



DIXON

CALIFORNIA

GENERAL PLAN 2040

ENVIRONMENTAL IMPACT REPORT

PUBLIC REVIEW DRAFT
JULY 8, 2020

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Executive Summary

This Draft Environmental Impact Report (EIR) evaluates the potential impacts of the proposed Dixon General Plan 2040, referred to as the “Proposed Plan.” The Proposed Plan was developed in response to policy direction provided by the City Council, Planning Commission, and community. This Draft EIR has been prepared on behalf of the City of Dixon, in accordance with the California Environmental Quality Act (CEQA). The City of Dixon is the lead agency for this EIR, as defined by CEQA.

An EIR is intended to inform decision-makers and the general public of the potential significant environmental impacts of a proposed project. The EIR also considers the availability of mitigation measures to minimize significant impacts and evaluates reasonable alternatives to the Proposed Plan that may reduce or avoid one or more significant environmental effects. Based on the alternatives analysis, an environmentally superior alternative is identified.

This EIR is a program EIR that examines the potential effects resulting from implementing designated land uses and policies in the Proposed Plan. The impact assessment evaluates the Proposed Plan as a whole and identifies the broad, regional effects that may occur with its implementation. As a programmatic document, this EIR does not assess site-specific impacts. Any future development project made possible by the Proposed Plan would be subject to individual, site-specific environmental review, as required by State law. This EIR represents the best effort to evaluate the Proposed Plan given its planning horizon through the year 2040. It can be anticipated that conditions will change; however, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of development.

Proposed Plan

The Proposed Plan is intended to respond directly to emerging trends and topics in Dixon since the preparation of the current General Plan (adopted in 1993), and to plan for city growth projected in coming decades. The Proposed Plan, which establishes a long-range planning framework and policies, would fully replace the City’s existing General Plan if adopted by the City Council.

The General Plan update was initiated to comprehensively examine the existing conditions in the city and to create a vision for the city’s future. Although the Proposed Plan does not specify or anticipate when buildout of the city will occur, a horizon of year 2040 is assumed for planning purposes. The purpose and objectives of the Proposed Plan, included below, underpin the policies and implementing actions of the Proposed Plan.

Planning Area

The Planning Area encompasses 5,522 acres (8.6 square miles) of both incorporated and unincorporated land. **The City of Dixon's existing city limits encompasses approximately 4,635 acres (7.2 square miles) of incorporated land, or 84 percent of the Planning Area.** The existing city limits include residential, commercial, and industrial developments as well as public facilities, including parks and schools. The city limits include a wastewater treatment plant that is about three miles south of Dixon. **The City's Sphere of Influence (SOI) is under the jurisdiction of the Solano County Local Agency Formation Commission (LAFCO), and incorporates a total of 887 acres outside of the city limits, or 16 percent of the total land located in the Planning Area.**

Purpose

California Government Code Section 65300 requires each city and county in California to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which...bears relation to its planning." The Dixon General Plan can be considered the city's development constitution, containing both a statement of the community's vision of its long-term development as well as the policies to support that vision by guiding the physical growth of the city. The Proposed Plan contains policies to guide decision-making related to development, housing, transportation, environmental quality, public services, parks, and open spaces. The Proposed Plan is a document to be adopted by the City Council that serves the following purposes:

- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision;
- Establish long-range development policies that will guide City departments, Planning Commission, and City Council decision-making;
- Provide a basis for judging whether specific development proposals and public projects are in harmony with plan policies;
- Plan in a manner that meets future land needs based on the projected population and job growth;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the small-town character of the community, preserve environmental resources, and minimize hazards; and
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and master plans, and the Capital Improvement Program.

The Proposed Plan would replace the existing 1993 General Plan in all elements, excluding the Housing Element, which was adopted and certified by the California Department of Housing and Community Development (HCD) in May 2015. The existing 1993 General Plan has a horizon year of 2010. The Proposed Plan would establish a planning and policy framework that would extend to horizon year 2040.

Objectives

The Proposed Plan provides the basis for the City's land use and development policy and represents the basic community values, ideals, and aspirations that will govern development and conservation. Specific objectives established for the project include the following:

1. *Small Town Character*: Promote and preserve Dixon's unique attributes—its quiet, safe, family-friendly, small-town charm.
2. *Sustainable Growth*: Allow residential growth consistent with the limitations of Measure B. Non-residential development should contribute to the City's fiscal health or benefit the community. All new development will mitigate any negative impacts as identified. New growth should respect and build on Dixon's historical context and natural environment.
3. *Strong Economy*: Promote high quality jobs and diversify the local economy, while retaining and supporting local businesses. Provide opportunities for residents to work locally if they choose.
4. *High Quality Development*: Ensure that new development is well designed, appropriately scaled, and makes a thoughtful and positive contribution to the city. All new development should be contiguous to existing developed areas. New areas to be annexed should be comprehensively planned.
5. *Historic Downtown*: Reinforce Downtown Dixon as the city's physical and cultural center. Encourage investments that increase Downtown's vitality and provide opportunities for residents and visitors to congregate and recreate, while respecting the area's unique historic resources and character.
6. *Agriculture and Natural Resources*: Maintain Dixon as a community surrounded by productive agricultural land. Support and promote growth in the agricultural industry and greenbelts, where appropriate. Use resources, such as soil and water, wisely; minimize pollution and community exposure to hazardous conditions.
7. *Mobility*: Prioritize creating and maintaining a transportation network that is safe, efficient, and well connected. Ensure that the street network functions for the automobile, yet is easily accessible, safe, and convenient for those traveling by other means, consistent with "Complete Streets" guidelines. Build on area rail access for cargo and look for additional alternatives for passenger transportation.
8. *Diverse Community*: Embrace differences and serve all equally. Provide community facilities and services that meet the needs of all ages, backgrounds, and interests. Provide for housing that meets the needs of a range of income levels and household sizes.
9. *Energy Conservation*: Promote residential and commercial energy conservation and transition to renewable energy resources as feasible.

Estimated Buildout of the Proposed General Plan

Buildout refers to the estimated amount of new development and corresponding growth in population and employment that is likely to take place under the Proposed Plan through the planning horizon year of 2040. Buildout estimates should not be considered a prediction for growth, as the actual amount of development that will occur through 2040 is based on many factors **outside of the City’s control. Therefore, buildout estimates represent one potential set of outcomes rather than definitive figures.** Additionally, the designation of a site for a specific land use in the Proposed Plan does not guarantee that a site will be developed or redeveloped at the assumed density during the planning period, as future development will rely primarily on each property owner’s initiative. **Buildout projections of this EIR do not include the total amount of potential development that could be accommodated by the Proposed Plan.** Rather, the buildout assumes that only a portion of the total potential development will occur by 2040.

Table ES-1 Residential Buildout (2040) describes the estimated housing units and population anticipated at buildout of the Proposed Plan according to analysis undertaken for the Proposed Plan. Table ES-2: Projected Jobs at Buildout (2040) describes the potential jobs anticipated to result from non-residential development shown on the proposed Land Use Diagram on vacant and underutilized sites.

Table ES-1: Projected Residential Units at Buildout (2040)

	Dixon			SOI			Planning Area Total		
	SFR ¹	MFR ²	Total	SFR	MFR	Total	SFR	MFR	Total
Existing (2018)	5,230	1,310	6,540	10	0	10	5,240	1,310	6,550
Future Development ³	2,220	610	2,820	140	0	140	2,350	610	2,960
Total at Buildout ⁴	7,440	1,920	9,360	150	0	150	7,590	1,920	9,510

Notes:

1. SFR = Single-Family Residential
2. MFR = Multi-Family Residential
3. Includes pipeline development
4. Figures may not sum due to rounding

Source: Dyett & Bhatia, 2019.

Table ES-2: Projected Jobs at Buildout (2040)

	Dixon	SOI	Planning Area Total
Existing (2018)	20,100	30	20,130
Future Development ¹	8,350	410	8,760
Total at Buildout ²	28,450	440	28,890

Notes:

1. Includes pipeline development
2. Figures may not sum due to rounding

Source: Dyett & Bhatia, 2019.

Alternatives to the Proposed Plan

Three alternatives to the Proposed Plan that could potentially avoid or substantially reduce significant impacts were considered: a Transit Oriented Development Alternative; a Compact Growth Alternative; and a Balanced Jobs-Housing Ratio Alternative. These alternatives, described in Chapter 4: Alternatives, were developed with a view to avoiding the conversion of Prime Farmland and substantially reducing daily VMT per service population. However, VMT analysis conducted on these alternatives determined that none of them would avoid or substantially reduce 2040 per service population VMT as compared to the Proposed Plan. Draft EIR. By contrast, the No Project Alternative could feasibly address the significant and unavoidable impact related to conversion of Prime Farmland that would result from the Proposed Plan and is fully analyzed in this EIR.

Given that the three aforementioned alternatives were deemed infeasible, only the No Project Alternative was analyzed in detail. A description of the No Project Alternative appears below.

NO PROJECT ALTERNATIVE

Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, the No Project Alternative represents what would be reasonably expected to occur in the foreseeable future if the Proposed Plan were not adopted and the **City's current General Plan was left unchanged and in use**. This alternative would retain all current land use designations and policies from the 1993 General Plan as amended to date. There would be no changes to the current General Plan Land Use map (see Figure 4.1) and no consolidation of land use designations; the new Corridor Mixed Use and Campus Mixed Use land use designations would not be applied. The following major roadway **improvement projects included in the City's Capital Improvements Program (CIP)** would be implemented under the No Project Alternative as with the Proposed Plan: the Parkway Overcrossing Project, the Vaugh Road Realignment Project, the A Street Grade Separation Project, and the A Street Queue Cutter Project. However, the City would not pursue passenger rail service to Dixon under this alternative.

Overall, the No Project Alternative would result in approximately 4,238 new residents, 1,487 new housing units, and 889 new jobs within the City of Dixon, and 4,650 new residents, 1,625 housing units, and 890 new jobs in Dixon and its SOI by 2040. Growth in the Sphere of Influence would be the same as under the Proposed Plan. The No Project Alternative would result in a ratio of single-family to multi-family residential units of 4.32, which is higher than the ratio of 3.89 which would be obtained under the Proposed Plan. This ratio is consistent with the requirements of Measure B, **the City's residential growth management implementation plan, adopted to meter the pace of residential development in Dixon and foster a ratio of not less than 80 percent single-family units and 20 percent multi-family units throughout the city.**

Table ES-3: Comparison of Key Characteristics, presents a summary of the residential capacity and reasonably anticipated non-residential development on opportunity sites in the No Project Alternative.

Table ES-3: Comparison of Key Characteristics

	City of Dixon			Study Area			Planning Area Total		
	Population	Housing	Jobs	Population	Housing	Jobs	Population	Housing	Jobs
Existing (2018)	20,099	6,536	4,949	31	13	413	20,130	6,549	5,362
Proposed Plan (2040)	28,449	9,358	6,224	443	148	413	28,893	9,506	6,637
No Project Alternative (2040)	24,337	8,024	5,837	443	148	413	24,781	8,172	6,250

Source: Dyett & Bhatia, 2019.

Areas of Controversy

During the drafting of the Proposed Plan and this EIR, public agencies and members of the public were invited to provide feedback on the documents. The following topics were identified as areas of controversy, based on comments at public meetings on the Proposed Plan and at the EIR Scoping Meeting, and responses to the Notice of Preparation (NOP):

- **Planning Area Boundaries.** Early versions of the Proposed Plan led to community concern over inclusion of “Areas of Concern” located outside of city limits to the north, south, and east. Many of the comments expressed concern that these areas could be annexed in the future and would be subject to impacts from future development under the Proposed Plan. The Areas of Concern are no longer included in the Planning Area for the Dixon General Plan Update and are not discussed in this EIR.
- **Transportation.** Multiple comments addressed transportation, including pedestrian and bicycle safety, travel demand management, and multimodal planning. Future development under the Proposed Plan could exacerbate existing congestion problems within the City of Dixon through growth of population and jobs.
- **Agricultural Resources.** Many of the comments addressed preservation of agricultural farmland and expressed a desire to preserve Dixon’s agricultural economy. Additional comments encouraged preservation of the surrounding greenbelts. Impacts to agricultural resources may occur through the conversion of existing uses.
- **Parkland Access.** Multiple comments requested that the EIR include information about access to parkland and identify existing and proposed parkland. Future development under the Proposed Plan could exacerbate existing parkland access problems within the City of Dixon through growth of population.

Additionally, environmental impacts classified as significant and unavoidable have been identified in the resource topics of agricultural resources; air quality; energy, greenhouse gases, and climate change; and transportation and traffic; and inasmuch as they may be controversial to the general public, agencies, or stakeholders, they are described briefly here.

AGRICULTURAL RESOURCES

Implementation of the Proposed Plan would allow for the conversion of Prime Farmland to non-agricultural uses. Under the Proposed Plan, urban development could occur on 98 acres of these farmlands designated by the Farmland Mapping and Monitoring Program (FMMP). Urban development could further result in indirect impacts that exert pressure on agricultural lands to convert to non-agricultural use. Conversion of agricultural land to urban use is not directly mitigable, as agricultural land is a finite and irreplaceable resource. Beyond limiting the amount of total growth permitted, there are no feasible mitigation measures for agricultural land conversion that would also fulfill the objectives of and implement the Proposed Plan. The impact would remain significant and unavoidable.

AIR QUALITY

Development under the Proposed Plan could violate air quality standards or contribute substantially to an existing or projected air quality violation. Any development under the Proposed Plan that would exceed Yolo-Solano Air Quality District (Yolo-Solano AQMD) regional significance thresholds would contribute to the nonattainment designation of the Air Basin, which constitutes an air quality violation. The Yolo-Solano Air Quality Management District area is currently classified as a federal and state nonattainment area for ozone, a federal nonattainment area for PM_{2.5}, and a state nonattainment area for PM₁₀.

Construction activities associated with the Proposed Plan would cause short-term emissions of criteria air pollutants, including the temporary generation of ozone precursors (ROG, NOX), CO, and particulate matter emissions that could result in short-term impacts on ambient air quality in the Planning Area. While policies in the Proposed Plan would enforce air quality standards during construction, with respect to ROG, NOx and PM exhaust emissions, there could be foreseeable conditions under the Proposed Plan where the amount of construction activity for an individual development project, or a combination of these projects, could result in the generation of these pollutant emissions that exceed their respective Yolo-Solano AQMD significance thresholds (10 tons per year for ROG and NOx, 80 pounds per day for PM₁₀ and PM_{2.5}). Emissions of these pollutants may not be reduced to levels below Yolo-Solano AQMD's **thresholds when multiple** construction projects are concurrently ongoing in Dixon. Therefore, the Proposed Plan would cumulatively contribute to the nonattainment designations of the Air Basin during construction, and impacts would be significant and unavoidable.

In addition to the short-term construction emissions, buildout of the Proposed Plan would generate long-term air emissions, and has the potential to result in air quality impacts from mobile, area, and energy sources. Future development under the Proposed Plan would be required to comply with applicable air quality plans, State Implementation Plan (SIP), California Air Resources Board (CARB) motor vehicle standards, Yolo-Solano AQMD regulations for stationary sources and architectural coatings, Title 24 energy efficiency standards, and the Proposed Plan policies; however, there is no guarantee that emissions would be mitigated below Yolo-Solano AQMD thresholds. Current nonattainment status and projected ROG, PM₁₀, and PM_{2.5} emissions at buildout in combination with past, present, and reasonably foreseeable projects elsewhere within the Yolo-Solano AQMD area demonstrate that the Proposed Plan, even with implementation of **applicable regulations and Proposed Plan's principles and actions that would reduce impacts** associated with long-term operational criteria pollutant emissions, would result in a significant and

unavoidable cumulative impact with respect to air quality and attainment of such standards. Therefore, development under the Proposed Plan could result in a cumulatively considerable net increase of criteria pollutants for which the General Plan region is nonattainment under an applicable federal or State ambient air quality standard. Even with the mitigation measures in the Proposed Plan, the impact would be significant and unavoidable.

Additionally, level of service impacts at three intersections under the Proposed Plan meet the screening criteria utilized by Yolo-Solano AQMD to provide a conservative indication of whether project-generated traffic will cause a potential carbon monoxide (CO) hot spot. As discussed in Chapter 3.3-13, signalization of these intersections is not recommended. Therefore, development under the Proposed Plan could expose sensitive receptors to substantial concentrations of CO. Even with the mitigation measures in the Proposed Plan, the impact would be significant and unavoidable.

ENERGY, GREENHOUSE GASES, AND CLIMATE CHANGE

Through implementation of the Proposed Plan policies aimed at reducing greenhouse gas (GHG) emissions, the Proposed Plan would serve to implement numerous strategies and mitigation measures aimed at reducing these emissions. However, even accounting for State and federal standards and for policies within the Proposed Plan that can be quantified, the resulting 2040 emissions are still greater than the Statewide percentage reduction target and the CARB Scoping Plan per capita target. This means that, absent additional measures at the State level, development **under the Proposed Plan would conflict with CARB's 2017 Scoping Plan, AB 32, EO S-03-05, Plan Bay Area, and SB 375**, as the City does not have direct control over certain aspects of transportation emissions, such as vehicle fuel efficiency standards or regional traffic. Further action is necessary at **the State and federal levels to achieve the deep cuts to emissions sources outside the City's jurisdictional control** needed to meet the GHG emissions reductions targets laid out by the State. **Given that, at this time, there are no post-2030 State or federal measures that would assist the City** in achieving the efficiency target in 2040, the potential exists for the Proposed Plan to conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Even with the mitigation measures in the Proposed Plan, the impact remains significant and unavoidable.

TRANSPORTATION AND TRAFFIC

Implementation of the Proposed Plan would contribute to population and job growth, resulting in projected higher amounts of traffic generation and congestion in the City of Dixon. More specifically, it would cause a significant impact by causing several local intersections to perform below level of service (LOS) standards established by the City of Dixon, as applicable, causing a conflict with these established measures of effectiveness of the circulation system.

Ten intersections were studied as part of the analysis under the General Plan Buildout. Five of the intersections are reported as operating at a deficient level of service during either Existing Conditions or future conditions under the Proposed Plan: Jackson Street & W A Street, First Street & B Street, First Street & Chestnut Street, First Street & W Cherry Street, and First Street & Valley Glen Drive. The intersection of First Street and Valley Glen Drive is planned for signalization, which will eliminate the operational deficiency. However, the intersections of First Street & B Street

and First Street & West Cherry Street do become deficient under the future Proposed Plan resulting in a potentially significant impact.

The Proposed Plan includes multiple policies and implementing actions that would seek to minimize this congestion on the transportation network through a series of efforts to reduce single occupancy vehicle trips, improve circulation throughout Dixon, and promote walking, bicycling and transit trips as viable transportation options. It also contains multiple implementing actions that identify mechanisms for funding actions designed to alleviate transportation impacts resulting from new development under the Proposed Plan. Nevertheless, even with Proposed Plan policies and implementing actions, impacts at the above stated intersections would be significant.

Impacts Summary and Environmentally Superior Alternative

IMPACTS SUMMARY

Table ES-4: Summary of Impacts and Mitigation Measures presents the summary of the significant impacts of the Proposed Plan identified in the EIR and the Proposed Plan mitigation measures that reduce these impacts. Detailed discussions of the impacts and proposed policies that would reduce impacts are in Chapter 3.

IDENTIFICATION OF ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines (Section 15126.6) require the identification of an environmentally superior alternative among the alternatives analyzed. Table 4.4-1: Summary of Impacts for Alternatives, **summarizes the alternatives' overall environmental impacts for each topic** presented in Section 4.3. For the Proposed Plan, seven impacts were expected to be significant and unavoidable, 55 impacts were expected to be less than significant, and three were found to be no impact. For the No Project Alternative, nine impacts were expected to be significant and unavoidable, 53 impacts were expected to be less than significant, and three were found to be no impact. The Proposed Plan was found to be environmentally superior in 23 cases. The No Project Alternative was found to be environmentally superior in 11 cases. In 25 cases, the difference in anticipated environmental impact between the two alternatives was determined to be insignificant.

Overall, the Proposed Plan was found to have a similar impact profile as the No Project Alternative. As the Proposed Plan would concentrate development along key mixed-use corridors and in downtown, it would result in both more growth and a more compact pattern of growth than the No Project Alternative. The Proposed Plan would also result in more multi-family housing units, which would provide a broader range of housing options, potentially reducing the risk of displacement. While the No Project Alternative would result in a higher jobs-to-housing ratio, the Proposed Plan would ultimately be more successful in achieving the objectives of the General Plan update process including fostering economic growth, encouraging careful stewardship of resources like water and energy, promoting high-quality development, and allowing convenient and safe travel. Given that the Proposed Plan would be more successful in achieving these objectives and is found to be environmentally superior in more cases, the Proposed Plan is determined to be the environmentally superior alternative.

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.1 Aesthetics			
3.1-1 Implementation of the Proposed Plan would not have a substantial adverse effect on scenic vistas.	None required	Less than Significant	N/A
3.1-2 Implementation of the Proposed Plan would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.	None required	No Impact	N/A
3.1-3 Implementation of the Proposed Plan would not substantially degrade the existing visual character or quality of public views of the site and its surroundings in a non-urbanized area or conflict with applicable zoning and other regulations governing scenic quality in an urbanized area.	None required	Less than Significant	N/A
3.1-4 Implementation of the Proposed Plan would not create new sources of substantial light or glare that could adversely affect day or nighttime views in the area.	None required	Less than Significant	N/A
3.2 Agricultural Resources			
3.2-1: Implementation of the Proposed Plan would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance	MM-AG-1: Any developer seeking to develop parcels designated as agricultural by the 1993 General Plan that contain FMMP-designated Prime farmland must acquire off-site Prime farmland or a conservation easement on such land within the Planning Area or within a ten-mile radius of the City, or each developer will participate in the City's Agricultural Mitigation	Significant and Unavoidable	Significant and Unavoidable

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	<p>Program. Each developer will pay the fee established for this program at the time of the City's approval of the tentative subdivision map or as otherwise specified in a development agreement. If the developer opts to purchase land, the developer can re-sell the land to an agricultural operator or other party so long as a conservation agreement acceptable to the City is granted to the City or an agency or organization acceptable to the City. Alternatively, the developer can purchase a conservation easement which is acceptable to the City and grant this conservation easement to the City or an agency or organization acceptable to the City. The parcels this mitigation measure applies to include: APN #s 0108040050, 0110140060, 0110140080, 0111020060, 0111020100, 0111020130, 0114020010, 0114031090, 0116030090, 0143010040, 0143020080, and 0143060060.</p>		
3.2-2: Implementation of the Proposed Plan would not conflict with existing zoning for agricultural use or a Williamson Act contract.	None required	Less than Significant	N/A
3.2-3: Implementation of the Proposed Plan would involve other changes in the existing environment which,	None required	Less than Significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
due to their location or nature, could result in conversion of Farmland to non-agricultural use			
3.3 Air Quality			
3.3-1 Development under the Proposed Plan will not conflict with or obstruct the implementation of the applicable air quality plan.		Less than Significant	N/A
3.3-2 Development under the Proposed Plan would violate air quality standards or contribute substantially to an existing or projected air quality violation.	<p>MM-AQ-1: Implement construction dust control mitigation measures described in Yolo-Solano AQMD's CEQA Handbook. The following construction dust and construction equipment exhaust control measures will be implemented, when feasible, to reduce the amount of dust emissions from construction activities in the Planning Area.</p> <ul style="list-style-type: none"> • Dust Control Measures <ul style="list-style-type: none"> ○ Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. ○ Haul trucks hauling dirt, sand, or loose materials shall maintain at least 2 feet of freeboard or shall be covered. 	Significant and Unavoidable	Significant and Unavoidable

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	<ul style="list-style-type: none"> ○ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area. ○ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). ○ Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. ○ Plant vegetative ground cover in disturbed areas as soon as possible. ○ Cover inactive storage piles. ○ Sweep streets if visible soil material is carried out from the construction site. ○ Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch 		

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	<p>layer of wood chips, mulch or gravel.</p> <ul style="list-style-type: none"> • Construction Equipment Emissions Control Measures: <ul style="list-style-type: none"> ○ Restrict unnecessary vehicle idling to 5 minutes. ○ Incorporate catalyst and filtration technologies. ○ Modernize the equipment fleet with cleaner repower and newer engines <p>MM-AQ-2: Require that applicants proposing development of projects within the City of Dixon require contractors, as a condition of contract, to reduce construction-related fugitive ROG emissions by ensuring that low-VOC coatings that have a VOC content of 10 grams/liter (g/L) or less be used during construction. All project applicants shall submit evidence of the use of low-VOC coatings to Yolo-Solano AQMD prior to the start of construction.</p> <p>MM-AQ-3: Require all development applications with the potential to create point-source air quality impacts be referred to the Yolo-Solano Air Quality Management</p>		

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	District (Yolo-Solano AQMD) for review and comment to ensure compliance with Yolo-Solano AQMD requirements prior to approval of the project.		
3.3-3 Development under the Proposed Plan would expose sensitive receptors to substantial pollutant concentrations.	<p>MM-AQ-4: Require development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses, or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures.</p> <p>MM-AQ-5: To protect sensitive receptors require discretionary projects in proximity to SR-113 and I-80 to include an analysis of mobile source toxic air contaminant health risks. The analysis, if necessary, shall identify feasible mitigation measures to reduce health risks to acceptable levels.</p> <p>MM-AQ-6: All applicants proposing development of projects that may include sensitive receptors within 1,000 feet of existing stationary sources shall prepare a site-specific construction health risk assessment (HRA) taking into account both project-level and cumulative health risks (including</p>	Significant and Unavoidable	Significant and Unavoidable

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	<p>existing TAC sources). If the HRA demonstrates, to the satisfaction of the City, that the health risk exposures for potential receptors will be less than Yolo-Solano AQMD project-level and cumulative thresholds (as appropriate), then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks would exceed Yolo-Solano AQMD project-level and/or cumulative thresholds (as appropriate), additional feasible on- and offsite mitigation shall be analyzed by the applicant to help reduce risks to the greatest extent practicable.</p>		
<p>3.3-4 Development under the Proposed Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.</p>		Less than Significant	

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.4 Biological Resources			
3.4-1 Implementation of the Proposed Plan would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	None Required	Less than Significant	N/A
3.4-2 Implementation of the Proposed Plan would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.	None Required	Less the Significant	N/A
3.4-3 Implementation of the Proposed Plan would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	None Required	Less the Significant	N/A
3.4-4 Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	None Required	Less the Significant	N/A
3.4-5 Implementation of the Proposed Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	None Required	Less the Significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.4-6 Implementation of the Proposed Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.	None Required	Less the Significant	N/A
3.5 Cultural, Historic, and Tribal Cultural Resources			
3.5-1 Implementation of the Proposed Plan could cause a substantial adverse change in the significance of a historical resource, as defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired (Guidelines Section 15064.5).	None Required	Less the Significant	N/A
3.5-2 Implementation of the Proposed Plan could cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	None Required	Less the Significant	N/A
3.5-3 Implementation of the Proposed Plan would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	None Required	Less the Significant	N/A
3.5-4 Development allowed by the Proposed Plan would have the potential to disturb human remains, including those interred outside of formal cemeteries.	None Required	Less the Significant	N/A
3.5-5 Implementation of the Proposed Plan could cause an adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or	None Required	Less the Significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
<p>object with cultural value to a California Native American Tribe, and that is:</p> <p>(a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or</p> <p>(b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>			
3.6 Energy, Greenhouse Gases, and Climate Change			
<p>3.6-1 Development under the Proposed Plan would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.</p>	<p>MM-GHG-1: The City of Dixon shall adopt and begin to implement a Climate Action Plan within a goal of 18 months, but no later than 36 months, of adopting the Proposed Plan update to address the GHG reduction goals of Executive Order B-30-15, Senate Bill 32, and Executive Order S-03-05 for GHG sectors that the City has direct or indirect jurisdictional control over. The Climate Action Plan shall include a community inventory of GHG emission sources, and quantifiable GHG emissions reduction targets for 2030 and</p>	<p>Significant and Unavoidable</p>	<p>Significant and Unavoidable</p>

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	2050, and an interim target for the General Plan buildout year 2040, that are consistent with the statewide GHG reduction targets and SB 375 Regional Plan Climate Targets. The City shall monitor progress toward its GHG emissions reduction goals and prepare reports every five years detailing that progress.		
3.6-2 Development under the Proposed Plan would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	Mitigation Measure GHG-1.	Significant and Unavoidable	Significant and Unavoidable
3.6-3 Development under the Proposed Plan would not cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance.	None Required	Less than Significant	N/A
3.6-4 The Proposed Plan would not conflict with the CBC Energy Efficiency Standards, the CARB passenger vehicle GHG emission reduction targets for 2020 and 2040, or any other applicable energy conservation regulations.	Mitigation Measure GHG-1.	Significant and Unavoidable	Less than Significant
3.7 Geology, Soils, and Seismicity			
3.7-1 Implementation of the Proposed Plan would not expose residents, visitors and employees, as well as public and private structures, to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides.	None Required	Less the Significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.7-2 Implementation of the Proposed Plan would not result in substantial soil erosion or the loss of topsoil.	None Required	Less the Significant	N/A
3.7-3 Implementation of the Proposed Plan would not locate structures on expansive soils or on a geologic unit or soil that is unstable, or that would become unstable as a result of new development under the Plan, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, or create substantial risks to life or property.	None Required	Less the Significant	N/A
3.7-4 Implementation of the Proposed Plan would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.	None Required	Less the Significant	N/A
3.7-5 Implementation of the Proposed Plan would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	GEO-1 Establish a procedure for the management of paleontological materials found on-site during a development, including the following provisions: - If materials are found on-site during grading, require that work be halted until a qualified professional evaluates the find to determine if it represents a significant paleontological resource. - If the resource is determined to be significant, the paleontologist shall supervise removal of the material and determine the most appropriate archival storage of the material.	Less the Significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	Appropriate materials shall be prepared, catalogued, and archived at the applicant's expense and shall be retained within Solano County if feasible.		
3.8 Hazards, Hazardous Materials, and Wildfire			
3.8-1 Implementation of the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	None Required	Less than significant	N/A
3.8-2 Implementation of the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	None Required	Less than significant	N/A
3.8-3 Implementation of the Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	None Required	Less than significant	N/A
3.8-4 Implementation of the Proposed Project would not result in development located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	None Required	Less than significant	N/A
3.8-5 Implementation of the Proposed Project would not result in development located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety	None Required	Less than significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
hazard or excessive noise for people residing or working in the project area.			
3.8-6 Implementation of the Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None Required	Less than Significant	N/A
3.8-7 Implementation of the Proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.	None Required	No impact	N/A
3.8-8 Implementation of the Proposed Project would not result in substantial development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would not substantially impair an adopted emergency response plan or emergency evacuation plan.	None Required	No impact	N/A
3.8-9 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would exacerbate fire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.	None Required	No impact	N/A
3.8-10 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that	None Required	No impact	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.			
3.8-11 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	None Required	No impact	N/A
3.9 Hydrology and Water Quality			
3.9-1 Development under the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements.	None Required	Less than significant	N/A
3.9-2 Development under the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).	None Required	Less than significant	N/A
3.9-3 Development under the Proposed Plan would not substantially alter the existing drainage pattern of the City of Dixon, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site.	None Required	Less than significant	N/A
3.9-4 Development under the Proposed Plan would not create or contribute runoff water which would	None Required	Less than significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.			
3.9-5 Development under the Proposed Plan would not substantially degrade water quality.	None Required	Less than significant	N/A
3.9-6 Development under the Proposed Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.	None Required	Less than significant	N/A
3.9-7 Development under the Proposed Plan would not place within a 100-year flood hazard area structures which would impede or redirect flood flows.	None Required	Less than significant	N/A
3.9-8 Development under the Proposed Plan would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.	None Required	Less than significant	N/A
3.9-9 Development under the Proposed Plan would not result in inundation by seiche, tsunami, or mudflow.	None Required	Less than significant	N/A
3.10 Land Use, Population, and Housing			
3.10-1 Implementation of the Proposed Project would not physically divide an established community.	None Required	No Impact	N/A
3.10-2 Implementation of the Proposed Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	None Required	No Impact	N/A
3.10-3 Implementation of the Proposed Plan would not displace substantial numbers of existing people or	None Required	No Impact	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
housing, necessitating the construction of replacement housing elsewhere.			
3.11 Noise			
3.11-1 Implementation of the Proposed Project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	None Required	Less than Significant	N/A
3.11-2 Implementation of the Proposed Project would not result in generation of excessive groundborne vibration or groundborne noise levels.	None Required	Less than Significant	N/A
3.11-3 Implementation of the Proposed Project would not result in development located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and could expose people residing or working in the project area to excessive noise levels.	None Required	Less than Significant	N/A
3.12 Public Services and Recreation			
3.12-1 Implementation of the Proposed Plan would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities.	None Required	Less than significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.12-2 Implementation of the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	None Required	Less than significant	N/A
3.12-3 Implementation of the Proposed Plan would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	None Required	Less than significant	N/A
3.13 Transportation			
3.13-1 Implementation of the Proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	None Required	Less than significant	N/A
3.13-2 Implementation of the Proposed Plan would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b).	MM-UTIL-1 <i>Addition of fixed route transit service serving school sites.</i> The proposed fixed-route service would complement the existing Dial-a-Ride on demand service. Such service would reduce vehicular trips to and from schools, reducing school related VMT and peak period congestion. A reasonable assumption regarding the reduction in VMT that could result from this measure is estimated at five percent. This figure corresponds to the bus and transit mode-share recorded for school sites in Alameda County where a Safe Routes to School program is in place. The new school transit service should be implemented in conjunction with a similar Safe Routes to School program to promote	Significant and unavoidable	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
	<p>mode shift. Note that the extensive bicycle and pedestrian improvements in the Proposed Plan will also tend to support mode shift away from personal vehicles for school trips.</p> <p>MM-UTIL2 <i>Implementation of Commute Travel Demand Management (TDM) program.</i> Research published by the California Air Pollution Control Officers Association (CAPCOA, 2010) suggests that mandatory commute TDM programs with monitoring and reporting requirements can reduce VMT by between 4 and 21 percent. Voluntary TDM programs have reported VMT reduction range of one to six percent. However, the CAPCOA research cautions that TDM programs show limited effectiveness in rural areas unless large employers are present and TDM measures appropriate to the setting are implemented. Dixon has few large employers where TDM programs could be monitored and reported on. Therefore, a more realistic assumption of 5 percent was selected from the range reported for voluntary TDM programs.</p>		
3.13-3 Implementation of the Proposed Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	None Required	Less than significant	N/A

Table ES-4: Summary of Impacts and Mitigation Measures			
<i>Impact</i>	<i>Mitigation Measures</i>	<i>Significance before Mitigation</i>	<i>Significance after Mitigation</i>
3.13-4 Implementation of the Proposed Plan would not result in inadequate emergency access.	None Required	Less than significant	N/A
3.14 Utilities and Service Systems			
3.14-1 Implementation of the Proposed Plan would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	None Required	Less than Significant	N/A
3.14-2 Implementation of the Proposed Plan would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.	None Required	Less than significant	N/A
3.14-3 Implementation of the Proposed Plan would not result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	None Required	Less than significant	N/A
3.14-4 Implementation of the Proposed Plan would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	None Required	Less than significant	N/A
3.14-5 Implementation of the Proposed Plan would comply with federal, State, and local management and reduction statutes and regulations related to solid waste.	None Required	Less than significant	N/A

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1 Introduction

This Draft Environmental Impact Report (EIR) has been prepared on behalf of the City of Dixon in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 *et seq.*). The EIR analyzes potential environmental impacts of the adoption and implementation of the proposed Dixon General Plan Update 2040, referred to as the “Proposed Plan.” As discussed in Section 1.2 below, this EIR is a Program EIR, and therefore presents a citywide assessment of the potential impacts of the Proposed Plan rather than analyzing project-level impacts. This chapter outlines the purpose and overall approach to the preparation of the EIR. The City of Dixon is the lead agency responsible for ensuring that the Proposed Plan complies with CEQA. “Lead agency” is defined by Section 21067 of CEQA as “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment.”

1.1 Purpose of the EIR

Pursuant to the provisions of CEQA and related case law, general plans and other programs must include analyses of the potential significant environmental impacts associated with implementation of their policies and proposals. The primary intent of CEQA is to ensure that public agency decision-makers document and consider the environmental implications of their actions in order to avoid or minimize environmental damage that could result from the implementation of a project wherever feasible, and to balance environmental, economic, and social objectives. The purpose of an EIR is to identify the significant effects on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided (California Public Resources Code [PRC] Section 21002.1).

PURPOSE

This EIR serves the following purposes:

- To satisfy CEQA requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of adopting and implementing the Proposed Plan;
- To recommend a set of measures to mitigate any significant adverse impacts;
- To analyze a range of reasonable alternatives to the Proposed Plan;

- To inform decision-makers and the public of the potential environmental impacts of the Proposed Plan prior to taking action on the Proposed Plan, and to assist City officials in reviewing and adopting the proposed General Plan; and
- To provide a basis for the review of subsequent development projects and public improvements proposed within the Planning Area. Subsequent environmental documents may be tiered from the Final EIR.

The Proposed Plan consists of policies, diagrams, and standards to guide the future development of the City of Dixon, as described in Chapter 2: Project Description. This EIR contains analysis of all potential environmental impacts expected to result from implementation of the various policies and programs identified as part of the Proposed Plan, including those that serve to avoid or minimize adverse environmental impacts. In accordance with CEQA requirements, this EIR also identifies and evaluates alternatives to the Proposed Plan, including the No Project Alternative, which represents the continued implementation of the current General Plan. An environmentally superior alternative is identified as part of the alternatives analysis.

This EIR represents the best effort, at a programmatic level, to evaluate the potential environmental impacts of the Proposed Plan given its 2040 planning horizon. It can be anticipated that conditions will change; however, the assumptions used are the best available at the time of preparation and reflect existing knowledge of patterns of development.

INTENDED USES OF THE EIR

The CEQA Guidelines (Section 15124(d)) require EIRs to identify the agencies that are expected to use the EIR in their decision-making, and the approvals for which the EIR will be used. This EIR will inform the City of Dixon, in addition to other responsible agencies, persons, and the general public, of the potential environmental effects of the Proposed Plan and the identified alternatives. The City of Dixon will use the EIR as part of its review and approval of the proposed General Plan. Other agencies expected to use the EIR include: Solano County, the Solano County Local Agency Formation Commission (LAFCO), and the Solano Transit Authority (STA), as well as State agencies such as the State Water Resources Control Board and Caltrans, and any other responsible or trustee agencies.

1.2 Approach and Scope of the EIR

TYPE OF EIR

This EIR is a program EIR, defined in Section 15168 of the CEQA Guidelines as: “[An EIR addressing a] series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) A[s] logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways.”

Program EIRs can be used as the basic, general environmental assessment for an overall program of future projects, policies, and related implementation actions, such as the Proposed Plan, intended to be developed or implemented over a 20-year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative effects.

As a programmatic document, this EIR presents a citywide assessment of the potential impacts of the Proposed Plan. It does not separately evaluate subcomponents of the Proposed Plan nor does it assess project-specific impacts of potential future projects under the Proposed Plan, all of which are required to comply with CEQA and/or the National Environmental Policy Act (NEPA) as applicable.

As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals). As noted, individual projects are required to prepare a more precise, project-level analysis to fulfill CEQA and/or NEPA requirements. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. These projects may, however, use the discussion of impacts in this EIR as a basis of their assessment of these regional, citywide, or cumulative impacts, provided that the projects are consistent with the General Plan and the data and assumptions used in this EIR remain current and valid.

PLANNING HORIZON

For analytic purposes in this EIR, the base year is 2018 unless otherwise noted, and the horizon year representing future conditions is 2040. In cases where current data is not available, the most recent known data is used to depict baseline conditions. The horizon year of 2040 represents the target year of the Proposed Plan when projects and programs are anticipated to be fully implemented. In reality, full implementation of the Proposed Plan may take more or less than 20 years.

ENVIRONMENTAL ISSUE AREAS

Information gathered about the environmental setting is used to define relevant planning issues, determine thresholds of significance, and evaluate potential impacts. Based on the initial analysis of environmental setting and baseline conditions, and comments received during the EIR Scoping Period, the following issues are analyzed in this program EIR:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural, Tribal, and Historic Resources
- Energy, Climate Change, and Greenhouse Gas Emissions

- Geology, Soils, and Seismicity
- Hazards and Hazardous Materials
- Hydrology, Drainage, and Water Quality
- Land Use, Population, and Housing
- Noise and Vibration
- Public Facilities and Recreation
- Traffic and Transportation
- Utilities and Service Systems

Chapter 5: CEQA Required Conclusions analyzes the potential growth inducement and cumulative effects of the Proposed Plan in relation to each issue area.

ALTERNATIVES

CEQA requires the EIR to evaluate a reasonable range of alternatives to the Proposed Plan that could feasibly attain most of the basic project objectives and would avoid or substantially lessen any of the significant environmental impacts. This EIR considers three alternatives – a Transit Oriented Development Alternative, a Compact Growth Alternative, and a Balanced Jobs-Housing Ratio Alternative – but ultimately concludes that these three alternatives would be infeasible. This EIR provides an in-depth analysis of the No Project Alternative, which represents the continuation of the City's currently adopted General Plan.

1.3 Environmental Review Process

In accordance with CEQA Guidelines Section 15090, prior to adopting the Proposed Plan, the City must certify that the Draft and Final EIRs have been completed in compliance with CEQA and that the decision-making body of the lead agency considered the information contained in the Final EIR. This section describes the environmental review process undertaken for this EIR pursuant to CEQA.

NOTICE OF PREPARATION AND SCOPING

The Notice of Preparation (NOP) for the EIR on the Proposed Plan was submitted to the State Clearinghouse on November 13, 2018 and circulated among relevant State and local agencies, as well as to members of the public. The NOP provided a brief project description and requested comments and guidance on the scope and content of the EIR from responsible and trustee agencies, interested public agencies, organizations, and the general public. The City received comments during a 30-day review period, which ended December 20, 2018. Eleven comments were received, including letters from the Department of Conservation, the Yocha Dehe Wintun Nation, the California Department of Fish and Wildlife, the Greenbelt Alliance, and others.

An EIR Scoping Meeting conducted by the Planning Commission was held December 12, 2018 at City Council Chambers, 600 East A Street, to receive comments and suggestions on scope and

content for the EIR and solicit input on potential impacts. The NOP and comments received at the Scoping Meeting and during the Scoping Period on the NOP are included as Appendix A of this EIR. Comments on the NOP, along with input received during public workshops and meetings over the course of the General Plan Update process, have helped to identify the major planning and environmental issues and concerns and establish the framework of this EIR.

TRIBAL CONSULTATION

Senate Bill (SB) 18, codified in California Government Code §65352.3, requires local governments to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places prior to the adoption or amendment of a city's general plan. Additionally, Assembly Bill (AB) 52 requires tribal cultural resources to be addressed under CEQA and established requirements for consultation with Native American tribes as part of the CEQA process, providing both federal and non-federally recognized tribes the right to formal consultation with project lead agencies (California Public Resources Code Section 21080.3.1).

In accordance with SB 18, the City contacted the NAHC in March 2015 to request a consultation list of tribes traditionally and culturally affiliated with the Planning Area. The NAHC provided a list of three tribes—the Yocha Dehe Wintun Nation, Kesner Flores, and the Cortina Band of Indians. The City contacted the three tribes and received a response from the Yocha Dehe Wintun Nation, who identified known cultural resources within the area of the General Plan Update; and the Iona Band of Miwok Indians, who were not originally on the NAHC list, but requested consultation.

Pursuant to SB 18 and AB 52, the City contacted the California Native American Heritage Commission (NAHC) again in December 2018 to request a search of its Sacred Lands File and to obtain a list of California Native American tribes whom the City would engage for the purposes of avoiding, protecting, and/or mitigating impacts on cultural resources. NAHC provided the City with a list of three California Native American tribes to contact in accordance with SB 18 and AB 52 –the Yocha Dehe Wintun Nation, the Kletsel Dehe Band of Wintun Indians, and the United Auburn Indian Community of the Auburn Rancheria. The City contacted the three listed tribes, per SB 18 and AB 52, providing information about the planning process and inviting them to initiate consultation if desired. The City received one response from the Yocha Dehe Wintun Nation, who requested consultation. The City contacted the Yocha Dehe Wintun Nation on June 19, 2020 for consultation. Correspondence related to tribal consultation is included as Appendix C of this EIR.

DRAFT EIR REVIEW

Upon completion of the Draft EIR, the City will file a Notice of Completion (NOC) with the Governor's Office of Planning and Research (OPR) and provide a Notice of Availability to the public to begin the mandated 45-day public review period. The public review period for this Draft EIR will be 45 days and will begin on July 8, 2020 and end on August 21, 2020. The EIR and appendices are available for review at the City of Dixon City Hall at 600 East A Street, Dixon, CA 95620 and online at <https://www.ci.dixon.ca.us/438/General-Plan-Update>.

Please submit comments on the Draft EIR in writing or via email to:

George Osner
City of Dixon Department of Community Development
600 East A Street
Dixon, CA 95620
gosner@cityofdixon.us

FINAL EIR AND CERTIFICATION

After the close of the public review period, City staff and CEQA consultants will review the comments, respond to the comments received, and revise the EIR as necessary. Responses to comments and revisions to the Draft EIR will be provided as the Final EIR. The City Council will then consider certification of the Final EIR. Subsequent to certification of the Final EIR, the City Council may approve the Proposed Plan. A decision to approve the Proposed Plan would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 and Section 15093. If the City Council approves the Proposed Plan, a Notice of Determination will be filed with the State Office of Planning and Research and the Clerk of Solano County.

RELEVANT PLANS AND ENVIRONMENTAL STUDIES

Other plans and studies relevant to the Proposed Plan and incorporated by reference include the following:

- Solano Countywide Bicycle Plan (2004)
- Solano Countywide Pedestrian Transportation Plan (2011)
- Solano County Comprehensive Transportation Plan (2017)
- Solano County General Plan (2008)
- City of Dixon Northeast Quadrant Specific Plan (1995)
- Southwest Dixon Specific Plan (2005)
- City of Dixon Parks and Recreation Master Plan (2015)
- City of Dixon Wastewater Facilities Plan (2011)
- City of Dixon Sewer System Management Plan (2016)

ORGANIZATION OF THE EIR

This Draft EIR is organized into the following chapters, plus appendices.

- ES. Executive Summary. Summarizes the EIR by providing an overview of the Proposed Plan, the potentially significant environmental impacts that could result from the Proposed Plan, the mitigation measures identified to reduce or avoid these impacts, alternatives to the Proposed Plan, and identification of the environmentally superior alternative.
1. Introduction. Introduces the purpose for the EIR, explains the EIR process and intended uses of the EIR, and describes the overall organization of this EIR.
2. Project Description. Describes in detail the proposed General Plan Update, including the location and planning boundaries, purpose and objectives, buildout, and implementation of the Proposed Plan.
3. Environmental Settings and Impacts. Analyzes the environmental impacts of the Proposed Plan. Impacts are organized by major topic. Each topic area includes a description of the environmental setting, significance criteria, methodology and potential impacts.
4. Analysis of Alternatives. Presents a reasonable range of alternatives to the Proposed Plan, provides discussion of environmental impacts associated with each alternative, compares the relative impacts of each alternative to those of the Proposed Plan and other alternatives, discusses the relationship of each alternative to the Proposed Plan's objectives, and identifies the environmentally superior alternative.
5. CEQA Required Conclusions. Addresses growth-inducing, cumulative, significant and unavoidable impacts, significant irreversible environmental change, and impacts found not to be significant.
6. References. Lists documents and other information sources used in the preparation of the EIR.
7. List of Preparers. Identifies the persons and organizations that contributed to the preparation of the EIR.
8. Appendices. Includes the NOP and compilation of agency and public comments received on the NOP, as well as technical documentation of data used for environmental analysis in this EIR.
 - Appendix A: Notice of Preparation and Scoping Comments
 - Appendix B: Air Quality and Greenhouse Gas Data
 - Appendix C: List of Historic Resources and Tribal Correspondence
 - Appendix D: Noise Modeling Results
 - Appendix E: Transportation Modeling Results

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2 Project Description

2.1 Introduction

Consistent with Section 15168 of the CEQA Guidelines, this Draft Environmental Impact Report (EIR) provides a programmatic analysis of the environmental impacts associated with implementation of the goals, policies, and actions and the projected buildout of the Dixon General Plan Update (Proposed Plan).¹ California Government Code Section 65300 et seq. mandates that all counties and incorporated cities prepare a general plan that establishes policies and standards for future development, housing affordability, and resource protection. State law encourages cities to keep general plans current through regular updates. The Proposed Plan is **an update to the City's 1993 General Plan** and would guide future land use decisions in the City of Dixon, providing a long-term vision for the city and, through its policies and implementing actions, would indicate how that vision may be achieved over the life of the document. It would be the primary policy document guiding growth and development within the City of Dixon through the planning horizon year of 2040. Together with the Zoning Ordinance and related sections of the Municipal Code, the Proposed Plan would serve as the basis for planning-related decisions made by City staff, the Planning Commission, and the City Council.

This chapter introduces the objectives of the Proposed Plan, and includes a description of the existing regional and local project setting, an outline of the projected population and employment growth rates and development patterns through the planning horizon year, the proposed General Plan land use diagram, key data tables, and a description of the Proposed Plan's **policy direction**. This project description provides the basis for the environmental analysis in Chapter 3 and Alternatives analysis in Chapter 4.

¹ As described in Section 15168 of the CEQA Guidelines, program-level environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria. The project that is the subject of this EIR consists of long-term plans that will be implemented as policy documents guiding future development activities and City actions. Because this is a program-level EIR, this document does not evaluate the impacts of specific, individual developments that may be allowed under the General Plan. Future specific projects may require separate environmental review.

2.2 Location and Project Boundaries

The City of Dixon is located in northeastern Solano County about 65 miles east of San Francisco, 11 miles northeast of Vacaville, 10 miles southwest of Davis, and 23 miles southwest of Sacramento, as shown on Figure 2-1. Covering an area of approximately 7.25 square miles, the community is ringed by agricultural land and open space, including over 1,000 protected acres within the Vacaville-Dixon Greenbelt. Regional access is provided by Interstate 80 (I-80), which runs along the western perimeter of the City, as well as State Route 113 (SR 113), a north-south state highway **that runs through the center of Dixon and serves as the “Main Street” of the community as it passes through downtown Dixon.** The Union Pacific Railroad mainline bisects the city in a southwest-northeast direction, carrying freight and passengers, although trains do not currently stop in Dixon. Fairfield and Suisun Transit Route 30 provides connections to the Fairfield Transportation Center, downtown Sacramento and points in between.

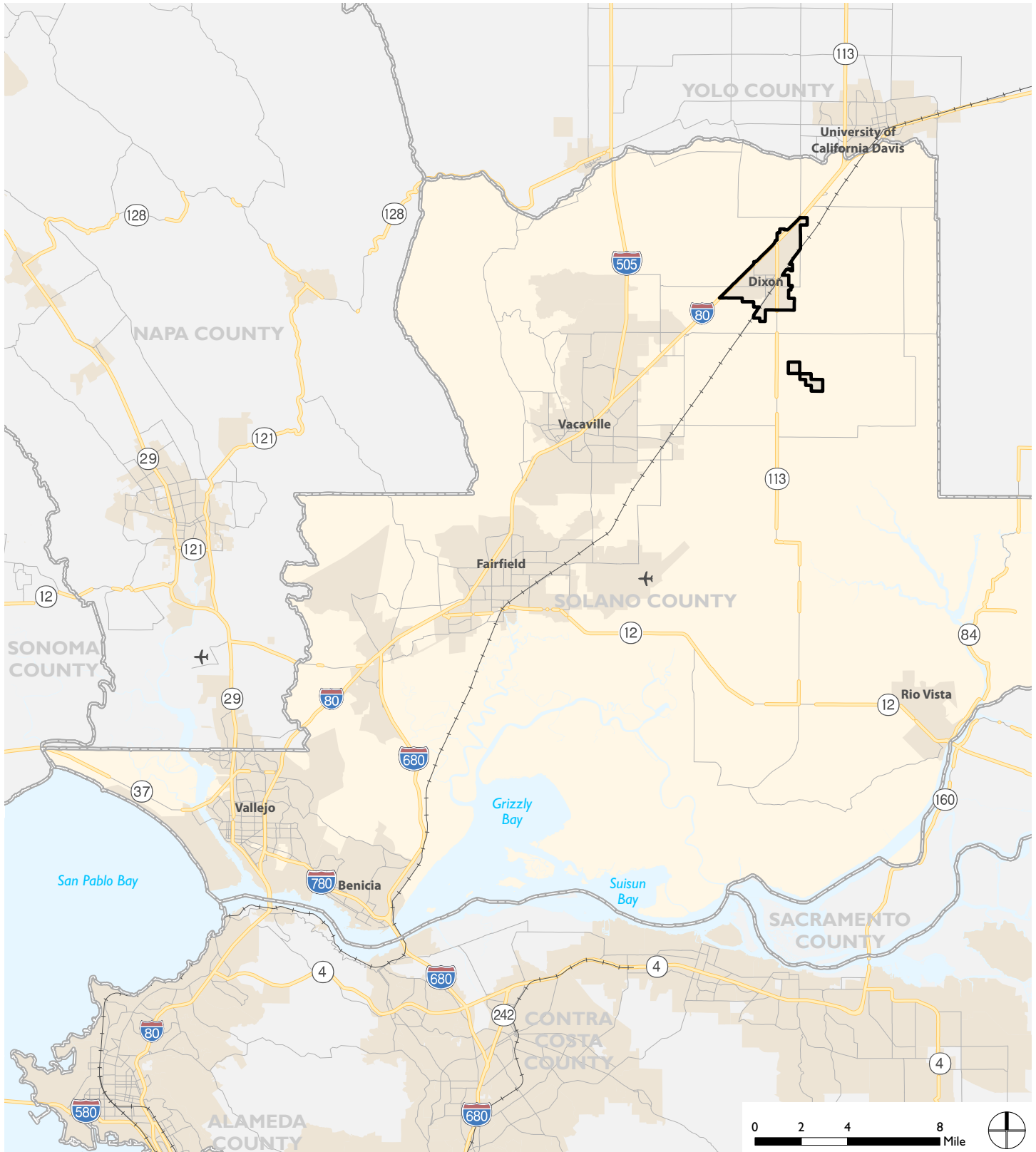
PLANNING AREA

The Planning Area is defined as the land area addressed by the General Plan, including land within the City limits and outside **City limits that bears a relation to the City’s planning.** The boundary of the Planning Area was determined in response to State law requiring each city to include in its **General Plan all territory within the boundaries of the incorporated area as well as “any land outside its boundaries which in the planning agency’s judgment bears relation to its planning”** (California Government Code Section 65300). The Proposed Planning Area, shown in Figure 2-2, comprises a total of 5,522 acres (8.6 square miles) of both incorporated and unincorporated land bearing **relation to the City’s future growth.**

The City of Dixon’s existing city limits encompasses approximately 4,635 acres (7.2 square miles) of incorporated land, or 84 percent of the Planning Area. The existing city limits include residential, commercial, and industrial developments as well as public facilities, including parks and schools. The city limits include a wastewater treatment plant that is about three miles south of Dixon.

The Sphere of Influence (SOI) is defined as the ultimate physical boundary and service area of the city, and it encompasses both incorporated and unincorporated territory that is envisioned to be **the city’s ultimate service area.** The Solano County Local Agency Formation Commission (LAFCO) **has jurisdiction over defining Dixon’s SOI and acts on annexations.** The city’s SOI boundary incorporates a total of 887 acres outside of the city limits (1.4 square miles) or 16 percent of the total land located in the Planning Area.

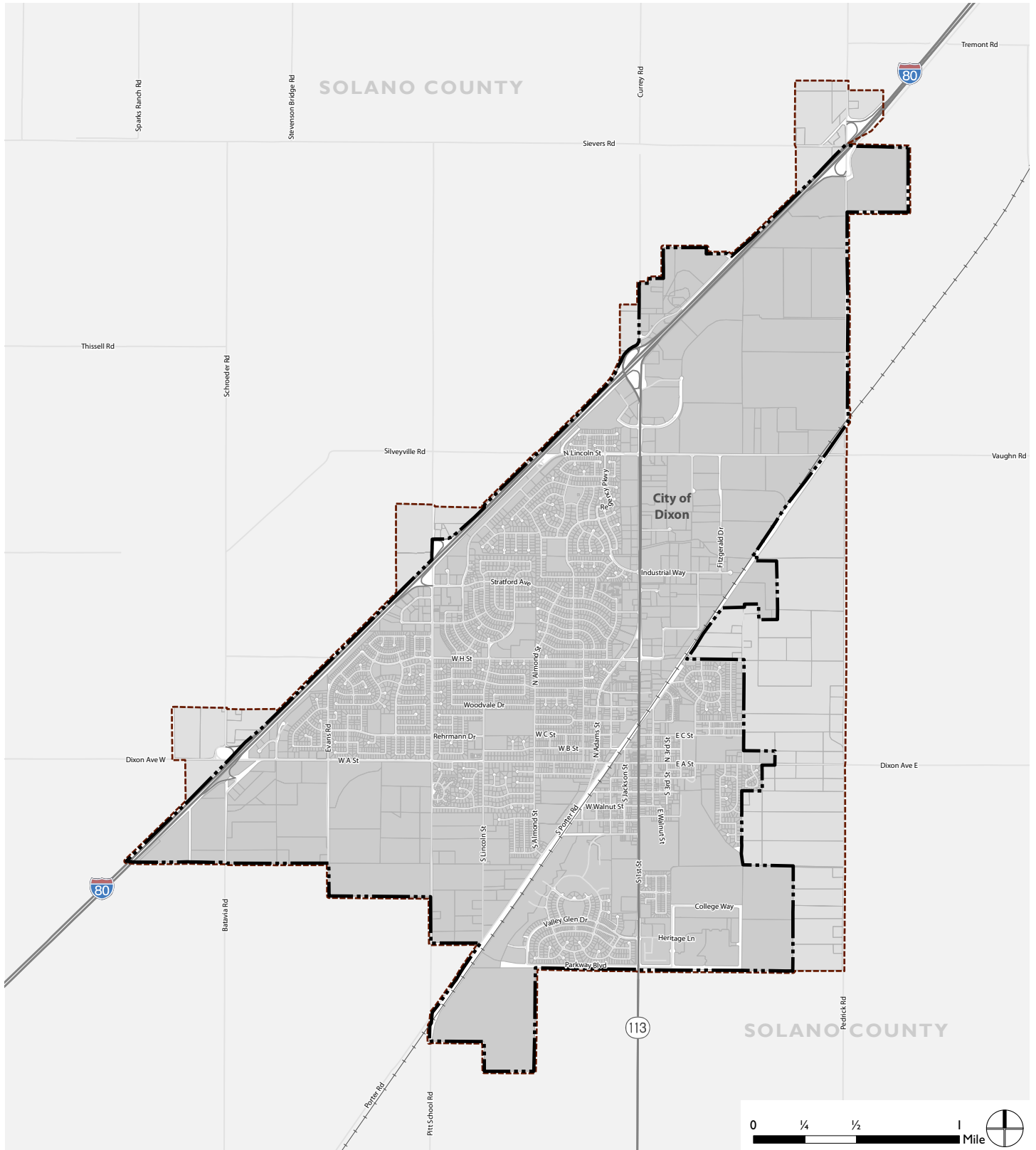
Figure 2.1: Regional Context



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019

-  Railroad
-  Dixon City Limit
-  Solano County

Figure 2.2: Planning Area Boundaries



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019

-  Railroad
-  Dixon City Limit
-  Sphere of Influence

2.3 Background

SETTING AND EXISTING LAND USES

Dixon is a community of approximately 20,000 residents with a rich agricultural heritage and a distinct small-town feel. The city is home to the Dixon May Fair, the oldest district fair and fairgrounds in the state of California, and the central portion of Dixon boasts numerous historic resources dating back to its past as a 19th Century railroad town, including the 1871 United Methodist Church on West B Street and the Carnegie Library downtown. The community has experienced higher than average residential growth since 2000, and today, it features an existing core of established neighborhoods, surrounded by newer residential subdivisions and clusters of highway-oriented commercial businesses at the freeway interchanges. Major employers, including Altec, Basalite, Campbell Soup Company, Cardinal Health, and First Northern Bank, are generally clustered in the northeastern part of the city. With affordable land available within the City limit and easy access to the University of California Davis campus, Sacramento, and the Bay Area, Dixon is committed to facilitating employment growth, supporting small business, and increasing opportunities for Dixon residents to work locally.

All land within the City limits is located south of I-80, except for a small area known as the Milk Farm. The city's **commercial and mixed uses (about 3 percent of the Planning Area)** are located along the Highway 113 corridor and near freeway off-ramps along the I-80 corridor. Most of the city's **industrial uses (about 7 percent of the Planning Area)** are clustered north of the Union Pacific Railroad tracks, in between Highway 113 and Pedrick Road. Residential uses compose nearly one-fifth of the Planning Area, and the predominant housing type in the city is single family homes. Many of the residential neighborhoods are found west of Highway 113, although some neighborhoods are east of the highway on the southern side of the Union Pacific Railroad tracks. Public facilities and parks (together about 12 percent of the Planning Area) are found in many of the residential neighborhoods across the city. Agricultural uses make up nearly 30 percent of the City of Dixon and 40 percent of the Planning Area, including about 1,385 acres within the city limits and nearly 750 acres outside of city limits. Agricultural uses border the residential and industrial uses on the southern, eastern, and northern edges of the city. There are large, vacant lots in the northeast and southwest areas of the city, totaling just about nine percent of the Planning Area.

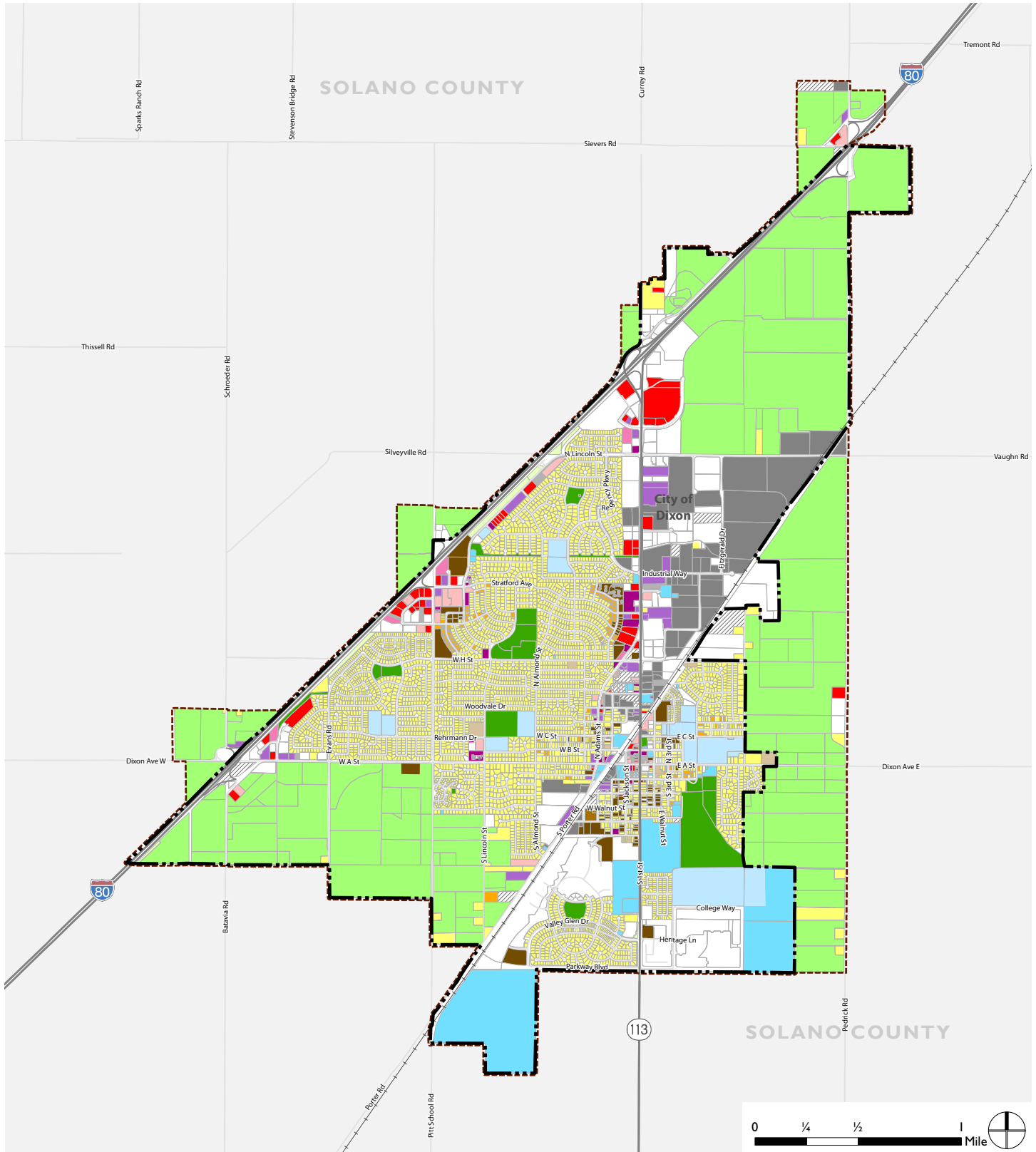
There are approximately 4,635 acres in the current city limits and an additional 887 acres in unincorporated land in the Planning Area. Table 2-1 shows the breakdown of existing land uses in the Planning Area. Figure 2-3 shows the overall pattern of existing land uses in the Planning Area.

Table 2-1: Existing Land Uses in Planning Area

Existing Land Use Category	Incorporated		Unincorporated		Total Planning Area	
	Acres	Percentage	Acres	Percentage	Acres	Percentage
Residential	1,034.0	22.3%	23.7	2.7%	1,057.7	19.2%
Single Family Residential	936.6	20.2%	23.7	2.7%	955.6	17.4%
Two Family Residential	19.6	0.4%	0	0.0%	19.6	0.4%
Mobile Home Park	1.8	0.0%	0	0.0%	1.8	0.0%
Multi Family Residential	75.9	1.6%	0	0.0%	75.9	1.4%
Commercial and Mixed Use	167.6	3.6%	8.1	0.9%	175.8	3.2%
General Commercial	66.8	1.4%	3.3	0.4%	70.1	1.3%
Service Commercial	47.3	1.0%	2.3	0.3%	49.6	0.9%
Office	16.9	0.4%	0	0.0%	16.9	0.3%
Hotel	8.1	0.2%	0	0.0%	8.1	0.1%
Commercial Mixed Use	25.6	0.6%	2.6	0.3%	28.2	0.5%
Residential Mixed Use	2.9	0.1%	0	0.0%	2.9	0.1%
Industrial	348.6	7.5%	22.0	2.5%	370.6	6.7%
General Industrial/Warehousing	321.5	7.0%	5.0	0.6%	326.4	5.9%
Open Storage	27.1	0.6%	17.0	1.9%	44.2	0.8%
Public and Community Facilities	541.4	11.7%	0.0	0.0%	541.4	9.8%
Public Facilities/Utilities	411.5	8.9%	0	0.0%	411.5	7.5%
School	118.8	2.6%	0	0.0%	118.8	2.2%
Church/Religious Facilities	11.1	0.2%	0	0.0%	11.1	0.2%
Parks and Open Spaces	137.7	3.0%	0.0	0.0%	137.7	2.5%
Parks & Recreation	110.5	2.4%	0	0.0%	110.5	2.0%
Greenway/Track	8.6	0.2%	0	0.0%	8.6	0.2%
Open Space	18.6	0.4%	0	0.0%	18.6	0.3%
Other	573.5	12.4%	56.0	6.3%	629.5	11.4%
Surface Parking	7.7	0.2%	0	0.0%	7.7	0.1%
Railroad or Other Right of Way	565.7	12.3%	56.0	6.3%	621.8	11.3%
Agricultural	1,384.5	29.9%	749.9	84.6%	2,134.4	38.7%
Vacant	447.9	9.7%	26.7	3.0%	474.6	8.6%
Total	4,635.1	100.0%	886.6	100.0%	5,521.7	100.0%

Source: City of Dixon, 2019; Solano County GIS, 2014; Dyett & Bhatia, 2019.

Figure 2.3: Existing Land Use in the Planning Area



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019



- | | | | |
|---------------------------|--------------------------------|-----------------------------|---------------------|
| Single Family Residential | Hotel | Public Facilities/Utilities | Railroad |
| Two Family Residential | Office | School | Dixon City Limit |
| Mobile Home Park | Service Commercial | Church/Religious Facilities | Sphere of Influence |
| Multi Family Residential | General Industrial/Warehousing | Parks & Recreation/Greenway | |
| General Commercial | Open Storage | Open Space | |
| Mixed Use | Surface Parking | Agricultural | |
| | | Vacant | |

RESIDENTIAL GROWTH MANAGEMENT

The City of Dixon has adopted several policies and ordinances over the years as the city has grown to ensure that growth is managed in an orderly and efficient fashion and to prevent premature conversion of valuable prime farmland to urban uses. Measure B was approved by voters and adopted as City ordinance in 2002; it limits the number of new housing units that can be built in a given year to three percent of the total existing the prior year. Measure B is intended to create and maintain an approximate mix of 80 percent single-family housing units (including single-family attached and duplex units) and 20 percent multi-family dwelling units. The purpose of Measure B is to achieve a balanced housing mix and a steady, controlled rate of annual growth. Residential development in Dixon is also subject to the City's Zoning Ordinance and Design Guidelines. Measure A, which was adopted by Solano voters in 1984, calls for city-centered growth to ensure that almost all residential growth that occurs within the county is located within incorporated areas. In 1994, the Solano County Board of Supervisors adopted the Orderly Growth Initiative (OGI) in order to extend the protections of Measure A until December 31, 2010 and ensure that lands zoned for agriculture cannot change without a popular vote.

Measure T was approved in 2008 as an amendment to the Orderly Growth Initiative that updated certain provisions of the Solano County General Plan relating to agriculture and open space policies and land use designations, and extended the amended initiative until December 31, 2028. The Orderly Growth Initiative applies to unincorporated land within Solano County, including the SOI, **in order to focus residential growth in the County's seven cities.**

The City of Dixon is a party to two Greenbelt Agreements: the Vacaville-Dixon Greenbelt and the Dixon-Davis Greenbelt. The Vacaville-Dixon Greenbelt is an approximately 1,000-acre agricultural and open space buffer between the cities of Vacaville and Dixon near Interstate 80. The Vacaville-Dixon Greenbelt Authority was formed in 1996 to monitor the land and the greenbelt is implemented through acquisition from willing sellers and resale of the properties with a permanent conservation easement. The Davis-Dixon Greenbelt is an agricultural buffer between the two cities and was formed in 1999 through an agreement with the City of Davis. No land was added to the greenbelt until 2004, when approximately 350 acres of agricultural land were purchased through agreements with the City of Davis, University of California at Davis, the Solano Land Trust, and federal and state agencies.

CURRENT DIXON GENERAL PLAN

The Dixon General Plan 1993-2010 was originally adopted in December 1993, replacing the 1987 General Plan. Subsequently, the City made significant revisions to the 1993-2010 General Plan in 2005, when the Air Quality Element was added, and again in 2010, when maps and statistical data were updated and a discussion of seismic and flooding hazards was added. The Proposed Plan is intended to make further revisions to the adopted 1993 General Plan and subsequent revisions to the 1993 General Plan made in 2005 and 2010, with an emphasis on new policies related to land use, economic development, water and energy conservation, roadway improvements, preservation of agricultural land, climate change, and multi-modal transportation options.

PRIOR PLANNING INITIATIVES

Subsequent to adoption of the 1993 General Plan, the City has completed several major planning initiatives, including the Northeast Quadrant Specific Plan, the Southwest Dixon Specific Plan, and the 2015-2023 Housing Element. Each initiative is summarized below.

NE Quadrant Specific Plan

Adopted in 1995, the Northeast Quadrant Specific Plan (NQSP) establishes a land use and circulation plan, policies, and guidelines for the ultimate development of 643 acres in the northeast portion of the City of Dixon. The purpose of the NQSP was to institute development criteria for this area after it was rezoned from agriculture to Employment Center (E) and Highway Commercial (HC) under the 1993 General Plan. The land use program in the Northeast Quadrant Specific Plan includes a mix of commercial, professional and administrative office, and light industrial uses, projected to result in approximately 11,200 new jobs. The NQSP has been amended numerous times, the most recent being June 2009. In February 2003, it was amended relative to the signage regulations for the 140-acre parcel (Wal-Mart) at the corner of N. First Street and Dorset Drive, which opened in October 2003. A 22-acre parcel adjacent to the I-80/Pedrick Road off-ramp approximately 0.75 miles from Wal-Mart has been developed as a TEC Equipment commercial facility, which opened in mid-2019. In September 2019, the City of Dixon and Scannell Properties negotiated a Development Agreement and Project Finance Plan for a warehouse distribution facility (General Electric) on a 32-acre parcel at the northeast corner of Dorset Drive next to Wal-Mart. While construction of the first phase of development of this project has not yet begun (as of June 2020), the City found that impacts of the project would not result in significant environmental impacts not previously studied in the NQSP.

Southwest Dixon Specific Plan

The Southwest Dixon Specific Plan (SWDSP) was adopted in 2005 and provides for the development of residential, commercial, and employment center uses within approximately 477 acres of primarily agricultural land in Southwest Dixon. The purpose of the Plan is to guide land use location, intensity and density, infrastructure requirements and the overall circulation pattern of the area. SWDSP goals include balancing a mix of employment, commercial, and residential uses in the Plan Area; providing transportation and public service systems; reserving land for community and recreational facilities; enhancing livability; establishing a high level of quality in design; and contributing to the overall infrastructure plans for the City, as described in the General Plan. The SWDSP land use program includes 1,365 housing units as well as approximately 963,800 square feet of commercial development. In 2005, the City approved a Development Agreement with the major landowners to allow the development of 906 single-family homes and 231 multi-family homes. The Homestead development is the first development to be implemented within the SWDSP and is currently planned to include 1,168 single-family homes of varying sizes, 274 of which are for residents age 55 and older. Also included in the project are a commercial site for community serving retail businesses; 32.6 acres of parks, open space and trails; a fire-station site; and new roads and improvements to existing transportation infrastructure. **Initial site work for Homestead's first phase concluded in the fall of 2019. Construction of the first phase of development, located on the east and west sides of Pitt School Road and south of Hillview Drive, is anticipated to begin in 2020.**

Housing Element Update

The Housing Element is one of the State-mandated elements **that must be included in the City's** General Plan. State law stipulates that the Housing Element include certain items, such as a Housing Needs Assessment; goals, policies and objectives regarding housing in Dixon; and implementation programs to work toward achieving those goals. In May 2015, the City adopted the 2015-2023 Housing Element Update to cover the eight-year planning period from January 2015 through January 2023. The proposed General Plan Update has not proposed any amendments to the Housing Element Update.

Priority Development and Priority Production Areas

In 2011, the City nominated Downtown Dixon as a Priority Development Area (PDA) to promote transit-oriented development in the vicinity of the newly reconstructed train station and support revitalization of the traditional commercial heart of the community. PDAs are an integral part of the regional sustainable growth strategy that coordinates housing plans, open space conservation efforts, economic development strategies, and transportation investments throughout the San Francisco Bay Area. A Downtown PDA Plan was prepared in 2017 but was never formally adopted by the City of Dixon.

In 2017, the Metropolitan Transportation Commission (MTC) initiated a new Priority Production Area (PPA) program intended to strengthen selected clusters of industrial development in the region and support the growth of middle-wage jobs in sectors involving production, distribution, and repair services, including logistics and advanced manufacturing. In September 2019, the City of Dixon nominated a 282-acre area within the Northeast Quadrant as a PPA, and the area was formally designated a PPA by MTC in January 2020. With the designation of the PPA, MTC removed the Downtown PDA designation.

2.4 Purpose and Objectives of the Proposed Plan

The Proposed Plan is an update to the Dixon General Plan that includes comprehensive revisions to land use designations and policy framework intended to guide development and conservation within the Planning Area through 2040. As required under the CEQA Guidelines, this section provides a description of the Proposed Plan's purpose and objectives (California Code of Regulations [CCR] 15124).

PURPOSE

California Government Code Section 65300 requires each city and county in California to adopt a **general plan** "for the physical development of the county or city, and any land outside its boundaries which...bears relation to its planning." The Dixon General Plan can be considered the City's **development constitution, containing both a statement of the community's vision of its long-term development as well as the policies to support that vision by guiding the physical growth of the city.** The Proposed Plan contains policies to guide decision-making related to development, housing, transportation, environmental quality, public services, parks, and open spaces. The Proposed Plan is a document to be adopted by the City Council that serves the following purposes:

- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision;
- Establish long-range development policies that will guide City departments, Planning Commission, and City Council decision-making;
- Provide a basis for judging whether specific development proposals and public projects are in harmony with plan policies;
- Plan in a manner that meets future land needs based on the projected population and job growth;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the small-town character of the community, preserve environmental resources, and minimize hazards; and
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and master plans, and the Capital Improvement Program.

The Proposed Plan would replace the existing 1993 General Plan in all elements, excluding the Housing Element, which was adopted and certified by the California Department of Housing and Community Development (HCD) in May 2015. The existing 1993 General Plan has a horizon year of 2010. The Proposed Plan would establish a planning and policy framework that would extend to horizon year 2040.

OBJECTIVES

As required under CEQA Section 15124, the following specific objectives have been established for the Proposed Plan:

- **Preserving and enhancing Dixon's small-town character;**
- Fostering economic development and building a strong, diverse economy with quality jobs for local residents;
- Ensuring a sustainable, measured rate of growth and efficient delivery of public services;
- **Promoting high-quality development that respects and complements Dixon's historic context and natural environment;**
- Preserving and protecting surrounding agricultural and open space lands; and
- Encouraging careful stewardship of water, energy, and other environmental resources.

2.5 General Plan Update Process

The General Plan Update process was initiated in late 2014 with a series of meetings involving the City Council, Planning Commission, GPAC, City staff and the consultant (Dyett & Bhatia), as well as with the launch of the project website. The first phase of the General Plan Update process was focused on community outreach to identify the most important issues to address with the General Plan and to establish a vision for the future of Dixon. This phase included a community-wide survey and a community workshop, which generated input from nearly 300 Dixon residents. Based on the input received, the GPAC helped to craft a Vision Statement and Guiding Principles, which were reviewed by the Planning Commission and approved by the City Council on May 10, 2016.

Concurrent with these visioning activities, the consultant team performed technical existing conditions research, preparing a Demographics and Economics Report in May 2015 (BAE Urban Economics, 2015); a memo on economic considerations for Sphere of Influence (SOI) expansion in August 2015 (BAE Urban Economics, 2015); and a Map Atlas describing existing conditions and planning issues and options in May 2016 (Dyett & Bhatia, 2016). The results of the existing conditions research were presented to the GPAC, the Planning Commission and City Council in 2016. The existing conditions research has informed development of the policy framework for the General Plan Update and provides critical information for the background and settings sections of the Proposed Plan and this EIR.

The second phase of the Update process focused on developing and analyzing land use alternatives to inform the creation of a Preferred Land Use Plan. From a range of five preliminary alternatives developed by the GPAC and reviewed by the Planning Commission, the City Council selected two alternatives for further analysis. The consultant team then prepared an Alternatives Evaluation Report, comparing the pros and cons of the alternatives, including potential population and job growth; transportation and utility infrastructure needs; and fiscal impacts on City finances (Dyett & Bhatia, 2017). In February 2017, the GPAC reviewed the Alternatives Evaluation Report and **provided input to inform the City Council's decision on the Preferred Land Use Plan**. In June 2017, the City Council approved the Preferred Land Use Plan, which is now part of the Proposed Plan.

In March 2018, the GPAC reconvened to review and provide input on draft goals for the General Plan Update. Based on comments received verbally at the March meeting and in writing thereafter, staff and the consultant refined the draft goals and presented them to the Planning Commission in April. The Planning Commission approved the draft goals for use in the General Plan on April 17, 2018.

Following the refinement of the General Plan Update Draft Goals, the consultant team developed a corresponding policy framework comprised of policies and actions. Policies and actions that support and implement the Draft Goals were reviewed and refined with the GPAC at a policy summit on July 28, 2018.

Narrative text, maps and graphics that describe the context for the Goals, policies and actions and illustrate key concepts were then crafted to complete the Draft General Plan, at which point the GPAC was given the opportunity to review the Draft General Plan prior to its release for public review and comment.

2040 VISION

The vision forms the basis for the Proposed Plan’s policies. The vision is an expression of the collective hopes and aspirations that members of the Dixon community have for the City’s future, and was formed from all of the input shared by community members throughout the planning process.

In 2040, Dixon is a place that has preserved its small town character. It has allowed sustainable, compatible growth necessary to support the community economically, provide jobs, and maintain services, ensuring a high quality of life. New development is thoughtfully designed and is of a scale and character that supports and strengthens Dixon’s historic development pattern. New and future development of Dixon’s historic downtown protects, preserves, and promotes its heritage. We celebrate our agricultural heritage and continue to prioritize farmland preservation, growth in the agriculture industry, and stewardship of our natural resources. Dixon is a safe, welcoming environment for individuals and families of all ages and backgrounds, which is highly valued. Residents and visitors can travel to and around town with ease, safety, and convenience, and they are served by plentiful and well-maintained parks and other community facilities. Youth are engaged in high quality schools and community activities, and seniors have the services and support they need to age in place. In 2040, Dixon can look forward to a bright future in which its unique character continues through a diverse community to be preserved and strengthened in the years to come.

GUIDING PRINCIPLES

The following Guiding Principles expand upon the 2040 vision, establishing detailed, actionable objectives that support the vision and provide a foundation for the policies in the Proposed Plan. The Guiding Principles emerged from the various comments and community discussions that took place as part of the planning process. All of the Proposed Plan’s policies advance one or more of the Guiding Principles in order to achieve the community vision.

1. *Small Town Character:* Promote and preserve Dixon’s unique attributes—its quiet, safe, family-friendly, small-town charm.
2. *Sustainable Growth:* Allow residential growth consistent with the limitations of Measure B. Non-residential development should contribute to the City’s fiscal health or benefit the community. All new development will mitigate any negative impacts as identified. New growth should respect and build on Dixon’s historical context and natural environment.
3. *Strong Economy:* Promote high quality jobs and diversify the local economy, while retaining and supporting local businesses. Provide opportunities for residents to work locally if they choose.
4. *High Quality Development:* Ensure that new development is well designed, appropriately scaled, and makes a thoughtful and positive contribution to the city. All new development should be contiguous to existing developed areas. New areas to be annexed should be comprehensively planned.
5. *Historic Downtown:* Reinforce Downtown Dixon as the city’s physical and cultural center. Encourage investments that increase Downtown’s vitality and provide opportunities for

residents and visitors to congregate and recreate, while respecting the area's unique historic resources and character.

6. *Agriculture and Natural Resources*: Maintain Dixon as a community surrounded by productive agricultural land. Support and promote growth in the agricultural industry and greenbelts, where appropriate. Use resources, such as soil and water, wisely; minimize pollution and community exposure to hazardous conditions.
7. *Mobility*: Prioritize creating and maintaining a transportation network that is safe, efficient, and well connected. Ensure that the street network functions for the automobile, yet is easily accessible, safe, and convenient for those traveling by other means, consistent with “Complete Streets” guidelines. Build on area rail access for cargo and look for additional alternatives for passenger transportation.
8. *Diverse Community*: Embrace differences and serve all equally. Provide community facilities and services that meet the needs of all ages, backgrounds, and interests. Provide for housing that meets the needs of a range of income levels and household sizes.
9. *Energy Conservation*: Promote residential and commercial energy conservation and transition to renewable energy resources as feasible.

2.6 Proposed Plan Characteristics

The Proposed Plan is an update to the Dixon General Plan that incorporates changes to the policy framework and land use designations intended to guide development and conservation through 2040 and to comply with new State laws that have come into force since the plan was last updated, including requirements for addressing geologic hazards, flooding, and wildland and urban fires, and environmental justice. Additionally, the Proposed Plan will include policies and implementing actions designed to catalyze job-generating development in the Northeast Quadrant Specific Plan Area and to support residential development in the Southwest Dixon Specific Plan Area, locations within the City limit that have previously been the focus of comprehensive long-range planning efforts.

PLAN ORGANIZATION

The existing General Plan organizational structure has been modified slightly in the proposed General Plan. In addition, some elements have been reorganized, and the proposed General Plan adds an optional element not included in the existing General Plan. The proposed General Plan contains six elements addressing the State mandated topics of land use, circulation, housing, open space, conservation, safety, and noise, supplemented with the optional economic development element. Additionally, as housing elements are required to be updated more frequently on a State-mandated cycle, the Dixon Housing Element is provided under a separate cover.

Each element begins with a discussion of existing issues and opportunities in Dixon and then presents a series of goals, policies, and actions. The goals describe general desired results that the community seeks to create through the implementation of the General Plan. Policies and implementing actions both support the goals. Policies are specific statements that regulate activities in the City, guide **decision-making** on an ongoing basis and direct implementing actions to achieve a goal. General Plan policies guide City staff and the Planning Commission in their review of land

development projects and in decision-making about City actions. Actions are measures, procedures, or techniques intended to implement one or more policies to help reach a specified goal. Typically, an action is a discrete item done once and completed. The elements and goals of the proposed General Plan are summarized as follows.

- Chapter 1: Introduction. This chapter outlines the vision for Dixon’s **future and guiding principles** for its growth and development, provides a basic context for the General Plan **Planning Area, and covers the General Plan’s purpose, relationships to other plans,** organization, and requirements for administration.
- Chapter 2: Natural Environment. This element includes background information and policies relating to resource conservation, environmental protection, energy and water conservation, reuse and recycling, and building a resilient community. This element also provides an overview of the public safety risks in Dixon related to seismic and geologic hazards, flood hazards, hazardous materials and operations, airport hazards, fire hazards, and noise, as well as corresponding mitigating policies. This element meets the State requirements of an Open Space Element, a Conservation Element, a Noise Element, and a Safety Element. Goals for this element include:
 - Protecting life and property from natural and human-made hazards and provide quick, effective response to disasters and emergencies;
 - Preserving, protecting and enhancing natural resources, habitats and watersheds in Dixon and the surrounding area, promoting responsible management practices.;
 - Minimizing air, noise, soil, and water pollution as well as community exposure to hazardous conditions;
 - Using energy and water wisely and promoting reduced consumption; and
 - Optimizing the use of available resources by encouraging residents, businesses and visitors to reuse and recycle.
- Chapter 3: Land Use and Community Character. This element describes the existing **land use pattern and provides an explanation of the General Plan’s approach to citywide growth.** The goals and policies in this chapter provide the physical framework for land use and development in the City. The land use portion of this chapter is required by State law, while the community character portion is an optional topic. Goals for this chapter include:
 - Focusing future development so that it is contiguous to existing developed areas and supports efficient delivery of public services and infrastructure;
 - Promoting and enhancing Dixon’s quiet, safe, family-friendly small-town;
 - Reinforcing the downtown area as the physical and cultural center of the city, recognizing its importance to the community’s sense of place;
 - Ensuring that new non-residential development is well-designed and makes a positive contribution to the character of the city without adversely affecting the quality of life in surrounding neighborhoods;
 - Fostering residential neighborhoods with attractive design, safe streets, access to shopping and services, and gathering places for the community;

- Fostering neighborhood centers throughout Dixon that provide services and amenities locally and contribute to a sense of community; and
- Protecting, preserving, and enhancing the significant cultural and historic features of Dixon, recognizing their importance to the character of the community.
- Chapter 4: Economic Development. This element provides an overview of the population and employment context in Dixon, and outlines goals and policies to support economic development. This is an optional element not required by State law. Goals for this element include:
 - Capitalizing on Dixon's access to the Bay Area, Davis and Sacramento and its ground, rail, and air transportation connections to foster quality jobs and diversify economic activity that enhances employment opportunities and strengthens the City's tax base while supporting and enhancing quality of life;
 - Partnering with businesses and entrepreneurs to make Dixon an attractive, easy place to do business;
 - Retaining and fostering the growth of Dixon businesses, including home-grown businesses that build on local strengths and know-how;
 - Expanding and diversifying the local economy by attracting new businesses that offer quality employment opportunities;
 - Leveraging the value of Dixon's location along major regional transportation corridors to promote commercial development; and
 - Make Downtown Dixon a destination that draws residents from the community and visitors from the local area with its historic architecture, cultural activities, festivals, shops, and restaurants.
- Chapter 5: Mobility and Transportation. This element includes policies and standards that seek to maintain safe and efficient circulation for all modes of travel. It identifies street improvements, and addresses walking, biking, transit, and parking to support a multi-modal circulation system. This element is required by State law. Goals for this element include:
 - Planning, designing, constructing, and maintaining a transportation network that provides safe and efficient access throughout the city and optimizes travel by all modes;
 - Managing the City's transportation system to minimize congestion, improve flow and improve air quality;
 - Facilitating convenient and safe pedestrian, bicycle, transit, and vehicular connections between neighborhoods and to destinations in Dixon and neighboring communities;
 - Facilitating travel within the city and to surrounding communities by alternatives to the automobile and reduce vehicle miles travelled;
 - Ensuring Downtown Dixon is an inviting place where it is safe and easy to walk, bike, drive, and park; and
 - Providing for goods movement by road and rail that supports commerce and industry while protecting local character and maintaining a high quality of life in Dixon.

- Chapter 6: Public Facilities and Services. This element contains background information, goals, and policies related to police and fire services, schools, community facilities and libraries, parks and recreation, water supply and demand, and public utilities. The public safety portion of this element is required by State law, while the public services portion is an optional topic. Goals for this element include:
 - Providing police and fire services that are responsive to community needs and ensure a safe and secure environment for people and property in Dixon;
 - Planning and providing utilities and infrastructure to deliver safe, reliable and adequate services for current and future residents and businesses to ensure the continued health and welfare of the community;
 - Locating and designing schools and other public facilities as contributors to neighborhood quality of life, identity and pride;
 - Providing and maintaining a comprehensive system of quality parks and recreational facilities to meet the needs of **Dixon’s current and future population**;
 - Providing community services that support families and meet the needs of community members of all ages, backgrounds and interests;
 - Promoting the health and welfare of all community members;
 - Encouraging the active participation of Dixon residents and businesses in civic life; and
 - Embracing differences and serving all in the community equally.

OPPORTUNITY AREAS

The Proposed Plan would focus future development and redevelopment primarily into key areas of the city as shown on Figure 2-4 and described below, including the Northeast Quadrant, Southwest Dixon, Downtown Dixon, and the SR 113 Corridor. Outside of these areas, the existing land use pattern would be preserved, with some infill development anticipated on vacant sites in residential neighborhoods. Change envisioned reflects existing site constraints, such as existing long-term leases, existing development agreements, and pending development applications, as well as physical and jurisdictional constraints and market conditions.

Northeast Quadrant

Encompassing the 643-acre Northeast Quadrant Specific Plan Area, the Northeast Quadrant extends from I-80 in the west to the eastern City limit and is generally bounded on the south by Vaughn Road and Pedrick Road on the east. The Northeast Quadrant area is a prominent gateway to the City of Dixon and is intended to provide a major employment center, shopping and services, and efficient vehicle circulation. The Proposed Plan envisions a new mixed use employment district within the Northeast Quadrant Specific Plan Area, leveraging the proximity of UC Davis and providing research and development facilities, office space, event space, and faculty, staff, and student housing opportunities together with open space and amenities. The Proposed Plan also supports industrial development in the area, including logistics, warehousing and advanced manufacturing activities within the 282-acre portion of the Northeast Quadrant that has been designated a PPA.

Southwest Dixon

The Southwest Dixon Specific Plan Area covers a 477-acre area bounded by West A Street to the north, I-80 to the west, and the City limit to the south. The Proposed Plan anticipates development of residential, commercial, and employment center uses within existing agricultural land in Southwest Dixon. The Proposed Plan anticipates full buildout of the housing units projected under the SWSP, as well as construction of new commercial and industrial job-generating uses, a fire station, and a community center. The employment uses would be concentrated in the western portion of the Specific Plan Area, adjacent to the freeway interchange.

Downtown Dixon

Downtown Dixon is focused around the intersection of West A Street and First Street at the heart of the community. With the reconstruction of train station and the development of the Pardi Market site, the City has made important investments downtown in recent years. The Proposed Plan envisions further revitalization downtown with the addition of a mix of new residential, retail, office, entertainment, cultural, civic, and personal service uses that contribute to the area's vitality and its charming Main Street feel. New small lot single family homes, townhomes, and apartments will provide more residents within walking distance of shops and restaurants. Mixed use development downtown will also provide opportunities for professional office space alongside and above retail and restaurant uses that cater to Dixon residents and visitors from the surrounding area.

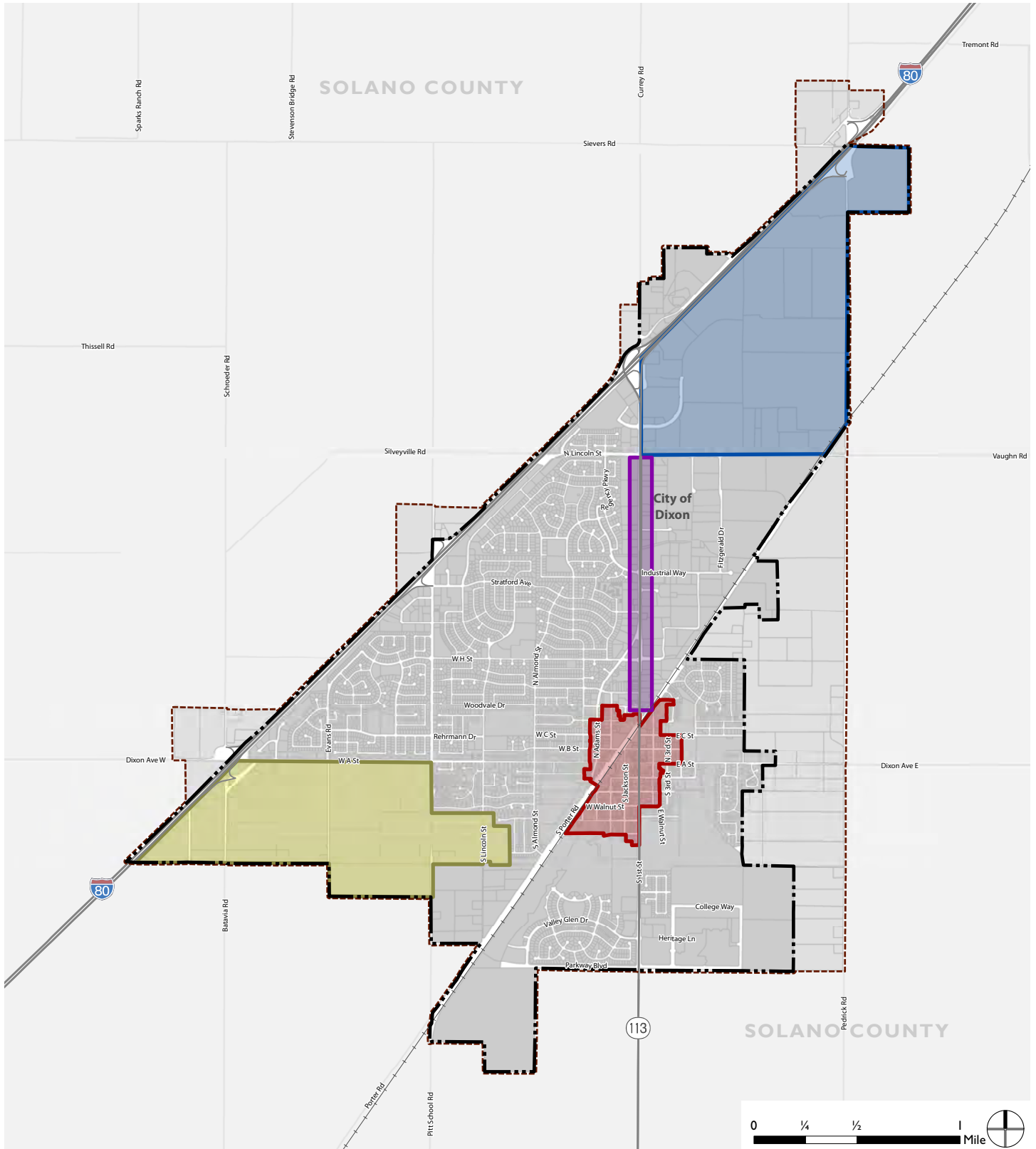
SR-113 Corridor

Extending from West F Street north to Vaughn Road, the SR 113 corridor represents an important opportunity for the community. The corridor is a major regional transportation route that contains a number of successful retail businesses, including auto, boat and tractor dealerships that draw consumers from the wider area. The Proposed Plan envisions new commercial and residential development on vacant and underutilized properties along the corridor to complement and support the existing businesses.








Neighborhoods

The Proposed Plan fosters neighborhood centers in several key locations to serve as focal points of the community, providing goods and services that cater to the daily needs of residents as well as opportunities to gather and socialize within walking and biking distance of home. The Proposed Plan anticipates full residential buildout of the Valley Glen Development (southeast of the Union Pacific Railroad and West Cherry Street) and the Parklane Subdivision (bounded by College Avenue to the north, Syracuse Lane to the South, Harvard Drive to the west, and Yale Drive to the east).

Figure 2.4: Focus Areas



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019

-  SR I13 Corridor
-  Priority Development Area (PDA)
-  Northeast Quadrant SP
-  Southwest Dixon SP
-  Railroad
-  Dixon City Limit
-  Sphere of Influence

PROPOSED LAND USE DESIGNATIONS

The Proposed Plan includes a streamlined, consolidated set of land use designations to guide development in the Planning Area through 2040. Under the Proposed Plan, three new mixed use designations are introduced to implement the vision for key change areas, while the total number of residential and industrial designations is reduced to simplify the planning framework. The proposed designations are described below and depicted on Figure 2-5.

Residential

Low Density Residential

The Low Density Residential (LDR) designation applies to residential neighborhoods characterized primarily by single-family homes, including single-family attached, semi-detached, and duet homes. This designation provides for a range of lot sizes and allows up to 9 dwelling units per acre, which is equivalent to a population of approximately 29 persons per acre. Permitted land uses include single-family residences and public facilities such as schools, religious institutions, parks, and other community facilities appropriate within a residential neighborhood.

Medium Density Residential

The Medium Density Residential (MDR) designation provides for a mix of single-family homes and other more compact housing types, including townhomes, garden homes, zero lot line homes, apartments, and condominiums. The intent of this designation is to foster a traditional neighborhood environment with a range of housing types that are affordable to people at all ages and stages of life. This designation allows 10 to 22 dwelling units per acre, which is equivalent to a population of up to approximately 70 persons per acre. Permitted land uses include residential homes and public facilities such as schools, religious institutions, parks, and other community facilities appropriate within a residential neighborhood.

Mixed Use

Corridor Mixed Use

The Corridor Mixed Use (CMU) designation is intended to foster a mix of retail and commercial uses, supported by housing. Mixed use can be vertical and/or horizontal, and the allowable range of uses includes large format retail, shopping centers, offices, hotels and housing. On larger sites, more than one use is required. On smaller sites, a single use may be permitted. Allowable FAR is 50% to 200% for single-use developments and 80% to 240% for mixed-use developments (combined residential and non-residential uses). Allowable residential density is 14 to 28 dwelling units per acre, with densities on the lower end of that range where proposed development abuts low density residential development. Corresponding zoning will be performance-based in order to promote flexibility and minimize non-conformance issues of existing uses.

Downtown Mixed Use

The Downtown Mixed Use (DT) designation applies in Dixon's traditional downtown area and is intended to promote Downtown Dixon as an attractive destination for residents and visitors to the community. The area is envisioned as a walkable environment with direct pedestrian and bicycle connections to surrounding residential neighborhoods and to the downtown rail depot. The designation provides for a full range of retail, employment, residential, entertainment, cultural, civic, and personal service uses. Permitted uses include restaurants, apparel stores, specialty shops, theaters, bookstores, travel agencies, hotels/motels and other similar uses serving a community-wide market and a larger visitor population, as well as banks, financial institutions, medical and professional offices, and other general offices and community institutional uses. On larger sites, more than one use is required. On smaller sites, a single use may be permitted. Maximum allowable FAR is 300% (combined residential and non-residential uses) and maximum allowable residential density is 30 dwelling units per acre.

Campus Mixed Use

The Campus Mixed Use (CAMU) designation is intended to foster new mixed-use employment districts with a range of job-generating uses, housing, and easy access to the regional transportation network. The CAMU designation would promote clusters of related light industrial, manufacturing, office, research & development, retail, service, and residential uses. Mixed use can be vertical and/or horizontal. Allowable FAR is 30% to 60% (combined residential and non-residential uses) and maximum allowable residential density is 30 dwelling units per acre. Corresponding zoning will be performance-based in order to promote flexibility and minimize non-conformance issues of existing uses.

Commercial

Neighborhood Commercial

The Neighborhood Commercial (NC) designation provides for shopping centers with off-street parking or a cluster of street-front stores that serve the immediate neighborhood. Permitted uses include supermarkets, bakeries, drugstores, variety stores, barber shops, restaurants, medical offices with urgent care or outpatient uses, dry cleaners, and hardware stores. The maximum permitted FAR in the NC designation is 60%.

Regional Commercial

The Regional Commercial (RC) designation provides for a range of commercial uses that cater to traffic passing through Dixon on I-80 as well as to local residents. Permitted uses include motels; fast food and other restaurants; gas stations; and large-format chain retail establishments, including **supermarkets and super-drugstores**. **This designation applies to land immediately adjacent to I-80 access ramps in areas that are easily accessible by car and highly visible from the roadway.** Maximum permitted FAR in the HC designation is 80%.

Service Commercial

The Service Commercial (SC) designation provides for retail and service uses not typically located in shopping centers, including auto repair, storage facilities, equipment rental, wholesale **businesses, nurseries, and contractors' facilities**. Ancillary office spaces that support such commercial uses are also permitted. Heavy industrial uses are not appropriate. Maximum permitted FAR in the I designation is 40%.

Other

Industrial

The Industrial (I) designation provides for large and small scale industrial, manufacturing, distributing and heavy commercial uses such as food processing, fabricating, motor vehicle service and repair, truck yards and terminals, warehousing and storage uses, wholesale uses, construction supplies, building material facilities, offices, **contractors' yards and the like**. Establishments located in these areas characteristically require large parcels of land with good truck and/or rail access. Due to the nature of their operation, uses in this designation require a degree of separation from residential, retail, restaurant, hotel and other sensitive uses. Maximum permitted FAR in the I designation is 60%.

Public Facilities

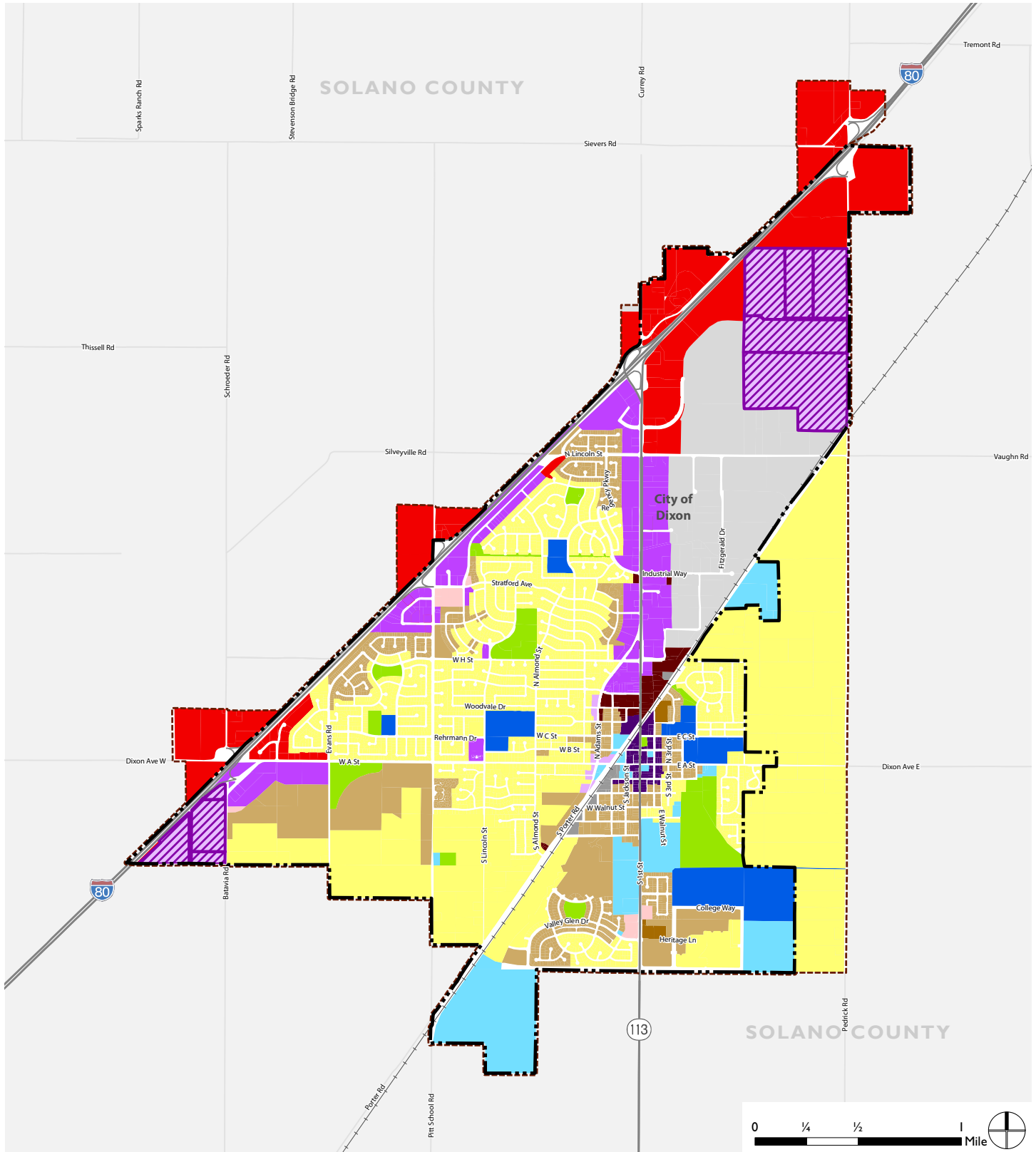
The Public Facilities (PF) designation encompasses facilities serving the good of the community, including fire and police stations; government buildings; libraries; schools; educational institutions; community centers; and other community-serving recreational facilities such as the Dixon May Fair. Assisted living facilities and neighborhood-oriented retail are conditional uses in this designation requiring permits. Co-location of multiple public facilities on a single site is encouraged where it will increase access to community services while offering cost savings and other benefits to community service providers. The maximum permitted FAR in the PF designation is from 10% to 100%, determined on a case-by-case basis in consideration of the neighborhood context.

Parks

The Parks (P) designation applies to existing and planned public parks in Dixon, including community parks, neighborhood parks, and **special park facilities such as the Women's Improvement Club Park and the Linear Path** extending from Regency Parkway to North Lincoln Street. Except for sites that have been acquired, the General Plan Land Use Map shows only the general location of future parks in the areas they will be needed. Permitted uses in this designation include parks, playgrounds, trails, recreational facilities and other similar uses. There is no maximum permitted FAR in this designation.

The location of proposed park facilities (indicated with a tree symbol) are not site specific, rather they identify the general vicinity where a park facility is needed to support future neighborhood growth.

Figure 2-5: Proposed Plan Land Use



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019

Land Use Designations

Residential

- Low Density Residential
- Medium Density Residential
- High Density Residential

Mixed Use

- Neighborhood Mixed Use

- Commercial Mixed Use

- Downtown Mixed Use

- Campus Mixed Use

Commercial

- Neighborhood Commercial

- Regional Commercial

- Service Commercial

Other

- Light Industrial

- General Industrial

- Governmental/Institutional

- School Buildings/Play Areas

- Parks

- Railroad

- Dixon City Limit

- Sphere of Influence



Table 2-2: Proposed Land Use Designations

Land Use Category	Incorporated		Unincorporated		Total Planning Area	
	Acres	Percentage	Acres	Percentage	Acres	Percentage
Residential	1,692.5	41.7%	613.8	61.7%	2,306.3	45.7%
Low Density Residential	1,179.1	29.1%	613.8	61.7%	1,792.8	35.5%
Medium Density Residential	513.4	12.7%	0	0.0%	513.4	10.2%
Mixed Use	938.0	23.1%	0	0.0%	938.0	18.6%
Corridor Mixed Use	303.2	7.5%	0	0.0%	316.5	6.0%
Downtown Mixed Use	316.5	7.8%	0	0.0%	303.2	6.3%
Campus Mixed Use	318.3	7.9%	0	0.0%	60.6	6.3%
Commercial	296.7	7.3%	376.0	37.8%	878.5	17.4%
Regional Commercial	205.8	5.1%	376.0	37.8%	581.8	11.5%
Service Commercial	60.6	1.5%	0	0.0%	60.6	1.2%
Neighborhood Commercial	30.3	0.8%	0	0.0%	316.5	0.6%
Industrial	549.2	13.5%	0	0.0%	549.2	10.9%
Public and Community Facilities	578.4	14.3%	0.8	0.1%	579.2	11.5%
Public Facilities	447.9	7.3%	0.8	0.1%	448.7	8.9%
Parks	130.5	3.2%	0	0.0%	130.5	2.3%
Agricultural	0.1	0.0%	4.5	0.5%	4.6	0.1%
Total	4,054.8	100.0%	995.1	100.0%	5,049.9	100.0%

Source: City of Dixon, 2019; Solano County GIS, 2014; Dyett & Bhatia, 2020.

ROADWAY IMPROVEMENTS

To support development under the proposed land use framework, the Proposed Plan includes the following transportation network improvement projects intended to prioritize east-west connectivity and improve roadway safety in Dixon:

- Parkway Overcrossing Project: an extension of Parkway Boulevard from Valley Glen Drive west to Pitt School Road, with a structure traveling over the Union Pacific Railroad tracks.
- Vaughn Road Realignment Project: a reconfiguration of this 4-lane arterial roadway immediately east of the UPRR tracks so that it curves north to meet Pedrick Road and provide a northbound connection without the need for an at grade crossing of the tracks.
- A Street Grade Separation Project: a major project for a grade separated vehicle crossing of the railway tracks downtown, identified as a prerequisite for a passenger rail station.
- A Street “Queue-Cutter” Project: an interim measure involving installation of a signal to hold and release traffic in intervals at the A Street at grade crossing of the railway tracks downtown in order to address eastbound vehicle queuing until grade separation can be completed.

2.7 Buildout Projections

Buildout refers to the estimated amount of new development and corresponding growth in population and employment that is likely to take place under the Proposed Plan through the horizon year of 2040 based on the proposed land use designations. Buildout estimates should not be considered a prediction for growth, as the actual amount of development that will occur through 2040 is based on many factors outside of the City's control, including changes in regional real estate and labor markets and the decisions of individual property owners. Therefore, buildout estimates represent one potential set of outcomes rather than definitive figures. Additionally, the designation of a site for a specific land use in the Proposed Plan does not guarantee that a site will be developed or redeveloped at the assumed density during the planning period, as future development will rely primarily on each property owner's initiative. Outside of city limits and the SOI, lands remain under the development control of Solano County unless annexed.

For this EIR, buildout projections do not include the total amount of potential development that could be accommodated by the Proposed Plan. Rather, the buildout assumes that only a portion of the total potential development will occur by 2040, as described below.

Methodology and Assumptions

Buildout is calculated by summing existing development, development that is planned, permitted, or under construction (known as "pipeline development"), and an estimated amount of potential new development in the Planning Area. New development is generally expected to occur in the change areas or in areas identified by the City's 2015 Housing Element as "opportunity sites" (the housing sites most likely to develop given parcel size, environmental constraints, and current zoning), as well as on a portion of vacant properties in the city's neighborhoods. The methodology used to calculate buildout for this analysis is summarized below..

Existing Development

To establish existing population, housing units, and jobs in the Planning Area, data from the Solano County Assessor, the United States Census Bureau (USCB) Longitudinal Employer-Household Dynamics (LEHD), the California Department of Finance (DOF), and the real estate analytics firm CoStar was adjusted according to categories that correspond to those in the citywide traffic model. For residential development, Assessor's data was used to identify single-family residential units (including two-family residential units), DOF 2018 data was used to identify multi-family residential units, and the 2015 Housing Element was used to identify mobile home units. Existing population was calculated assuming a residential vacancy rate of 5 percent in the city and 8.8 percent in the SOI, 3.2 persons per household in the city, and 2.8 persons per household in the SOI as estimated in the 2010 Census for Solano County and 2018 DOF data. City staff confirmed that LEHD data from the U.S. Census represents the best available and most recent (2015) estimate of jobs in Dixon, and was broken into detailed employment categories. CoStar data, Solano County Assessor's data, and data from the City of Dixon on home-based businesses was used to geo-locate jobs in the City of Dixon.

Future Development

Future development projected to occur under the Proposed Plan includes development on the Housing Element housing inventory opportunity sites and on vacant and underutilized sites primarily located in opportunity areas. To estimate buildout for the planning horizon, the midpoint of allowable density and intensity ranges was assumed for each proposed land use designation, as well as the percentage of parcels that would actually develop depending on location and land use designation. Job numbers were derived based on square feet per employee assumptions from ABAG, CoStar, SCAG, BAE, and the U.S. Green Building Council. Not all parcels identified as vacant or opportunity sites were assumed to fully develop by the planning horizon year of 2040 in order to reflect more realistic development patterns. Residential development projections in account for the growth control limitations of Measure B, which limits the number of new housing units that can be built in a given year to three percent of the total existing the prior year. Measure B is intended to create and maintain an approximate mix of 80 percent single-family housing units (including single-family attached and duplex units) and 20 percent multi-family dwelling units.

Buildout projections also account for pipeline projects that are currently under City review or that have been approved but not yet constructed. Pipeline projects include development assumed under the NOSP and SWDSP, as well as estimated remaining housing units to be built within the Parkland Subdivision and Valley Glen project site. Given Solano County's Orderly Growth Initiative, which calls for city-centered growth to ensure that almost all residential growth that occurs within the county is located within incorporated areas, limited growth is projected in the SOI over the planning horizon. Growth forecasts account for pipeline projects in the SOI based on the density ranges allowed in the applicable County residential land use designations.

Residential Buildout

Table 2-3 describes potential residential development resulting from application of land uses shown on the Proposed Plan Land Use Diagram (Figure 2-5), according to analysis undertaken for the Proposed Plan using the methodology described above.

Table 2-3: Projected Residential Units at Buildout (2040)

	<i>Dixon</i>			<i>SOI</i>			<i>Planning Area Total</i>		
	<i>SFR</i> ¹	<i>MFR</i> ²	<i>Total</i>	<i>SFR</i>	<i>MFR</i>	<i>Total</i>	<i>SFR</i>	<i>MFR</i>	<i>Total</i>
Existing (2018)	5,230	1,310	6,540	10	0	10	5,240	1,310	6,550
Future Development ³	2,220	610	2,820	140	0	140	2,350	610	2,960
Total at Buildout⁴	7,440	1,920	9,360	150	0	150	7,590	1,920	9,510

Notes:

1. SFR = Single-Family Residential
2. MFR = Multi-Family Residential
3. Includes pipeline development
4. Figures may not sum due to rounding

Source: Dyett & Bhatia, 2019.

Buildout Population

The buildout population takes into consideration the population estimated for 2018, as well as additional population associated with housing units projected to be built through the planning horizon, including population projections assumed by pipeline projects. The population projection assumes a residential vacancy rate of 5 percent in the city and 8.8 percent in the SOI as estimated in the 2010 Census for Solano County, and 3.2 persons per household in the city and 2.8 persons per household in the SOI as estimated in the 2010 Census for Solano County and 2018 DOF data. Table 2-4 describes the projected population at buildout of the Proposed Plan.

Table 2-4: Projected Population at Buildout (2040)

	<i>Dixon</i>	<i>SOI</i>	<i>Planning Area Total</i>
Existing (2018)	20,100	30	20,130
Future Development ¹	8,350	410	8,760
Total at Buildout²	28,450	440	28,890

Notes:

1. Includes pipeline development
2. Figures may not sum due to rounding

Source: Dyett & Bhatia, 2019.

Employment Projections

The projected number of future jobs was added to the estimated number of existing jobs (as of 2018). Table 2-5 describes projected non-residential development in terms of square feet and potential jobs.

Table 2-5: Projected Jobs at Buildout (2040)

	<i>Dixon</i>	<i>SOI</i>	<i>Planning Area Total</i>
Existing (2018)	4,950	410	5,360
Future Development ¹	1,280	0	1,280
Total at Buildout ²	6,220	410	6,640

Notes:

1. Includes pipeline development

2. Figures may not sum due to rounding

Source: Dyett & Bhatia, 2019.

2.8 Intended Uses of the EIR

This EIR examines the potential environmental impacts of implementing the Proposed Plan and identifies mitigation measures required to address significant impacts, as necessary. As no specific developments are proposed as part of the Proposed Plan, this EIR is a programmatic EIR and does not evaluate the potential environmental impacts of specific, individual development proposals that may be allowed under the Proposed Plan subsequent to its adoption. Subsequent projects will be reviewed by the City for consistency with the Proposed Plan and this EIR, and adequate project-level environmental review will be conducted as required under CEQA. Projects successive to this EIR include, but are not limited to, the following:

- Approval and funding of major public projects and capital improvements
- Issuance of permits and other approvals necessary for implementation of the proposed General Plan
- Property rezoning consistent with the proposed General Plan
- Development plan approvals, such as tentative maps, variances, conditional use permits, and other
- Land use permits
- Permit issuances and other approvals necessary for public and private development projects
- Development agreement processes and approvals

TIERING

This EIR is a program-level EIR and does not evaluate the impacts of specific, individual developments that may be allowed under the proposed General Plan. Each specific future project will require separate environmental review, as required by CEQA, to secure the necessary discretionary development permits. Therefore, while subsequent environmental review may be tiered off this EIR,² this EIR is not intended to address impacts of individual projects. Subsequent projects will be reviewed by the City for consistency with the proposed General Plan and this EIR. Subsequent project-level environmental review will be conducted as required by CEQA.

REQUIRED PERMITS AND APPROVALS

Implementation of the Proposed Plan will require additional regulatory actions by the City of Dixon, including amendments to the Northeast Quadrant Specific Plan, Southwest Dixon Specific Plan, and Zoning Code to ensure consistency across documents. The primary regulatory actions are described below. Additionally, the Proposed Plan will require a recommendation from the Planning Commission and adoption by the City Council. Future, subsequent development under the Proposed Plan may require approval of federal, State, and responsible or trustee agencies that may rely on this programmatic EIR for decisions in their areas of expertise.

2.9 Documents Incorporated by Reference

Consistent with CEQA Guidelines Section 15150, this Draft EIR incorporates the following documents by reference³:

- *Northeast Quadrant Specific Plan and Final EIR* (SCH# 92113073)
- *Southwest Dixon Specific Plan and Final EIR* (SCH # 200204237)

Where portions of these documents are relevant to the analysis in this EIR, the incorporated part of the referenced documents are briefly summarized. In compliance with CEQA Guidelines Section 15150, the documents listed above are available to the public at the City of Dixon Planning Division Office and online.

² Section 15385 of the CEQA Guidelines describes “tiering” as “the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared.”

³ Under CEQA Guidelines 15150, an EIR may incorporate by reference all or portions of another document that is a matter of public record or generally available to the public. The incorporated text shall be considered to be set forth in full as part of the EIR.

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3 Environmental Settings and Impacts

3.1 Overview

Sections 3.1 through 3.15 analyze the potential environmental impacts that may occur as a result of implementation of the Proposed Plan. The environmental issues subject to detailed analysis in the following sections include those that were identified by the City as potentially significant in response to the NOP. There are 14 environmental issues addressed in the following sections. Chapter 3.15 includes a brief discussion of additional impacts that were determined to be not potentially significant, in the issue areas of Forestry Resources and Mineral Resources. The environmental topics addressed are as follows:

- 3.1 Aesthetics
- 3.2 Agricultural Resources
- 3.3 Air Quality
- 3.4 Biological Resources
- 3.5 Cultural, Historic, and Tribal Cultural Resources
- 3.6 Energy, Greenhouse Gas Emissions, and Climate Change
- 3.7 Geology, Soils, and Seismicity
- 3.8 Hazards and Hazardous Materials
- 3.9 Hydrology and Water Quality
- 3.10 Land Use, Population, and Housing
- 3.11 Noise
- 3.12 Public Services and Recreation
- 3.13 Transportation
- 3.14 Utilities

These assessments are based on the description of the Proposed Plan provided in Chapter 2. This evaluation does not satisfy the need for project-level CEQA analysis for individual projects. Individual projects under the Proposed Plan will require project-level analysis at the time they are proposed, based on the details of those projects and the existing conditions at the time such projects are pursued.

3.2 Impacts Considered

According to the CEQA Guidelines, the following general types of environmental impacts must be considered in this program EIR:

- Direct or primary impacts, which are caused by the project and occur at the same time and place as the project.
- Indirect or secondary impacts, which are caused by the project and occur later in time or farther removed in distance but are still reasonably foreseeable. Indirect or secondary impacts may include growth-inducing impacts and other impacts related to induced changes in the pattern of land use, population density, or growth rate, and related impacts on air and water and other natural systems, including ecosystems. Indirect or secondary impacts may also include cumulative impacts.
- Short-term impacts, which are those of a limited duration, such as the impacts that would occur during the construction phase of a project.
- Long-term impacts, which are those of greater duration, including those that would endure for the life of a project and beyond.
- Significant unavoidable impacts, which cannot be mitigated to a level that is less than significant.
- Irreversible environmental changes, which may include current or future irretrievable commitments to using non-renewable resources, or growth-inducing impacts that commit future generations to similar irretrievable commitments of resources. Such changes are addressed in Chapter 5: CEQA Required Conclusions.
- Cumulative impacts, which include two or more individual impacts that when considered together are considerable or which compound or increase other adverse environmental effects. The individual impacts may be changes resulting from a single project or a program of projects. The cumulative effect from several projects is the change in the environment that results from the incremental effect of the Proposed Plan when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. Cumulative impacts are addressed in Chapter 5: CEQA Required Conclusions.

3.3 Organization

Each section is formatted to include a summary of existing conditions, including regulatory context; the criteria for determination of significance for each impact; methodology and assumptions; evaluation of potential project impacts; a mitigation framework, if applicable; and a conclusion of significance after mitigation for impacts identified as significant.

The goals, policies, and implementing actions of the proposed General Plan reduce some impacts, and cases in which existing and proposed regulations, policies, and implementing actions reduce the impacts to a less-than-significant level are documented.

Physical Setting

This subsection provides relevant information about the existing physical environment related to the particular environmental topic. In accordance with Section 15125 of the CEQA Guidelines, the discussion of the physical environment describes existing conditions within the Planning Area at the time the NOP was filed on November 13, 2018, unless otherwise noted. The physical setting provides the basis for assessing and comparing impacts of the Proposed Plan.

Regulatory Setting

This subsection describes federal, State, regional, and local plans, policies, regulations, and laws that may apply to the environmental topic under evaluation.

Impact Analysis

This subsection focuses on an analysis of the potential environmental impacts of the Proposed Plan described in Chapter 2, “Project Description,” of this EIR. All potential direct and indirect impacts in Chapter 3 are evaluated in relation to applicable City, State, and federal standards. Thresholds of significance based on Appendix G of the CEQA Guidelines are used to identify the potential environmental impacts of the Proposed Plan; the methods used to conduct the impact analysis are summarized; and the impacts analyzed in the respective sub-section are summarized. The analysis of the potential environmental impacts is divided by impact significance criterion, presented in the following format:

Impact 3.X-X The impact statement briefly summarizes the findings of the impact discussion based on the identified threshold of significance. The level of significance is included at the end of the impact statement. Levels of significance listed in this EIR (as described below) are *no impact*, *less than significant*, *less than significant with mitigation*, or *significant and unavoidable*.

The impact discussion is contained in the paragraphs following the impact statement. The analysis compares implementation of the Proposed Plan to existing conditions. In addition, the effects of policies and implementing actions in the Proposed Plan that would reduce the impacts are discussed.

Mitigation Measures

For potentially significant impacts, feasible mitigation measures are identified. If the impact is determined to be less than significant, no mitigation measures are required. Where no mitigation measures have been identified that could reduce an impact to less than significant, the reason is stated and no mitigation measures are listed.

As stated in CEQA Guidelines Section 15370, mitigation includes:

1. Avoiding the impact altogether by not taking a certain action or parts of an action.
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3. Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
5. Compensating for the impact by replacing or providing substitute resources or environments.

3.4 Determining Level of Significance

For each potential environmental impact identified in this EIR, a statement of the level of significance of the impact is provided. Impacts are assessed as one of the following categories:

The term “no impact” is used when the environmental resource being discussed would not be adversely affected by implementation of the Proposed Plan. It means no change from existing conditions. This impact level does not need mitigation.

A “less than significant” impact would cause a minor change in the physical environment but would not meet or exceed the significance threshold. This impact level does not require mitigation, even if feasible, under CEQA.

An impact that is “less than significant with mitigation” would have a substantial adverse effect on the physical environment but could be reduced to a less than significant level with mitigation. Under CEQA, mitigation measures must be provided, where feasible, to reduce the magnitude of significant or potentially significant impacts.

A “significant and unavoidable impact” would cause a substantial adverse effect on the environment, and no known feasible mitigation measures are available to reduce the impact to a less than significant level. Under CEQA, a project with significant and unavoidable impacts may be approved, but the lead agency (in this case, the City) must prepare a “statement of overriding considerations” in accordance with Section 15093 of the CEQA Guidelines, explaining how the benefits of the project outweigh the potential for significant impacts.

3.1 Aesthetics

This section assesses potential local and regional impacts on aesthetics from future development under the Proposed Plan, including those related to scenic vistas, visual character, and light and glare. The section provides context **regarding the Planning Area's existing visual character and scenic resources**, as well as relevant federal, State, and local regulations and programs. There were no responses to the NOP regarding topics addressed in this section of the EIR.

Environmental Setting

PHYSICAL SETTING

Visual Character Overview

Dixon's **small-town** character is shaped by its agricultural heritage. Dixon contains a compact city center, and the City's total area is approximately 7 square miles. A greenbelt of open space and/or farmland surrounds the city, and the city limits are bordered by flat fields of row crops. **Other open space amenities include the city's parks. Within the city, downtown Dixon serves as the focal point of community identity.** Dixon has become more suburban in recent decades, with subdivisions swelling its population of commuters who travel to Davis and the Sacramento area to work along the Interstate 80 (I-80) corridor. Architectural elements of significant merit include **historic buildings located within Dixon's downtown.**

Since the 1870s, Dixon's history has been intertwined with that of the railroad, when the community was physically relocated toward the railroad tracks to capitalize on the transportation and resultant economic benefits. The Union Pacific railroad tracks run parallel to I-80 in a northeast-southwest configuration and traverse the city near the downtown area. The Planning Area is also served by the I-80 and State Route 113, which provide view corridors to the Coast Range west of the Planning Area and the surrounding greenbelt.

Scenic Resources and Vistas

Scenic vistas and resources are somewhat limited in the Planning Area. Unlike much of the rest of the northern Bay Area, Dixon has flat terrain and climate similar to that of the Central Valley. This allows clear and largely unobstructed views of the surrounding greenbelt of open space and agricultural land. The Northern Coast Range forms the western border of the Sacramento Valley and is visible from the Planning Area, particularly along stretches of I-80.

Open space, agricultural land, and parks contribute to the visual character of the Planning Area. Land to the southwest of the Planning Area is located within the Dixon/Vacaville greenbelt and subject to the Solano County General Plan Agricultural Reserve Overlay. Additional open space within the Planning Area includes multiple parks and wetland/valley foothill riparian habitat south of the Union Pacific Railroad tracks.

Historical buildings and architecture add to the Planning Area's visual character. As discussed in Section 3.5: Cultural and Tribal Cultural Resources, the State OHP Historic Property Directory (HPD) lists 315 recorded historic buildings or structures within the Planning Area. The National Register of Historic Places (NRHP) lists two of these resources: the Jackson Fay Brown House and the Dixon Carnegie Library. The Jackson Fay Brown House is architecturally significant as a distinctive example of a rural Italianate farmhouse in California. The Dixon Carnegie Library is one of the few remaining Carnegie Library buildings still operating as a library in the United States.

While not officially designated as a historic resource, the Milk Farm sign located adjacent to I-80 is **a reminder of Dixon's agricultural heritage and landmark to commuters.** From its inception, the principal livelihood of Dixon was farming. Historically, agrarian pursuits consisted of subsistence farming, cattle-raising, and alfalfa and small-grain production. However, by the early 1900s Dixon was known as "The Dairy City" after hydraulic pumps became available to farmers. The Dixon "Milk Farm" was opened in 1919 and relocated in 1939 close to I-80. The Milk Farm served many travelers stopping at the restaurant and service station. Dairy operations stopped after World War II and the Milk Farm building was demolished in 2000, but its distinctive sign remains.

Scenic Routes and Gateways

Dixon is located on the Interstate 80 corridor connecting San Francisco and Sacramento, an important element in establishing the visual image of Dixon. The Dixon Planning Area is served by **the following five I-80 interchanges: Pedrick Road, State Route 113 (First Street), Pitt School Road, West A Street/Dixon Avenue, and Midway Road.** West A Street is the main thoroughfare for vehicles coming to downtown Dixon from I-80 and provides the first impression for freeway motorists entering southwest Dixon. The West A Street corridor is considered an important **gateway into the City of Dixon. The City's Design Guidelines also provide guidance to create visual gateways into Southwest Dixon Neighborhoods.** Secondary regional access to Dixon is provided by State Route 113 (First Street), which serves as the main street in downtown Dixon.

A scenic road may be considered (often in the CEQA context) as a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and human-made scenic resources. Scenic roads direct views to areas of exceptional beauty, natural resources or landmarks, or historic or cultural interests. The City has not established any formal scenic road designations within the city boundary and has not created any development criteria or design guidelines related to scenic roadways. No roads in the Planning Area have been designated as State Scenic Highways and none have been identified as Eligible for designation. The Solano County General Plan identifies the entirety of I-80 and SR-113 as scenic roadways and includes policies and implementation programs aimed at protecting designated scenic roadways, as discussed below in the Regulatory Settings.

Community Character

Downtown

Downtown Dixon is a mixture of historic and newer buildings concentrated along South First Street. Commercial buildings in the Downtown tend to be older; many originated in the early part of the twentieth century and display a wide range of architectural styles and materials. **The small-town character of Downtown Dixon is enhanced by the Downtown's compact size, old-fashioned alleyways, and historic public facilities including the Dixon Carnegie Library and Women's Improvement Park.** Downtown Dixon is bisected by SR 113.

In recent years, the City has been engaged in planning efforts to enhance Downtown Dixon, with the adoption of the Downtown Revitalization Plan in 1996 and the Downtown Dixon Business Association Design Guidelines in 2007. The construction of a replica of the old Dixon train station was also completed in 2007, with the intent that it would eventually be used as a train station for the Capitol Corridor Train. However, no passenger trains currently stop in Dixon.

In 2011, the City nominated Downtown Dixon as a Priority Development Area (PDA) to promote transit-oriented development in the vicinity of the newly reconstructed train station and support revitalization of the traditional commercial heart of the community. PDAs are an integral part of the regional sustainable growth strategy that coordinates housing plans, open space conservation efforts, economic development strategies, and transportation investments throughout the San Francisco Bay Area. A Downtown PDA Plan was prepared in 2017 but was never formally adopted by the City of Dixon.

In 2017, the Metropolitan Transportation Commission (MTC) initiated a new Priority Production Area (PPA) program intended to strengthen selected clusters of industrial development in the region and support the growth of middle-wage jobs in sectors involving production, distribution, and repair services, including logistics and advanced manufacturing. In September 2019, the City of Dixon nominated a 282-acre area within the Northeast Quadrant as a PPA, and the area was formally designated a PPA by MTC in January 2020. With the designation of the PPA, MTC removed the Downtown PDA designation.

Open Space and Agriculture

Open space areas and agricultural lands provide a variety of benefits, including visual enjoyment and aesthetic beauty. Much of the open space and agricultural acreage is located in the eastern and southwestern portions of the Planning Area but within city boundaries. **The majority of open space and agricultural acreage is located within the City's SOI and is protected by the Dixon/Vacaville Greenbelt and Solano County General Plan Agricultural Reserve Overlay.**

A greenbelt of open space and farmland surrounds the city, contributing to both the agricultural views and economic success of the Planning Area. Sunflower fields and almond tree orchards along the I-80 in Dixon bloom in mid-summer and early spring, respectively, creating a scenic backdrop for travelers and a popular tourist destination. The Jepson Prairie Preserve is located 10 miles south of Dixon and is one of the few remaining vernal pool habitats and native bunchgrass prairies in California. While the Preserve itself is not located in the Planning Area, similar habitat is located in

the southern portion of the Planning Area (discussed in Section 3.4: Biological Resources) and adds to the aesthetic value of Dixon. Additionally, there are multiple parks within the Planning Area, including Hall Park, Northwest Park, Patwin Park, Conejo Park, Veterans Park, and the Women's Improvement Club Park.

Light and Glare

Light and glare sources within the Planning Area are primarily associated with residential, commercial, and industrial land uses. Streetlights are provided with the greatest frequency along major streets, such as SR 113. Streetlights are located in lesser frequencies in the more rural and agricultural portions of the Planning Area. In commercial and industrial areas, signage and cars in parking lots may produce light. Glass and reflective surfaces on buildings, residences, and vehicles traveling in the area and in parking lots in the downtown contribute to a limited amount of glare. The light and glare that exist in developed areas of the city are typical for an urbanized setting.

REGULATORY SETTING

Federal Regulations

There are no relevant federal laws, policies, plans, or programs that apply to the Proposed Plan.

State Regulations

Title 24, Part 6 of the California Code of Regulations Building Energy Efficiency Standards

Title 24, Part 6 of the California Building Code requires all new development to be subject to the Nighttime Sky-Title 24 Outdoor Lighting Standards, which was passed by California Legislature in 2001. This section of the building code seeks to minimize light pollution, increase energy efficiency, and improve safety.

California Scenic Highways Program

Recognizing the value of scenic areas and the value of views from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963. Under this program, numerous State highways have been designated as eligible for inclusion as scenic routes. The Master Plan of State Highways Eligible for Official Scenic Highway Designation maps show designated highway segments, as well as those that are eligible for designation. No roads in the Planning Area have been designated as eligible for the California Scenic Highways Program.

Local Regulations

Solano County General Plan

The Solano County General Plan addresses scenic resources in the Resources Element and cites “agricultural landscapes, the delta and marshlands, and the oak and grass covered hills” as valuable scenic vistas. The Solano County General Plan Resources Element designates I-80 and SR-113 as scenic roadway corridors.

In addition, Policy RS.P-37 states that the County will “[p]rotect the visual character of designated scenic roadways,” and Implementation Program RS.I-21 states “[p]reserve the visual character of scenic roadways as shown in Figure RS-5 through design review, designating alternate routes for faster traffic, regulating off-site advertising, limiting grading in the view corridor through the grading ordinance, limiting travel speeds, and providing pullover areas with trash and recycling receptacles.”

City of Dixon Municipal Code

Chapter 15.14 California Green Building Standards Code

The City of Dixon has adopted the 2016 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11). The purpose of the California Green Building Standards Code (CALGreen) is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

- Planning and design,
- Energy efficiency,
- Water efficiency and conservation,
- Material conservation and resources efficiency,
- Environmental quality.

CalGREEN includes both mandatory and voluntary measures for both residential and non-residential development. These include a nonresidential mandatory light pollution reduction measure that establishes maximum allowable light and glare standards for outdoor lighting systems for new nonresidential projects (2016 California Green Building Standards Code, 5.106.8 Light pollution reduction).

Chapter 16.10 Historical Building Code

Chapter 16.10 of the Dixon Municipal Code adopts the 2016 California Historical Building Code (CHBC), Title 24, California Code of Regulations, Part 8. The intent of the CHBC is to provide means for the preservation of the historical value of qualified historical buildings or structures and, concurrently, to provide reasonable safety from fire, seismic forces or other hazards for occupants of these buildings or structures, and to provide reasonable availability to and usability by, the disabled. The CHBC supplants the Uniform Building Code (UBC) and allows greater flexibility in the enforcement of code requirements.

Chapter 18.23 Design Review Commission

The purpose of Chapter 18.23 is to recognize the interdependence of land values and aesthetics and to provide methods to promote sound land use development and assist in the development of architectural standards and guidelines for residential, office, commercial, retail business, and

industrial structures. Chapter 18.23 establishes the height limitations, screening and landscaping, setbacks, and design review requirements for new development. As established in Chapter 18.23, the City Design Review Commission is responsible for reviewing the location, design, and intensity of all exterior lighting of new development. The City of Dixon Planning Commission serves as the City Design Review Commission.

Chapter 18.27 Off-Street Parking

Chapter 18.27 establishes standards for off-street parking. Off-street parking and loading areas are to be laid out in a manner which will ensure their usefulness, protect the public safety, add to the visual quality of the area and, where appropriate, insulate surrounding land uses from their impacts. Section 18.27.080, regarding standards for off-street parking facilities, and Section 18.27.120, regarding standards for off-street loading facilities, both state that if the parking or loading area is illuminated, lighting shall be deflected away from abutting residential sites so as to cause no annoying glare.

Chapter 18.28 Performance Standards

Chapter 18.27 establishes performance standards for proposed new land uses. Section 18.28.020 states that: “No land or building in any zoning district shall be occupied or used in any manner so as to create any dangerous, injurious, noxious or otherwise objectionable fire, explosive or other hazard; noise or vibration; smoke, dust, odor or other form of air pollution; heat, cold, dampness, electrical or other disturbance; glare; liquid or solid refuse or wastes; or other substance, condition or element in such a manner or amount as to adversely affect the surrounding area or adjoining premises.” Section 18.28.090 establishes humidity, heat, cold, and glare performance standards. When located in any residential, commercial, office or nonindustrial zoning district, all commercial and industrial uses must be operated as to not produce humidity, heat, cold, or glare which is readily detectable at or beyond any lot line of the lot containing the uses. When located in an industrial zoning district, all uses must be operated as to not produce humidity, heat, cold, or glare which is readily detectable at or beyond any boundary of the zone.

Northeast Quadrant Specific Plan

Adopted in 1995, the Northeast Quadrant Specific Plan (NQSP) establishes a land use and circulation plan, policies, and guidelines for the ultimate development of 643 acres in the northeast portion of the City of Dixon. The purpose of the NQSP was to institute development criteria for this parcel after it was rezoned from agriculture to Employment Center (E) and Highway Commercial (HC) under the 1993 General Plan. The land use program proposed by the Northeast Quadrant Specific Plan includes a mix of commercial, professional and administrative office, and light industrial uses. The NQSP has been amended numerous times, the most recent being June 2009. In February 2003, it was amended relative to the signage regulations for the 140-acre parcel (Wal-Mart) at the corner of N. First Street and Dorset Drive.

The Form and Design Element of the NQSP establishes standards and guidelines to serve as an aid in the design and review of individual developments within the Northeast Quadrant Specific Plan Area. The Form and Design objectives of the NQSP are to: provide for a blending of the built environment with landscaped open space to enhance work environments and enrich the overall

image of the plan area; apply state-of-the-art energy conservation methods and systems responsive to local climatic conditions to building and landscape design, building siting and orientation; enable superior quality development that integrates architectural style, landscaping, public art, signage, lighting, circulation, and street furniture to produce an environment that is aesthetically pleasing in form, scale, texture, color and variety; and ensure safety and convenience for all plan area users. The General Design Guidelines of the specific plan focus on the themes and design features that will be used throughout the plan area. Guidelines are included which detail the treatment of common elements or issues found in a number of different land use types. A focus of the design guidelines is on the interface between the outside world and the project.

Southwest Dixon Specific Plan

The Southwest Dixon Specific Plan (SWDSP) was adopted in 2005 and provides for the development of residential, commercial, and employment center uses within approximately 477 acres of primarily agricultural land in Southwest Dixon. The purpose of the Plan is to guide land use location, intensity and density, infrastructure requirements and the overall circulation pattern of the area. Specific Plan goals include balancing a mix of employment, commercial, and residential uses in the Plan Area; providing transportation and public service systems; reserving land for community and recreational facilities; enhancing livability; establishing a high level of quality in design; and contributing to the overall infrastructure plans for the City, as described in the General Plan.

The SWDSP includes multiple policies aimed at protecting visual resources. Additionally, the SWDSP includes the Southwest Dixon Supplemental Design Guidelines by reference, which provide more detailed direction for architectural design, signage, landscape design, and other facets of new development within the Southwest Dixon Specific Plan Area. The Supplemental Design Guidelines focus on the key elements identified by the SWDSP and assist the Planning Commission (**servicing as the City's Design Review Commission**) and City staff in their evaluation of new development.

City Downtown Dixon Business Association Design Guidelines

In 2007, the City Council adopted the Downtown Dixon Association Design Guidelines, a set of recommendations for the preservation and visual improvement of the Downtown. One of the main **priorities of the Guidelines is to ensure that new development Downtown is “visually compatible with the existing traditional building, i.e. late 19th century to early 20th century California commercial style.”** The **Design Guidelines are organized into six chapters: architectural guidelines, site planning, storefront design guidelines, parking and circulation design guidelines, sign design guidelines, and streetscape design guidelines.** The **Design Guidelines' objectives are centered on eight themes: architectural style, rhythm of façade widths, perceived scale of structures, distinction between upper and lower floors, building heights, pedestrian-oriented activity at the sidewalk and amenity areas, predominantly transparent ground floor facades in commercial and retail areas, and existing façade renewal.**

The Design Guidelines are implemented by the Planning Commission, servicing as the City's Design Review Commission, in consideration of renovation of existing structures and approval of new

infill development and are used in conjunction with the development standards of existing City codes.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Have a substantial adverse effect on a scenic vista;
- Criterion 2: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway;
- Criterion 3: In a non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings, or in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality;
or
- Criterion 4: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

METHODOLOGY AND ASSUMPTIONS

Aesthetics and visual resources are generally subjective by nature, and therefore the extent of visual impact associated with adoption and implementation of the Proposed Plan can be difficult to quantify. In addition, it is difficult to estimate the impact future development would have on scenic resources, since individual development projects can be designed to be compatible with and/or enhance the aesthetic quality of an area. As such, this analysis was based on the overall amount of new development at buildout of the Proposed Plan, the potential location of new development, and policies in the Proposed Plan.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Economic Development

- E-1.7 Require industrial, light industrial, and agro-industrial development to meet performance standards based on factors of noise, odor, light, glare, traffic generation and air emissions, soil contamination, and surface and groundwater contamination in order to minimize its impacts on established or proposed residential areas and other adjacent uses.
- E-5.2 Ensure that commercial centers visible from State highways in Dixon are attractively designed and easy to navigate.

- E-5.3 Enhance the visual character of commercial properties at freeway interchanges by encouraging facade improvements, distinctive signage, and other elements.
- E-5.A Prioritize efforts to fill vacant commercial space in high visibility locations at freeway interchanges and along major corridors.
- E-5.B Work with Caltrans and adjacent property owners to implement a coordinated landscaping and design strategy along State highway corridors.
- E-5.D Investigate methods such as a facade improvement program and attractive city entry signage to encourage upgrades to highly visible locations such as freeway interchanges, community entryways, and major corridors.
- E-5.E Study the need for business improvement districts to fund improvements that enhance the character of key commercial areas of the city.
- E-6.1 Recognize that protecting local historic character and providing a vital mix of daytime and evening uses is integral to the economic success of Downtown Dixon.
- E-6.2 Promote and encourage context-sensitive, mixed use residential, office, retail, and restaurant development on infill sites downtown.
- E-6.3 Actively support and promote locally-owned small businesses that cater to the needs of Dixon residents and visitors to differentiate Downtown Dixon from other commercial areas of the city.
- E-6.4 Foster attractive and safe public spaces and streets downtown through the implementation of the adopted downtown design guidelines.
- E-6.5 Partner with the Downtown Dixon Business Association, the Dixon Library, and other groups to promote Downtown Dixon as a focal point for arts, culture, and entertainment in the community.
- E-6.6 Support annual festivals and regular events that contribute to the economic vitality of Downtown Dixon.
- E-6.A Consult property owners, real estate brokers, and developers to identify barriers and incentives for investments needed to transform second floor spaces into viable office and residential spaces.
- E-6.B Explore the economic feasibility of a theatre/cinema venue downtown.
- E-6.C Work with local property owners, the Downtown Dixon Business Association, the Dixon Chamber of Commerce, the Dixon Library, and other downtown stakeholders to establish passenger rail service to Downtown Dixon.

Land Use and Community Character

- LCC-1.1 Recognize and maintain Dixon as a community surrounded by productive agricultural land and greenbelts.
- LCC-2.1 Maintain the "small town character" of Dixon while allowing for population growth and business as well as increased employment, shopping, cultural and recreational opportunities.
- LCC-2.2 **Encourage compatible new development that respects and complements Dixon's historic context and natural environment.**
- LCC-2.3 **Recognize a diversity of architectural styles contributes to Dixon's charm and promote a variety of building styles and types consistent with the community's small-town feel.**
- LCC-2.4 Require new development in mixed use areas and along corridors provide appropriate transitions in building height and massing so that it is sensitive to the physical and visual character of adjoining lower-density neighborhoods.
- LCC-2.5 Use the design review process to assess how built characteristics, including scale, materials, hardscape, lights, and landscaping, blend into the surrounding neighborhood.
- LCC-2.6 Encourage the design of projects that enhance public safety and discourage crime by orienting homes and buildings toward the street, providing adequate lighting and sight lines, and selectively installing fencing and landscaping.
- LCC-2.7 Encourage high standards of property maintenance and rapid abatement of conditions contributing to blight.
- LCC-2.8 Protect and improve scenic vistas in Dixon, including views from Interstate 80 and views of surrounding agricultural and open space lands.
- LCC-2.A Adopt citywide design guidelines for residential, commercial and mixed use development. The guidelines shall define and encourage elements and features that contribute to Dixon's small-town character.
- LCC-2.B Review the Municipal Code and identify opportunities to improve and streamline the Design Review Process.
- LCC-3.A Maintain and periodically update an historic resources inventory.
- LCC-3.B Develop an historic preservation plan, guidelines and supporting ordinances. The plan should consider incentives for the restoration and preservation of qualified historic buildings, such as granting tax abatements through a Mills Act Program or establishing an annual historic preservation award.

- LCC-3.E Partner with the Dixon Historical Society, the Dixon Library and other community groups to develop a historic buildings walking tour, with signage identifying historical attractions.
- LCC-4.3 Encourage infill development, adaptive reuse, and the restoration of historic buildings to revitalize Downtown Dixon as a center of community activity.
- LCC-5.1 Establish inviting gateways that signal entry into Dixon with high-quality development and similarly-themed design elements to build sense of place.
- LCC-5.A Update City regulations and establish design guidelines, as needed, to improve key gateways.
- LCC-5.B Support mural projects at high-visibility locations and install streetscape and landscape features and unifying signage to enhance gateways.
- LCC-6.5 Encourage new development to incorporate greenery, including climate appropriate trees and plants as well as rain gardens, and as new development occurs, acquire easements or development rights for open space, planting street trees, and landscaping adjacent to public rights-of-way.
- LCC-7.1 Foster the preservation, restoration, and compatible reuse of historically significant structures and sites.

Mobility and Transportation

- MT-3.C Collaborate with the Rails to Trails Conservancy, UC Davis, Solano County Transportation Authority and other partners to explore the possibility of creating a "rail with trail," or multiuse path adjacent to the railroad in Dixon.

Public Services and Facilities

- PS-4.6 Prioritize the maintenance and, where feasible, improvement of parks and recreational facilities to ensure safe, attractive facilities that are responsive to community needs.

IMPACTS

Impact 3.1-1 Implementation of the Proposed Plan would not have a substantial adverse effect on scenic vistas. (Less than Significant)

As noted in the Environmental Setting section, scenic vistas and resources are limited in the Planning Area. Implementation of the Proposed Plan could have a significant impact on scenic vistas if development resulted in the obstruction or removal of existing scenic vistas, including agricultural and historic resources.

The Proposed Plan includes policies and implementing actions aimed at maintaining and improving scenic vistas and resources. Proposed policy LCC-2.8 specifically requires the protection and improvement of scenic vistas such as views from I-80 and views of surrounding agricultural and open space lands, and proposed policy LCC-1.1 recognizes and maintains Dixon as a community surrounded by agricultural land and greenbelts. Implementing action E-5.D proposes methods to improve highly visible locations within the Planning Area such as freeway interchanges, community entryways, and major corridors. Proposed land use policies address building design and visual character and in doing so would also contribute to protection of scenic vistas and resources (policies LCC-2.2, LCC-2.4, LCC-2.5, LCC-4.1, and E-5.2, and implementing actions LCC-2.A and LCC-4.B).

Future residential development projects associated with implementation of the Proposed Plan would be subject to community design goals and policies (Policies 2-2.1 through 2-2.11) of the Southwest Dixon Specific Plan, as well as Zoning Ordinance requirements associated with site planning and development regulations including the height limitations, screening and landscaping, setbacks, and design review requirements established in Section 18.23. In addition, subsequent residential development projects would be subject to the Dixon Downtown Design Guidelines and/or the Southwest Dixon Supplemental Design Guidelines where appropriate. Compliance with existing regulations and Proposed Plan policies would ensure that impacts on scenic vistas would be less than significant.

Mitigation Measures

None required.

Impact 3.1-2 Implementation of the Proposed Plan would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)

As stated in the Regulatory Setting above, there are no Designated or Eligible State Scenic Highways in the Planning Area. Therefore, there would be no impact related to scenic resources within a State scenic highway.

Mitigation Measures

None required.

Impact 3.1-3 Implementation of the Proposed Plan would not substantially degrade the existing visual character or quality of public views of the site and its surroundings in a non-urbanized area or conflict with applicable zoning and other regulations governing scenic quality in an urbanized area. (Less than Significant)

Implementation of the Proposed Plan could substantially degrade the existing visual character or quality of the Planning Area if new development occurring under the Proposed Plan introduced built elements that were significantly out of character with existing development in terms of height, massing, or quality of design or materials. The visual character of the Planning Area is currently characterized by historic buildings and cultural resources, an accessible street network, and surrounding agricultural resources. The small-town character of the Planning Area contributes to its overall visual character. New development would not substantially degrade the existing visual character and quality of the site or its surroundings due to the City's current regulations and Proposed Plan policies.

Generally, the City of Dixon design review process would regulate new development and redevelopment for consistency with existing style, character, and quality. The City has an adopted sign ordinance that limits the size, type, and lighting of signs to minimize visual intrusion and clutter within the city. Future residential development projects will require compliance with community design goals and policies (Policies 2-2.1 through 2-2.11) of the Southwest Dixon Specific Plan, as well as Zoning Ordinance requirements associated with site planning and development regulations including the height limitations, screening and landscaping, setbacks, and design review requirements established in Section 18.23. In addition, subsequent residential development projects would be subject to the Dixon Downtown Design Guidelines and/or the Southwest Dixon Supplemental Design Guidelines where appropriate. The Downtown Design Guidelines specify requirements for the conservation, adaptive use, and enhancement of buildings and streetscapes within Downtown Dixon, and establish guidelines to maintain the Downtown's historic and small-town character. The Southwest Dixon Supplemental Design Guidelines set types of land uses, development standards, and design expectations for the area bounded by Interstate 80, West A Street, Pitt School Road, and the southern city limit. The strategies contained in the Downtown Design Guidelines and the Southwest Dixon Supplemental Design Guidelines ensure that any future development resulting from implementation of the Proposed Plan would have

physical, visual, and functional compatibility with surrounding uses and remain in keeping with the desired character of Dixon and its surroundings.

In addition, the Proposed Plan’s land use designations, policies, and implementing actions are intended to limit any visually incompatible development in the city while enhancing the area’s overall visual quality. The Proposed Plan would permit higher densities and intensities than what currently exists in the City of Dixon and its Sphere of Influence, which could result in development that obstructs scenic views within the Planning Area. However, new development would be subject to policies, in the Proposed Plan that emphasize visual compatibility with surrounding development and maintain the existing small-town character of Dixon (policies E-6.2, E-6.4, LCC-2.1, LCC-2.2, LCC-2.3, LCC-2.4, LCC-2.5, LCC-2.7, and LCC-4.3). Policies promote a diversity of architectural styles and require new development to provide appropriate transitions in building height and massing in order to ensure that development under the Proposed Plan is compatible with Dixon’s “small town character.” **The Proposed Plan would also use the established design review process to assess how built characteristics blend into the surrounding neighborhood.** Proposed Plan policies and implementing actions are sensitive to the historic and agricultural resources that shape the visual character of the Planning Area, and include measures to preserve and enhance these resources (policies LCC-1.1, LCC-2.2, LCC-2.8, LCC-3.1, and LCC-4.3, and implementing actions LCC-3.A, LCC-3.B, LCC-3.E). Additionally, many of the policies and implementing actions listed above would improve general visual character and quality through landscaping and façade improvements at freeway interchanges, attractive and inviting community entryways, mural projects, street trees, and incorporation of greenery in new developments (policies E-5.3, LCC-5.1, and LGC-5.5 and implementing actions E-5.A, E-5.B, E-5.D, and LCC-5.B). Implementation of the Proposed Plan would support existing downtown design guidelines and maintain the existing small-town character of Dixon while enhancing the overall visual quality and economic success of the Planning Area. Therefore, given compliance with existing regulations and Proposed Plan policies, impacts on visual character would be less than significant.

Mitigation Measures

None required.

Impact 3.1-4 Implementation of the Proposed Plan would not create new sources of substantial light or glare that could adversely affect day or nighttime views in the area. (Less than Significant)

Existing developed areas in the city currently generate some light and glare, and new development that would be facilitated by the Proposed Plan could result in increased light and glare. Some elements of the built environment, such as parking lots, commercial buildings, and signs, may emit light for 24 hours a day. New sources of daytime glare could include new buildings with reflective surfaces, such as office buildings with glazed windows. Such light and glare could affect residential areas, as well as areas frequented by wildlife.

Implementation of the Proposed Plan would result in significant new development in the Northeast Quadrant and Southwest Dixon areas, which are largely undeveloped and contain agricultural uses under existing conditions, thereby increasing light and glare in and around these areas. The

Northeast Quadrant Specific Plan EIR concludes that this impact would be less than significant with the implementation of mitigation measures 4.1-2a, which requires project applicants to minimize the use of bright and reflective building materials, and 4.1-2b, which also requires project applicants to prepare a photometric analysis demonstrating compliance with glare performance standards listed in subsection 12.24.09 of the Dixon Zoning Ordinance. The Southwest Dixon Specific Plan EIR also concludes that this impact would be less than significant with the implementation of mitigation measures that limit night lighting of non-residential buildings; establish certain lighting requirements; and require that all final project plans include preparation of a lighting plan for non-residential development, roadways, and public areas. Therefore, impacts associated with light and glare in the Northeast Quadrant and Southwest Dixon areas under the Proposed Plan would be less than significant.

All development associated with implementation of the Proposed Plan would be regulated by the Dixon Municipal Code, which contains standards for lighting and building materials that do not produce glare (Dixon Municipal Code Sections 18.28.020 and 18.28.090). Chapter 18 (Section 18.23.170) of the Municipal Code discourages the use of shiny metallic roofing and building materials. In addition, the function of the City Design Review Commission, as identified in Section 18.23 of the Zoning Ordinance, is to review the location, design, and intensity of all exterior lighting of new development. The Zoning Ordinance also contains lighting standards for parking facilities. The 2016 California Green Building Standards Code, adopted as Chapter 15.14 of the Dixon Municipal Code, includes a nonresidential mandatory light pollution reduction measure that establishes maximum allowable light and glare standards for outdoor lighting systems for new nonresidential projects (2016 California Green Building Standards Code, 5.106.8 Light pollution reduction). Additionally, Proposed Plan policy E-1.7 requires industrial, light industrial, and agro-industrial development to meet light and glare performance standards in order to minimize impacts on established or proposed residential areas. Compliance with existing regulation and Proposed Plan policies would ensure that development under the Proposed Plan would result in less than significant impacts associated with increased light and glare.

Mitigation Measures

None required.

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3.2 Agricultural Resources

This section assesses potential environmental impacts on agricultural resources from future development under the Proposed Plan, including those related to Prime Farmland, Unique Farmland, and Farmland of Statewide Importance; agricultural zoning and Williamson Act contracts; and the conversion of farmland to non-agricultural uses. This section describes existing agricultural resources in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were two comments on the Notice of Preparation (NOP) regarding topics covered in this section. The Solano County Local Agency Formation Commission (LAFCO) recommended that **the scope of the EIR include the City of Dixon's Sphere of Influence (SOI) Update and future anticipated annexations, taking into account LAFCO's SOI and annexation requirements.** This includes providing information about prime agricultural lands and mitigations that are consistent with the LAFCO standard, identifying the total number of acres that meets the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 definition of "Prime Agricultural Farmland," identifying all lands under a Williamson Act contract within the City's proposed SOI, and discussing the Vacaville-Dixon Greenbelt Area and associated policies. The Greenbelt Alliance expressed opposition to the annexation of the "areas of concern" (currently zoned as "Intensive Agriculture" in the Solano County General Plan), encouraged the City of Dixon to explore adopting an Urban Growth Boundary to protect the agricultural and open space lands around the city, **highlighted Dixon residents' support of a greenbelt outside of city limits,** and addressed the economic benefits of protecting agricultural lands. Since these comments were received, the Proposed Plan has been revised to no longer include Areas of Concern; the Proposed Plan only addresses the City of Dixon and its existing SOI and does not propose land use changes to the Areas of Concern. The remainder of the comments are addressed in Impacts 3.2-1, 3.2-2, and 3.2-3.

Environmental Setting

PHYSICAL SETTING

Agricultural Context

In the Planning Area, agriculture has played a role as an important industry, a predominant feature of the visual landscape, and a major contributor to the City of Dixon's identity. Dixon's agricultural heritage derives from its location in the Dixon Ridge farming area, which has some of Solano County's most fertile soil. The Planning Area is located in Solano County, the 28th most productive county for total value of production at \$327,751. In 2016, the county's top four commodities by gross value were tomatoes, vegetables, walnuts, and nursery products. There are 407,101 acres of farmland in Solano County (Solano County, 2017).

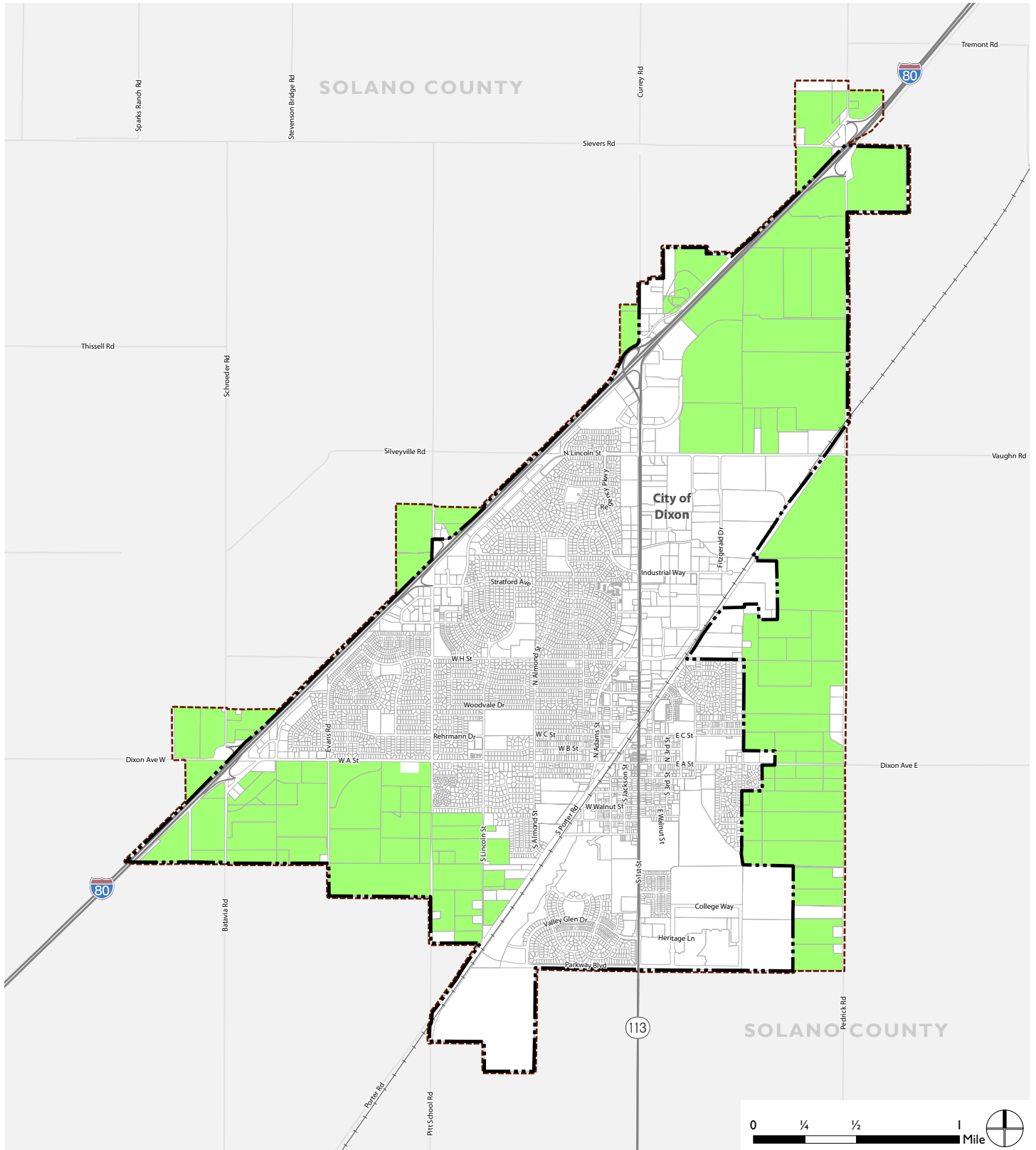
In California, productive farmland acreage has been gradually declining, due primarily to the conversion of farmland to non-agricultural uses. Between 1984 and 2010, the area of farm and grazing lands in the state declined by more than 1.4 million acres, including a loss of 662,000 acres of Prime Farmland, the farmland type with the best soils for agricultural production (Department of Conservation, 2014). Since 1984, Solano County's annual agricultural land acreage has been decreasing, with a loss of 156 net acres between 2014 and 2016. However, Solano County has seen an 1,806-acre net increase of Important Farmland (FMMP, 2016). The Planning Area is also surrounded by the agricultural region of Dixon Ridge, which consists of the second most valuable farmland in Solano County, after the Winters region to the northwest of Dixon in Yolo County. The majority of the goods produced in this region are field crops, including tomatoes, alfalfa, and sunflowers. Two of the few processing facilities in Solano County, the Campbell Soup Plant and Superior Meat, are located in the Dixon Ridge region.

Existing Farmland in the Planning Area

Farmland Characteristics

According to 2014 Solano County Assessor data, existing agricultural uses occupy 2,134 acres (39 percent) of the total land area within the Planning Area, including 1,385 acres in the City of Dixon and 750 acres in the SOI. The majority of existing agricultural uses in the city are related to crops, including some orchard crops grown in the SOI. Grazing lands also are interspersed throughout the Planning Area. Agricultural uses, including grazing and farmland, are also located adjacent to the City limit, with large areas around the periphery of the City limit. With the exception of two parcels in the southern part of the Planning Area, and a few perimeter portions of parcels in the north of the Planning Area, all agricultural lands within the city limit were designated for non-agricultural uses under the 1993 General Plan. However, many of these parcels have not yet been developed with urban uses, and, to some extent, are still being used for agriculture.

3.2-1: Existing Agricultural Land



Data Source: Solano County GIS, 2014; City of Dixon, 2019; Dyett & Bhatia, 2019





-  Agricultural
-  Railroad
-  Dixon City Limit
-  Sphere of Influence

Table 3.2-1: Farmland Types and Acreages

	Dixon		SOI		Total Planning Area	
	Acre	Percentage of City	Acre	Percentage of SOI	Acre	Percentage of Planning Area
Prime Farmland	864	19	736	83	1,600	29
Farmland of Statewide Importance	0	0	0	0	0	0
Unique Farmland	19	0	0	0	19	0
Grazing Land	327	7	1	0	310	6
Total	1,191	26	737	83	1,928	35

Note: Numbers may not sum due to rounding

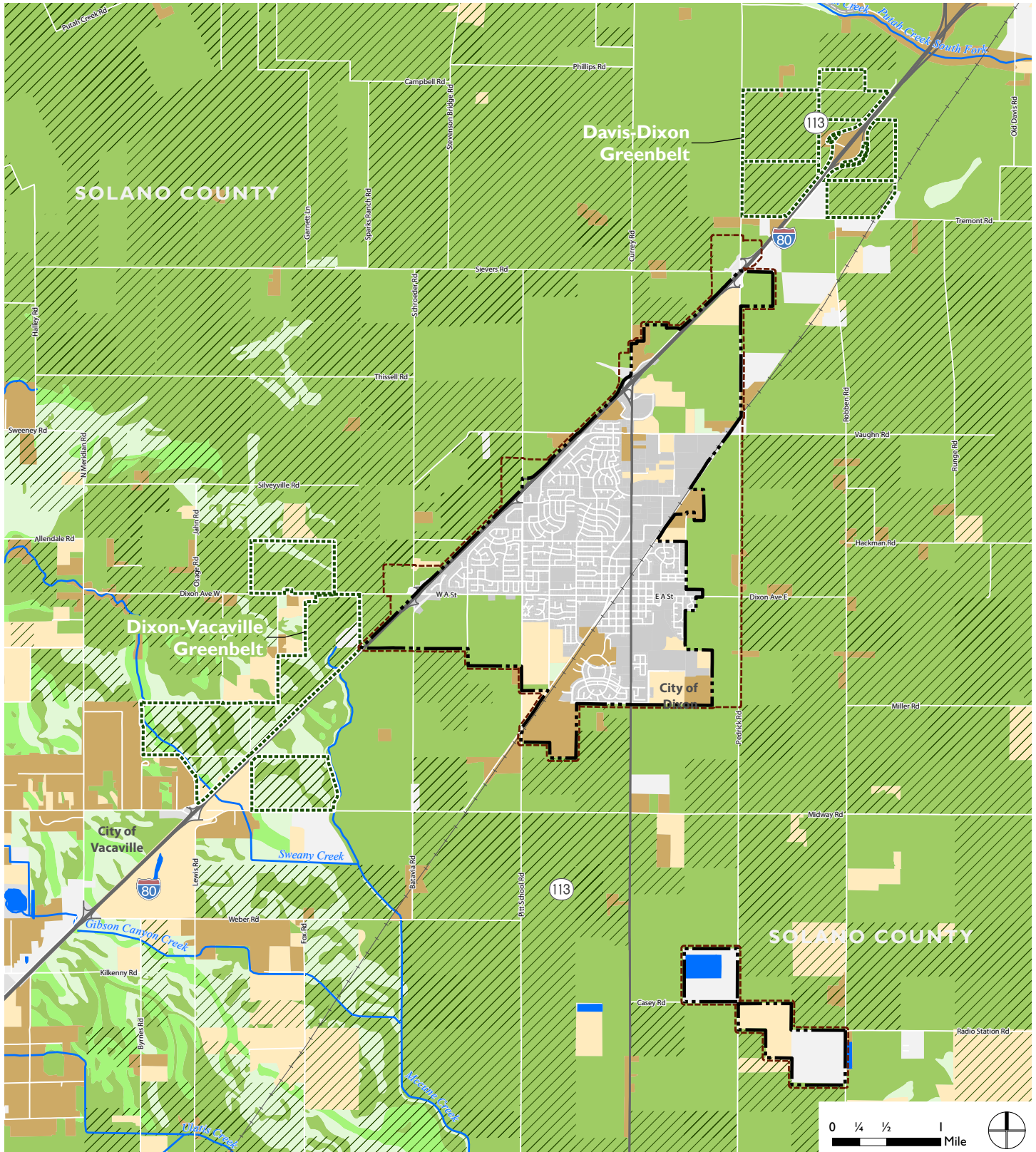
Source: California Dept. Conservation, 2020; Solano County GIS, 2016.

Farmland Classification

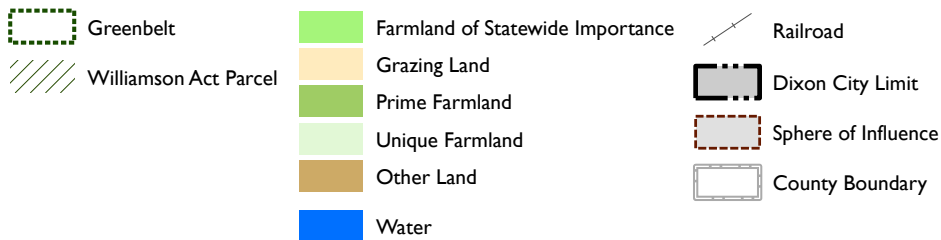
The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) classifies farmland into the following categories based on soil type and current land use:

- Prime Farmland. Land that has the best combination of physical and chemical characteristics for crop production. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when managed (including water management) according to current farming methods. Prime Farmland must have been used for the production of crops within the last three years.
- Farmland of Statewide Importance. Land other than Prime Farmland that has a good combination of physical and chemical characteristics for crop production. Similar to Prime Farmland, Farmland of Statewide Importance must have been used for crop production within the last three years.
- Unique Farmland. Land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but which is currently used for the production of specific high economic value crops (as listed in the last three years by the California Department of Food and Agriculture). It has the special combination of location, soil quality, growing season, and moisture supply to produce sustained high quality or high yields of a specific crop (e.g., oranges, olives, avocados, rice, grapes, and cut flowers) when treated and managed according to current farming practices.
- Farmland of Local Importance. Land that is either currently producing crops or has the capability to do so. It is land other than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, but it may be important to the local economy due to its productivity.
- Grazing Land. Land on which the existing vegetation, whether grown naturally or through management, is suitable for livestock grazing.

Figure 3.2-2: Open Space and Agriculture



Data Source: CA Department of Conservation, FMMP, 2016; Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019



All categories exclude publicly owned land for which there is an adopted policy preventing agricultural use. The FMMP designations are informational only and do not constitute any regulatory policy. Designations of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance are referred to collectively in this analysis as Important Farmland.

Figure 3.2-2 illustrates the locations of lands classified by the FMMP as Important Farmland or Grazing Land within the City of Dixon and the study areas. Table 3.2-1 summarizes the Planning Area's FMMP classifications. Within the Planning Area, much of the existing farmland is categorized as Prime Farmland, including farmland in the southwest area, large parcels along the eastern border of the Planning Area, and parcels in the Planning Area to the north of I-80. Across the city, parcels categorized as Grazing Land neighbor many of the Prime Farmland parcels. There are two areas the City of Dixon categorized as Unique Farmland, one along Vaughn Road in the north of the City and one along S. Porter Road. Outside of the Planning Area, the vast majority of the parcels are categorized Prime Farmland. There are no parcels of land characterized as Farmland of Statewide Importance, or Farmland of Local Importance.

Prime Agricultural Land

The Solano County LAFCO describes "Prime agricultural land" as an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:

- a) Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
- b) Land that qualifies for rating 80 through 100 Storie Index Rating.
- c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
- d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.

Prime agricultural land with Storie Index Ratings of over 80 or with land use capability classifications of Class I or Class II within the Planning Area are shown in Figure 3.2-3. A total of 679 acres of land in the Planning Area meets LAFCO Criteria A and B for Prime Agricultural Land.

Williamson Act Contracts

As of 2016, there were 74 acres of farmland under Williamson Act contracts in the Planning Area, as listed in Table 3.2-2 and shown in Figure 3.2-2. Two properties **within Dixon’s Sphere of Influence** are subject to Williamson Act contracts, north of Pitt School Road. There were two additional parcels subject to the Williamson Act within City limits, but as of October 2017, these two properties were in non-renewal and no longer under contract. The Williamson Act is discussed in further detail in the Regulatory Setting below.

Table 3.2-2: Williamson Act Contracts

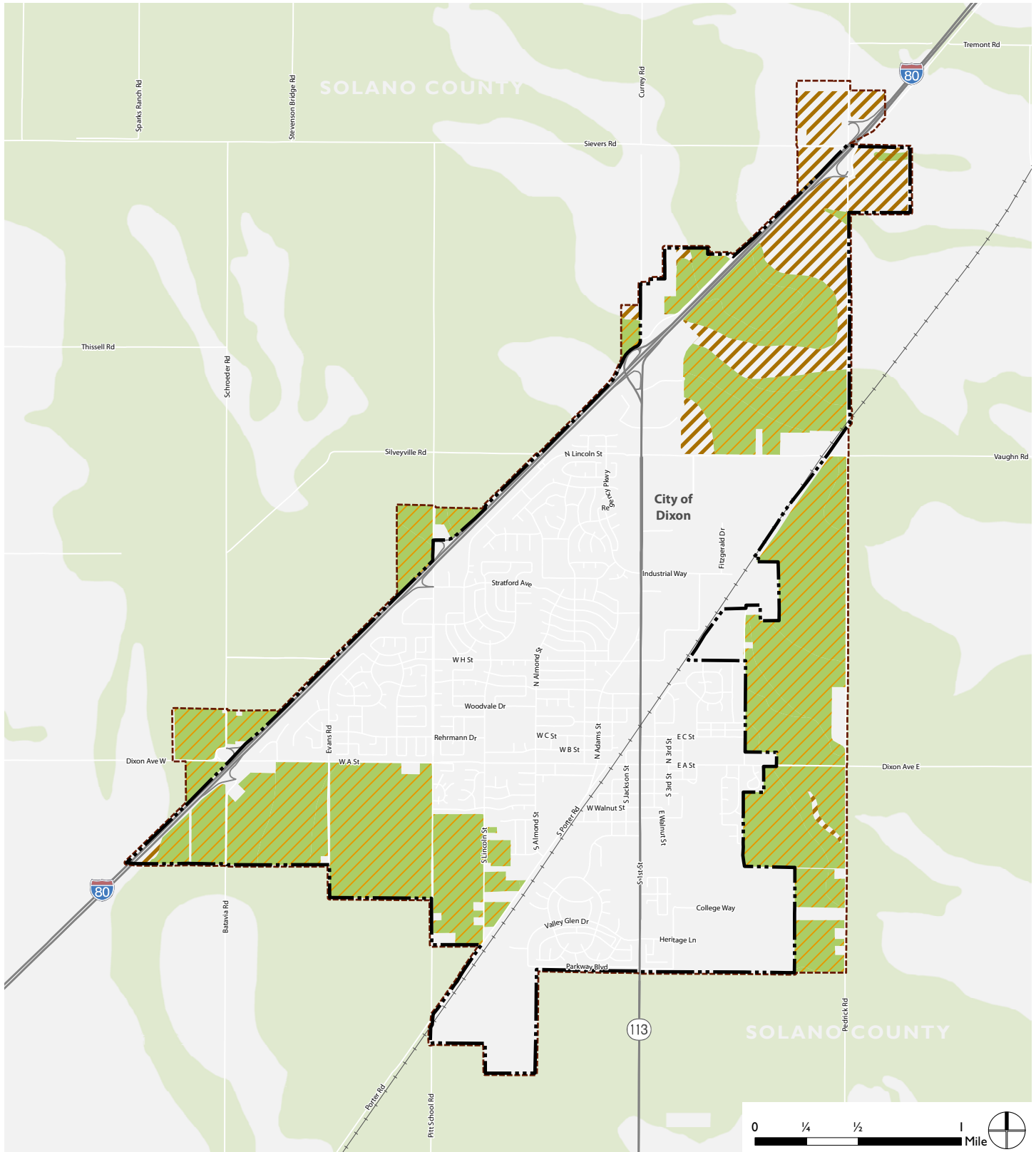
<i>Location</i>	<i>Acres</i>
Unincorporated Areas ²	4.5
APN 0108090110	
APN0113010100	
Total³	74

Notes:

1. Only a portion of these parcels are within the SOI.
3. Numbers may not sum due to rounding.

Sources: Farmland Mapping and Classification Program (FMMP), 2016; Dyett & Bhatia, 2018.

Figure 3.2-3: LAFCO Prime Agricultural Land Characteristics



Data Source: USDA Soils Data, 2018; City of Dixon, 2019; Dyett & Bhatia, 2019

Storier Index Rating

80 to 100

Land Use Capability Classification

Class I

Class II

Railroad

Dixon City Limit

Sphere of Influence



REGULATORY SETTING

Federal Regulations

Federal Farmland Protection Policy Act, 7 U.S. Code Section 4201 and 7 Code of Federal Regulations 658

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) oversees the Farmland Protection Policy Act (FPPA) (7 U.S. Code [USC] Section 4201 et seq.; see also 7 Code of Federal Regulations [CFR] 658). The FPPA (a subtitle of the 1981 Farm Bill) is national legislation with the following stated purpose: "to minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." The FPPA applies to projects and programs that are sponsored or financed in whole or in part by the federal government and does not apply to private construction projects subject to federal permitting and licensing, projects planned and completed without assistance from a federal agency, federal projects related to national defense during a national emergency, or projects proposed on land already committed to urban development. The FPPA spells out requirements to ensure federal programs to the extent practical are compatible with state, local, and private programs and policies to protect farmland and calls for the use of the Land Evaluation and Site Assessment (LESA) system to aid in analysis.

U.S. Department of Agriculture Natural Resources Conservation Service

The U.S. Department of Agriculture's Natural Resources Conservation Service maps soils and farmland uses to provide comprehensive information necessary for understanding, managing, conserving, and sustaining the nation's limited soil resources. In addition to many other natural resource conservation programs, the NRCS manages the Farmland Protection Program, which provides funds to help purchase development rights to keep productive farmland in agricultural uses. Working through existing programs, USDA joins with state, tribal, or local governments to acquire conservation easements or other interests from landowners.

State Regulations

Farmland Mapping and Monitoring Program

The California Department of Conservation FMMP classifies farmland into five different categories based on soil type and current land use, as described in the Physical Setting. The minimum mapping unit is 10 acres, with the exception of grazing land, which is 40 acres. See Table 3.2-1 for a listing of acreage by farmland classification in the Planning Area.

California Farmland Conservancy Program

The California Farmland Conservancy Program (Public Resources Code Section 10200 et seq.) supports the voluntary granting of agricultural conservation easements from landowners to qualified nonprofit organizations, such as land trusts, as well as local governments. Conservation easements are voluntarily established restrictions that are permanently attached to property deeds, with the general purpose of retaining land in its natural, open-space, agricultural, or other condition while preventing uses that are deemed inconsistent with the specific conservation

purposes expressed in the easements. Agricultural conservation easements define conservation purposes that are tied to keeping land available for continued use as farmland. Such farmlands remain in private ownership and the landowner retains all farmland use authority, but the farmland is restricted in its ability to be subdivided or used for non-agricultural purposes, such as urban use. The Dixon-Davis Greenbelt and Vacaville-Dixon Greenbelt are agricultural conservation easements located outside of the Planning Area limits.

California Right to Farm Act

The California Right to Farm Act (California Civil Code § 3482.5) establishes that no agricultural activity, operation, or facility, conducted or maintained for commercial purposes and in a manner consistent with established customs and standards, shall become a nuisance after it has been in operation for more than three years if it was not a nuisance at the time it began. The Right to Farm Act requires that as a part of real estate transactions, land sellers and agents must disclose whether the property is located within one mile of farmland as designated on the most recent Important Farmland Map. Any of the five agricultural categories on the map qualifies for disclosure purposes, including Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land.

California Land Conservation Act (Williamson Act)

Williamson Act Contracts

The California Land Conservation Act (Government Code Section 51200 et seq.) of 1965, commonly known as the Williamson Act, provides a tax incentive for the voluntary enrollment of agricultural and open space lands in contracts between local government and landowners. The contract restricts the land to agricultural and open space uses and compatible uses defined in State law and local ordinances. An agricultural preserve, which is established by local government, defines the boundary of an area within which a city or county will enter into contracts with landowners. Local governments calculate the property tax assessment for lands under contract based on the actual use of the land rather than the potential land value assuming full development.

Williamson Act contracts are effective for periods of 10 years and longer. The contract is automatically renewed each year, maintaining a constant, 10-year contract, unless the landowner or local government files to initiate non-renewal. Should that occur, the Williamson Act would terminate 10 years after the filing of a notice of non-renewal. Only a landowner can petition for a contract cancellation. Tentative contract cancellations can be approved only after a local government makes specific findings and determines the cancellation fee to be paid by the landowner.

Two properties subject to Williamson Act contract are located within the Planning Area. They are **located within Dixon's Sphere of Influence, north of Pitt School Road and the City limit line.**

The State of California has the following policies regarding public acquisition of and locating public improvements on lands in agricultural preserves and on lands under Williamson Act contracts (Government Code Section 5129051295):

- Avoid locating federal, State, or local public improvements and improvements of public utilities, and the acquisition of land, in agricultural preserves;
- Locate public improvements that are in agricultural preserves on land other than land under Williamson Act contract; and
- Any agency or entity proposing to locate such an improvement, in considering the relative costs of parcels of land and the development of improvements, consider the value to the public of land, particularly prime agricultural land, in an agricultural preserve.

Open Space Subvention

Under the Open Space Subvention Act of 1971, the State has provided annual subvention payments to counties for foregone property tax revenue due to Williamson Act contracts. The Budget Act of 2009 virtually eliminated these payments for the 2009-10 fiscal year. While partial funding was restored for the 2010-11 fiscal year, long-term State support to counties for agricultural land conservation is uncertain. Despite the elimination of most payments from the State, the California Department of Conservation has continued to release status reports of lands under Williamson Act contracts, with the most recent release occurring in 2016.

Local Regulations

Solano County General Plan

Agriculture Element

The 2008 Solano County General Plan includes an Agriculture Element with goals and policies for agriculture that apply to lands adjacent to, and surrounding, Dixon, including land in the SOI. The Solano County General Plan considers agriculture to be a significant business within Solano County **and highlights agriculture as a major theme of the Plan. The Agricultural Element's eight goals** include the following four goals directly related to Agricultural Preservation:

- Goal AR.G-1: Recognize, value, and support the critical roles of all agricultural lands in the stability and economic well-being of the county.
- Goal AR.G-2: **Preserve and protect the county's agricultural lands as irreplaceable resources** for present and future generations.
- Goal AR.G-5: Reduce conflict between agricultural and nonagricultural uses in Agriculture-designated areas.
- Goal AR.G-8: Seek to increase the **value-added component of the county's agricultural economy** to a level that meets or exceeds the state average.

One specific provision of the Solano County General Plan requires using an urban-agricultural buffer of approximately 300 to 500 feet of vegetated land in municipal service areas between residential and agricultural uses as a tool to minimize resident-farmer conflict and to reduce pesticide drift. The Solano County General Plan includes policies to strengthen the Williamson Act,

encourage the conservation of water resources for agricultural purposes, and encourage water districts in the county to expand agricultural water usage and explore new water sources.

The Solano County General Plan also establishes ten unique production regions defined by the agricultural environment. Solano County General Plan land use standards for the Dixon Ridge (the region surrounding the Planning Area) allow for agricultural production, processing facilities, and services with a minimum lot size of 40 acres.

Solano County Proposition A and Measure T

Proposition A, an initiative measure passed by the voters of Solano County in June 1984, reaffirmed **the 1980 General Plan’s cornerstone policies of city-centered growth and farmland protection**, and imposed strict limitations on the County Board of Supervisor’s **ability to allow new residential, commercial, or industrial development in agricultural and open-space areas**. Proposition A was a limited-term measure that was to expire in December 1995. In 1994, the voters of Solano County proposed the Orderly Growth Initiative, in order to extend the protections of Proposition A until December 31, 2010. In response to broad public support for that proposal, the Solano County Board of Supervisors adopted the Orderly Growth Initiative as its Resolution No. 94-170 on July 26, 1994.

On November 4, 2008, Solano voters passed Measure T, which was an amendment to Solano County’s 1994 Orderly Growth Initiative that updated certain provisions of the Solano County General Plan related to agriculture and open space policies and land use designations, and extended the amended initiative until December 31, 2028.

Solano County Code Chapter 2.2

Commonly known as the “Right-to-Farm Ordinance,” Solano County Code Chapter 2.2 protects agricultural operations from nuisance complaints, which are most commonly issued when residential uses are located adjacent to agricultural operations. These complaints can cease or curtail agricultural operations and prevent investment in local agricultural infrastructure or operations that would result in a boost to the local economy. Chapter 2.2 protects the right of an agricultural operator to continue any agricultural operation that took place before the establishment of adjacent residential uses. Additionally, upon the purchase of real property in agricultural areas, the County notifies the buyers to understand and accept inconveniences or discomforts resulting from nearby agricultural activities as a normal and necessary aspect of living in a rural or agriculturally productive area. To assist in resolving problems between residential and agricultural land use, an Agricultural Grievance Committee has been created in Solano County to arbitrate and mediate disputes concerning agricultural operations.

Uniform Rules and Procedures Governing Agricultural Preserves and Land Conservation Contracts

Under the Solano County Agricultural Preserve Program, an agricultural preserve is established by the County at the request of one or more property owners within areas devoted to agricultural use, recreational use and/or open space use, as defined in the Williamson Act. Establishment of an agricultural preserve is a prerequisite for property owners wishing to enter into land conservation **contracts with the County. Under Solano County’s program, a property owner makes application**

simultaneously for either the establishment or expansion of an agricultural preserve and approval of a land conservation contract.

As a method of implementing the Williamson Act locally, Solano County has adopted Uniform Rules and Procedures Governing Agricultural Preserves and Land Conservation Contracts (Uniform Rules). Under the Uniform Rules, an agricultural preserve is established by the County at the request of one or more property owners within areas devoted to agricultural use, recreational use and/or open space use, as defined in the Williamson Act. Establishment of an agricultural preserve is a prerequisite for property owners wishing to enter into land conservation contracts **with the County. Under Solano County's program, a property owner** makes application simultaneously for either the establishment or expansion of an agricultural preserve and approval of a land conservation contract. A land conservation contract is a contract entered into by the property owner and the County that restricts the use of the land for agricultural, recreational and/or open space uses for a minimum term of 10 years. In exchange, the property receives a reduction in property taxes while the contract is in effect. Under the program, contracted property is assessed on the basis of the agricultural income producing capability of the land, the fair market value, or the Proposition 13 value, whichever is less.

The Uniform Rules set forth permitted and compatible land uses for agricultural preserves. Land within an agricultural preserve for agricultural purposes must be maintained in commercial agricultural use and adhere to stated principles of compatibility. The Uniform Rules designate principal dwellings, secondary dwellings, companion living units, agricultural employee housing, and temporary single-family dwellings as consistent residential uses incidental to agricultural uses. A property owner may request a determination of compatibility by the Solano County Planning Commission upon written request based on new **and sufficient evidence of a use's compatibility** with the purposes and intent of the Williamson Act based on compatibility criteria.

Local Agency Formation Commission (LAFCo) Sphere of Influence

The Solano County Local Agency Formation Commission (LAFCo) is an independent County agency established by State law. LAFCo has approval authority regarding changes in organization to cities, including annexations, detachments, new formations, and incorporations. LAFCo approval is necessary for changes to St. Helena's **city limits or Sphere of Influence**.

The Solano County LAFCO has adopted standards and procedures for the evaluation of annexation proposals. Standards 8 and 9 of the LAFCO Standards and Procedures Manual control urban growth and protect open space and prime agricultural land through approval (or denial) of the annexation applications protect agricultural and open space lands as part of their main missions and strategic goals.

Standard No. 8: Likelihood of significant growth and effect on other incorporated or unincorporated territory

Prior to approving an annexation, LAFCO shall make a determination that the proposed conversion of open space lands to urban use is justified by probable urban growth within a 10 year-period of time. A determination on the likelihood of significant growth justifying the conversion shall be based on analysis of local and regional demand for the proposed use.

Standard No. 9: Protection of prime agricultural land

Urban growth shall be guided away from prime agricultural land unless such action would not promote planned, orderly, and efficient development for the agency. Development of existing vacant or non-prime agricultural lands within the agency limits should be encouraged before any proposal is approved for urbanization outside of the agency limits.

Additionally, LAFCO applies a broader definition of “Prime Agricultural Land”, which means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets the qualifications detailed in the Settings section above.

Vacaville-Dixon Greenbelt Joint Powers Agreement

Vacaville and Dixon, about 10 miles apart, created a joint-powers authority featuring two members from each city council and an ex-officio member of the Solano County Board of Supervisors. The JPA, formed to preserve viable agricultural and open-space land, is responsible for maintaining greenbelt lands and recommending amendments to general plans, annexations and spheres of influence. The Vacaville-Dixon Greenbelt Agreement identifies approximately 1,000 acres of land located between Vacaville and Dixon that have been purchased by the Vacaville-Dixon Greenbelt Authority (VDGA) to be maintained in productive agriculture or as other open space uses mutually agreed upon by VDGA. This land is protected by an Agricultural Reserve Overlay, which preserves the prime farmlands and scenic resources of the area located between the two cities. The Vacaville-Dixon Greenbelt is shown in Figure 3.2-4.

Davis-Dixon Greenbelt

In 2005, the City of Dixon partnered with the City of Davis, UC Davis, California Department of Conservation, and the U.S. Department of Agriculture’s Natural Resource Conservation Service to begin purchasing land for the Davis-Dixon Greenbelt, which currently contains over 400 acres of farmland, and is managed by the Solano Land Trust. Similar to the Vacaville-Dixon Greenbelt, land in the Davis-Dixon Greenbelt is protected by an Agricultural Reserve Overlay. Prioritized lands located between the two cities are intended to remain an agricultural landscape in perpetuity, implemented through acquisition from willing sellers and resale of the properties with a permanent conservation easement. The Davis-Dixon Greenbelt is shown in Figure 3.2-4.

City of Dixon Specific Plans

Northeast Quadrant Specific Plan

Adopted in 1995, the Northeast Quadrant Specific Plan (NQSP) establishes a land use and circulation plan, policies, and guidelines for the ultimate development of 643 acres in the northeast portion of the City of Dixon. The purpose of the NQSP was to institute development criteria for this parcel after it was rezoned from agriculture to Employment Center (E) and Highway Commercial (HC) under the 1993 General Plan. Historically, the site has been intensively cultivated to grow field and orchard crops. Since adoption of the Plan, land in the western portion of the Northeast Quadrant has been developed with commercial uses while agricultural uses continue to

occupy land in the eastern portion along Pedrick Road. Land use goal 7 in the Northeast Quadrant Plan specifies agricultural buffers as parts of the plan-wide open space system.

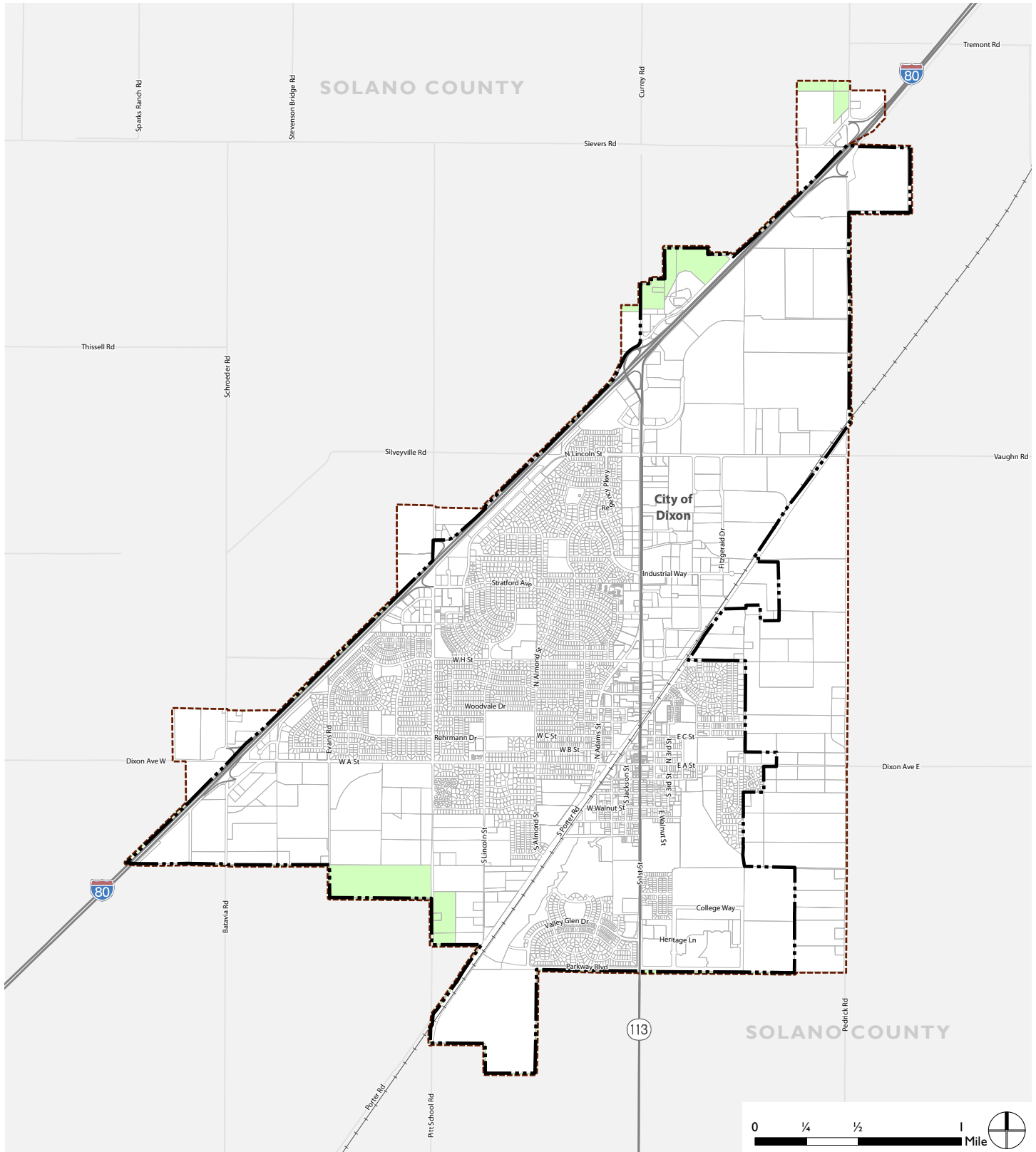
Southwest Dixon Specific Plan

The Southwest Dixon Specific Plan was adopted in 2005 and provides for the development of residential, commercial, and employment center uses within approximately 477 acres of primarily agricultural land in Southwest Dixon. At build-out, no agricultural uses are included in the Southwest Dixon Specific Plan area; the area to the south of the Specific Plan area will remain in agricultural use.

The Southwest Dixon Specific Plan includes the following policies relevant to implementation of the Proposed Plan:

- 2.1.3 Interim Uses. Agricultural uses may continue in all undeveloped areas designated for future urban use in Southwest Dixon.
- 2.3.3 **Provide open space buffers in Southwest Dixon to help define the City's urban boundary.**
- 2.3a Functional Buffers. Provide open space buffers. Required detailed planting and maintenance for these areas, consistent with the needs of nearby agricultural and urban uses. Include wildlife habitat where feasible. Buffers take the form of dedicated open space, easements, or setbacks on private property.
- 3.1.3 Agricultural-Urban Conflicts. The City shall implement measures to reduce conflicts between new urban development and existing agricultural activities in the vicinity of the Specific Plan Area.
- 3.1a Urban/Agricultural Interface. Proposed developments next to agricultural operations can face issues such as noise, odors, and dust. For projects bordering agriculture use, the following as conditions should be implemented.

Figure 3.2-4: Land With Agricultural Designations Under the 1993 General Plan



Data Source: Solano County GIS, 2014; City of Dixon, 2019; Dyett & Bhatia, 2019

- Agricultural
- Railroad
- Dixon City Limit
- Sphere of Influence

City of Dixon Municipal Code

Agriculture Mitigation Program

Due to the strong public interest in preservation of the agricultural lands surrounding the city, and to preserve open space and prime agricultural lands, the City has established an agricultural mitigation program (Municipal Code, Chapters 17.16A and 4.09). As part of the program, applicants that seek to annex agricultural land into City limits or expand the City's existing Sphere of Influence to include agricultural lands must first create a viable and enforceable plan for agricultural preservation that meets the Solano County Local Agency Formation Commission's Agricultural Preservation Policy. Agricultural mitigation for areas that are annexed into the City or added to the City's Sphere of Influence can be achieved by either acquiring and dedicating agricultural land and development rights to create an agricultural conservation easement to permanently protect agricultural land at a ratio of 1:1 for every acre of agricultural land that is converted to nonagricultural uses, or payment of an in-lieu fee which is established to cover the actual cost of purchasing agricultural conservation easements on a 1:1 ratio, with priority given to prime agricultural land.

Measure B Residential Growth Implementation Plan

On April 8, 1986, the resident voters of the City of Dixon approved an initiative ordinance which authorized but did not require the City Council to limit annual residential growth in the City. In 1995 and 1996, the City annexed to its territory a total of 1,332 acres of largely vacant agricultural lands to provide future growth areas for both residential developments and nonresidential developments. Prior to annexing these areas, the City adopted amendments to its 1993 General Plan which provided plans for streets, highways, and public and private land uses within these future growth areas (Chapter 18.48)

Title 18 Zoning

The Dixon Municipal Code contains one agricultural zoning code district, AG. The Code lists specific intentions informing the AG district, including:

- A. To reserve for exclusive agricultural use appropriately located areas which are suitable for raising crops or livestock because of high quality soils, existing or potential irrigation works, adequate drainage, suitable climate or other factors and which are indicated on the land use diagram of the Dixon General Plan.
- B. To provide locations for permanent dwellings and transient accommodations for persons gaining their livelihoods from agricultural pursuits.
- C. To ensure adequate light, air and privacy for each dwelling unit.
- D. To provide appropriate locations for facilities for the handling, processing, sale and shipment of agricultural produce and livestock.
- E. To provide appropriate locations for certain types of establishments primarily serving agricultural producers.

- F. To provide appropriate locations for certain predominately open uses of land which are harmonious with agricultural users but are not harmonious with urban uses, including natural gas, oil, water and other types of drilling.
- G. To prevent the intrusion of urban development into agricultural areas in such manner as to make agricultural production uneconomical or impractical.
- H. To prevent premature development of certain lands which eventually will be appropriate for urban uses until the installation of streets, utilities and community facilities makes orderly development possible.
- I. To further the agricultural land protection goals and policies of the Dixon General Plan.

There are three areas of the City currently zoned for agricultural use: one area north of I-80 at Currey Road; one just south of I-80 near Pedrick Road; and one at the southern edge of the City on Pitt School Road.

Under the Proposed Plan, the Dixon Municipal Code would be updated to ensure consistency between the new land use designations and the zoning code.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Criterion 2: Conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- Criterion 3: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use.

METHODOLOGY AND ASSUMPTIONS

Farmland resource acreages were assessed based on the California Department of Conservation FMMP, a biennial report and mapping resource on the conversion of farmland and grazing land, and from the USDA Natural Resources Conservation Service Web Soil Survey. Williamson Act contract lands were identified by geographic information systems (GIS) data from Solano County. Using these sources, the Proposed Plan was analyzed for potential conversion of Important Farmland, conversion of Williamson Act contract lands, and other changes resulting from the Proposed Plan that may result in the conversion of farmland to urban uses. Cumulative impacts related to agricultural resources are discussed in Chapter 5: CEQA Required Conclusions.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Economic Development

- E-1.9 Encourage and promote continued agricultural use and production in vacant areas designated for future development.

Land Use and Community Character

- LCC-1.1 Recognize and maintain Dixon as a community surrounded by productive agricultural land and greenbelts.
- LCC-1.2 Maintain designated urban-agricultural buffers within City jurisdiction to minimize conflicts with adjoining agricultural uses.
- LCC-1.3 **Promote a compact development pattern and limit “leap frog” development** in order to support efficient delivery of public services and infrastructure, conserve agricultural and open space lands, reduce vehicle trips, and improve air quality.
- LCC-1.A Maintain a greenbelt of open space and/or farmland around the city through the Vacaville-Dixon Greenbelt Authority and other agreements with the City of Davis and the University of California at Davis.
- LCC-1.B Coordinate with Solano County to ensure that land use designations and development standards in unincorporated portions of the Planning Area are consistent with those set forth in the Dixon General Plan.
- LCC-2.8 Protect and improve scenic vistas in Dixon, including views from Interstate 80 and views of surrounding agricultural and open space lands.

Natural Environment

- NE-1.1 Preserve the natural open space and agricultural lands that surround Dixon through continued leadership in cross-jurisdictional conservation initiatives such as the Vacaville-Dixon Greenbelt and the Davis-Dixon greenbelt.
- NE-1.2 Support regional efforts to place additional land under permanent conservation easements and continue to use the Agricultural Land Mitigation Fund to collect development impact fees for the purpose of funding greenbelt expansion.
- NE-1.3 Encourage open space preservation through easements, open space designation, or dedication of lands for the purpose of connecting conservation areas, protecting biodiversity, accommodating wildlife movement, and sustaining ecosystems.
- NE-1.4 Prior to annexing land into the city or expanding the SOI, continue to require agricultural mitigation consistent with the Solano County Local Agency Formation **Commission’s Standards and Procedures when agricultural lands would be converted to nonagricultural purposes.**

NE-1.5 Continue to allow agriculture as an interim use on land within the City that is designated for future urban use.

NE-1.A Adopt a Right to Farm ordinance that protects the rights of agricultural operations in areas adjacent to the City to continue operations and seeks to minimize conflicts with adjacent urban uses in Dixon.

Public Services and Facilities

PSF-6.B Consider adopting urban agricultural regulations or tax incentives.

IMPACTS

Impact 3.2-1 Implementation of the Proposed Plan would convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (*Significant and Unavoidable*)

Implementation of the Proposed Plan would result in a significant impact if future development occurring in accordance with the Proposed Plan's land use designations and policies would convert Important Farmland to non-agricultural uses.

As noted above, according to Solano County Assessor data, a substantial portion -- approximately 39 percent of the total land in the Planning Area -- has an existing land use listed as Agriculture; however, much of this land is located within the Northeast Quadrant and Southwest Dixon Specific Plan Areas and has been redesignated for urban uses as part of prior planning efforts. Table 3.2-1 shows the existing inventory of Important Farmland by category. Most of the land in the Planning Area that is not urbanized is classified as FMMP Prime Farmland, for a total of 1,600 acres, with 864 acres in City limits and 736 acres in the SOI. There are 19 acres classified as Unique Farmland, all within City limits with about half near the Southwest Quadrant and about half in the Northeast Quadrant. There is no Farmland of Statewide Importance within the Planning Area.

The Proposed Plan would establish various urban land use designations for areas with FMMP Prime and Unique Farmland, including Low and Medium Density Residential, Corridor Mixed Use, Mixed Use, Industrial, and Regional Commercial in areas of Prime and Unique Farmland. These designations allow for development that would result in farmland conversion. In total, the Proposed Plan would allow for development on 883 acres and 736 acres of FMMP Prime or Unique Farmland within City limits and in the SOI, respectively. The Proposed Plan does not leave any land within the City limit with an agricultural land use designation. However, the vast majority of this agricultural land has already been designated for urban use in the current City of Dixon General Plan. Additionally, the Southwest Dixon Specific Plan EIR and Northeast Quadrant Specific Plan EIR both include mitigation to address the potential impact of displacement of Prime Farmland through development associated with the Specific Plans. Applicants for development projects in the Southwest Quadrant and Northeast Quadrant would be required to provide conservation of agricultural land within the Dixon Planning Area or within a ten-mile radius of the City at a 1:1 ratio, or pay the appropriate fee to participate in the City's master agricultural conversion program.

But as shown in Figure 3.2-4, of the 1,600 acres of existing agricultural use lands per Solano County Assessor data, 103 acres within City limits and 445 acres in the SOI are designated as agricultural use in the 1993 General Plan. Of those lands, 72 acres in the City limits and 25 acres in the SOI are designated as Prime Farmland (there are no other Important Farmland designations on this land). One of these areas is located north of I-80 near within City limits near Currey Road, one area is in the south of the City to the east and west of Pitt School Road, and one is outside of City limits off of Pedrick Road.

Proposed Plan policies provide a framework for ensuring that Dixon remains a community ringed by open space and agricultural land. Proposed policies and actions under the Proposed Plan that would reduce impacts on Important Farmland include policy E-1.9, which permits existing agricultural uses in areas designated for future development to continue operating as an interim use. Other proposed land use policies that would reduce impacts on Important Farmland include LGC-1.3, which encourages infill development within currently developed areas in order to conserve the active agricultural lands that surround the city; Policies LCC-1.1, LCC-1.2, LCC-1.8, NE-1.1, NE-1.2, NE-1.3, NE-1.4, and implementing actions LCC-1.A and NE-1.A provide support for protecting agricultural uses adjacent to the city. Any future annexation or SOI expansion proposed in the Planning Area for areas that include agricultural land would require, per the Dixon Farmland Mitigation Program, farmland mitigation at a 1:1 ratio for equal or higher quality farmland through an easement or in-lieu fee. **Further, Solano County LAFCO's Standards and Procedures** require applicants who seek to annex agricultural land into City limits or expand the **City's Sphere of Influence to include a market study of unincorporated agricultural lands that could be converted to non-agricultural uses and documentation of the impact on prime agricultural land.** Despite these mitigating factors, the potential loss of 72 acres in the City limits and 25 acres in the SOI of Prime Farmland would be significant.

Despite reductions in potential impacts from Proposed Plan policies and local programs, permanent loss of 98 acres of land classified as Prime Farmland under the FMMP would occur under the Proposed Plan. This impact would be significant prior to mitigation.

Mitigation Measures

MM-AG-1: Any developer seeking to develop parcels designated as agricultural by the 1993 General Plan that contain FMMP-designated Prime farmland must acquire off-site Prime farmland or a conservation easement on such land within the Planning Area or within a ten-mile radius of the City, or each developer will participate in the City's Agricultural Mitigation Program. Each developer will pay the fee established for this program at the time of the City's approval of the tentative subdivision map or as otherwise specified in a development agreement. If the developer opts to purchase land, the developer can re-sell the land to an agricultural operator or other party so long as a conservation agreement acceptable to the City is granted to the City or an agency or organization acceptable to the City. Alternatively, the developer can purchase a conservation easement which is acceptable to the City and grant this conservation easement to the City or an agency or organization acceptable to the City. The parcels this mitigation measure applies to include: APN #s 0108040050, 0110140060, 0110140080, 0111020060, 0111020100, 0111020130, 0114020010, 0114031090, 0116030090, 0143010040, 0143020080, and 0143060060.

However, implementation of the Proposed Plan would result in the redesignation of 98 acres of Prime Farmland from an agricultural land use designation to a non-agricultural land use within City limits and Spheres of Influence. Conversion of agricultural land to urban use is not directly mitigable, aside from preventing development altogether, as agricultural land is a finite and irreplaceable resource. The Proposed Plan reflects a policy determination to allow a certain amount of growth to occur in the Planning Area, which necessitates conversion of farmland to urban uses. Beyond limiting the amount of total growth permitted, there are no feasible mitigation measures for agricultural land conversion that would also fulfill the objectives of and implement the Proposed Plan as proposed. The impact would remain significant and unavoidable.

Impact 3.2-2 Implementation of the Proposed Plan would not conflict with existing zoning for agricultural use or a Williamson Act contract (*Less than Significant*)

Zoning for Agricultural Use

Implementation of the Proposed Plan would result in a significant impact if implementation would conflict with existing agricultural zoning under the City of Dixon's Municipal Code or the Solano County General Plan.

Under the City's current General Plan, there are two parcels within City limits zoned for agricultural use in the northern part of the Planning Area, and one in the south of the City near Pitt School Road. The Proposed Plan would apply non-agricultural land use designations in these areas, including Regional Commercial and Low Density Residential, that would be inconsistent with the provisions of the zoning district. However, upon adoption of the Proposed Plan and in accordance with State law, **the City of Dixon's Municipal Code would be updated to match the Proposed Plan's land use designations. Therefore, there would not be a conflict between the City's zoning for agricultural use and the Proposed Plan, and the Proposed Plan would result in no impact.**

For lands outside of the City limit, the Proposed Plan makes land use designations for land currently within the unincorporated area of the county that do not conflict with the agricultural zoning districts in Solano County. **The areas under Dixon's Sphere of Influence are regulated under the Solano County General Plan, which includes policies that provide for continued agricultural uses within unincorporated MSAs until or if properties are annexed by cities for development. Land use designations applied to areas in the SOI signal the City's future intent, but do not conflict with existing zoning, as zoning would be revised at the time of annexation to be in compliance with the City of Dixon's General Plan.** Therefore, the Proposed Plan's **accordance with these existing zoning designations under the Dixon and Solano County General Plans result in no impacts for lands within the Sphere of Influence.**

Williamson Act Contracts

Williamson Act

A significant impact could also occur if the Proposed Plan implementation conflicted with parcels under Williamson Act contracts, which protect agricultural land use. Two portions of parcels in **Dixon's Sphere of Influence are under active Williamson Act contract**, both located to the north of I-5 along Pitt School Road. Under the Proposed Plan, they would both be designated Regional Commercial.

These lands under active Williamson Act contracts in the Proposed Plan are outside of the current City limits and therefore would be subject to County policy and regulation. According to the County's **Uniform Rules, lands under Williamson Act contracts must be under agricultural land** use and zoning designations. The parcels are currently zoned as A-40: Exclusive Agricultural-40 acres under Solano County zoning and are under active agricultural use. Both parcels under Williamson Act contract were designated as Highway Commercial, a non-agricultural use, under the existing 1993 General Plan. Future development allowed by the proposed non-agricultural land use designations would be incompatible with agricultural uses on Williamson Act lands, and proposed land use designations would conflict with Uniform Rule requirements applicable to Williamson Act contracts. Solano County LAFCO's **Standard No. 9** would apply to these parcels, which requires that cases in which cancellation of a contract will be required, evidence supporting the cancellation shall be provided to demonstrate that the findings can reasonably be made. In cases where lands were protested for inclusion in an agricultural preserve by an agency, the agency may choose not to succeed to the contract, in which case the agricultural preserve contract will terminate upon annexation. Parcels under active Williamson Act contract also meet the LAFCO definition of prime agricultural land. Under Standard No. 8, prior to approving an annexation, LAFCO shall make a determination that the proposed conversion to open space lands to urban use is justified by probable urban growth within a 10-year period of time. Further, the Proposed Plan could increase development pressures on the parcels, but the non-agricultural land use designation has been in effect for over two decades.

Because the parcels under Williamson Act contract were already designated as a non-agricultural use by the 1993 General Plan, and the Proposed Plan makes no additional changes to parcels under Williamson Act contract, the impact is considered less than significant.

Mitigation Measures

None required.

Impact 3.2-3 Implementation of the Proposed Plan would involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use (*Less than Significant*)

A significant impact could occur if urban development results in indirect impacts that exert pressure on agricultural lands to convert to non-agricultural use. Such indirect impacts can include the division of large tracts of continuous agricultural land into smaller, less agriculturally viable tracts; the presence of incompatible uses adjacent to existing agricultural operations that could lead to the restriction of chemical use and/or complaints regarding noise, dust, and odors; increases in land values and taxes that exert pressure on agricultural landowners to convert to urban uses; and loss of agricultural support infrastructure, such as processing facilities. In addition, urban growth may increasingly compete with agriculture for the use of water resources, and may conflict with operational use of area roadways. As the Proposed Plan provides for infill development on non-agriculturally designated lands that support existing agricultural uses and the expansion of the urban footprint in an area surrounded by existing agricultural uses, it has the potential to cause these indirect impacts.

Existing regulations and policies could reduce potential impacts to some extent. The California Right to Farm Act and the Solano County Right-to-Farm Ordinance, found in Chapter 2.2 of the Solano County Code, protects farm operations within the Planning Area from nuisance complaints associated with residential uses located next to active agricultural operations and prevents the siting of **incompatible uses**. **The City of Dixon’s Agricultural Mitigation Program requires applicants that seek to annex agricultural land into city limits or expand the city’s existing Sphere of Influence to include agricultural lands must meet the Solano County LAFCO’s Standards and Procedures for Standards 8 and 9, which includes a market study of unincorporated agricultural lands that could be converted to non-agricultural uses and documentation of its impact on prime agricultural land.** Mitigation measures in LAFCO Standards include agricultural conservation easement to permanently protect agricultural land at a ratio of 1:1 for every acre of agricultural land that is converted to nonagricultural uses, or payment of an in-lieu fee. To the northeast of the City limits, **Solano County’s Limited Industrial Land Use designation protects against industrial uses that are not compatible with agriculture, and the City’s Title 18 Zoning serves to reduce impacts by limiting the expansion of urban uses into areas designated for agriculture.** Additionally, the agricultural overlays of the Vacaville-Dixon and Dixon-Davis Greenbelts would also preserve agricultural land and provide buffers against incompatible uses. And as discussed in Chapter 3.9: Hydrology, the City of Dixon is a participant in the Solano Subbasin Groundwater Sustainability Agency, ensuring that groundwater levels are closely monitored and protected, easing conflicts between urban and agricultural water demands.

The Proposed Plan also aims to reduce development pressures on areas outside of the City boundary and SOI by promoting compact development patterns. The Proposed Plan requires **limiting “leap frog development,” development that is separated from existing urban uses by parcels of vacant land, a pattern that can lead to rapid, sprawling fragmentation of agricultural lands.** Paired with the policy to promote compact development patterns, these requirements will limit development pressures on surrounding agricultural lands, increasing the long-term viability of agricultural uses in those areas (LCC-1.3). Other policies that will help to mitigate possible development pressures include the requirement to maintain greenbelts of open space or farmland

and continue to use the Agricultural Land Mitigation Fund to collect development impact fees to fund greenbelt expansion (NE-1.1, NE-1.2, NE-1.3, and NE-1.A); protect and improve scenic vistas that include view of surrounding agricultural lands (LCC-2.8); and require new development near agricultural land provides appropriate setbacks (LCC-2.8). The Proposed Plan requires that prior to annexing any land or expanding the SOI, the City continue to require agricultural mitigation consistent with the **Solano County LAFCO's Standards and Procedures** when agricultural lands would be converted to nonagricultural purposes (NE-1.4). Other policies mitigate impacts by encouraging and promoting continued agricultural use in vacant areas designated for future development (E.1.9); support the local agricultural community (LCC-1.1); adopt a Right to Farm ordinance to minimize agricultural conflicts with adjacent urban uses, including to allow the continued use of accepted farming practices and protect against complaints regarding noise, dust, and odors (NE-1.A); and maintain designated urban-agricultural buffers (LCC-1.2). The Proposed Plan also requires coordination with Solano County to ensure development standards in unincorporated portions are consistent with those set forth in the Dixon General Plan (LCC-1.B).

These proposed policies, in combination with LAFCo policies, the City's Agricultural Mitigation Program, and MM-AG-1 from Impact 3.2-1, would conserve farmland at a 1:1 ratio, securing significant additional tracts of land for the existing agricultural greenbelts and protecting land outside the SOI from future conversion. Therefore, the impact is considered less than significant.

Mitigation Measures

None required.

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3.3 Air Quality

This section summarizes information on the air quality environment in Dixon and provides an evaluation of the air quality-related effects of the Proposed Plan. The analysis considers existing and projected air quality along major roadways, in addition to other air pollutant sources in the planning area. Mitigation measures are recommended to ensure that emissions are reduced to the maximum extent feasible. This section focuses on criteria air pollutants and toxic air contaminants (TACs); greenhouse gases (GHGs) are evaluated in Section 3.6: Energy, Climate Change, and Greenhouse Gas Emissions.

There was one response to the NOP regarding topics covered in this section. Yolo-Solano Air Quality Management District provided guidance for assessing impacts to air quality and requested that the EIR discuss cumulative impacts of the Proposed Plan, including a review of whether proposed growth is consistent with the growth assumptions in the most recent Metropolitan Transportation Plan. Yolo-Solano Air Quality Management District also requested that the EIR discuss measures such as infill development, transit infrastructure, and pedestrian and/or bicycle infrastructure that would help minimize mobile emissions as the city grows. The Yolo-Solano Air Quality Management District requested that the EIR address whether future growth would place sensitive receptors in proximity to any sources of toxic air contaminants, and discuss how any potential impacts from toxic air contaminants will be mitigated to the extent feasible.

Environmental Setting

PHYSICAL SETTING

The City of Dixon is located in the northern portion of Solano County, part of Yolo-Solano Air Quality Management District. The Yolo-Solano AQMD encompasses approximately 1,500 square miles and includes all of Yolo County and the northeast portion of Solano County, including Vacaville, Dixon, and Rio Vista. The Yolo-Solano AQMD is located in the southernmost portion of the Sacramento Valley and characterized by a large, flat valley bounded by the Northern Coast Ranges to the west and northern Sierra Nevada to the east. The climate is characterized by hot dry summers and mild wet winters. The summer average maximum temperatures are in the 80s to mid 90s, while winter average maximum temperatures are in the high 50s to mid 60s, with minimum temperatures in the high 30s to low 40s.

Due to the climate and terrain of the Sacramento Valley, the potential for air pollution could be high if there were sufficient sources of air contaminants nearby. The summer and fall prevailing winds can transport ozone precursors northward from the San Pablo Bay and Carquinez Strait area into the Sacramento Valley, which effectively traps and concentrates pollutants when stable

conditions are present (Carroll & Zaremba, 1999). In addition, pollutants may be recirculated by the local upslope and downslope flows created by the surrounding mountains, contributing to buildup of air pollution within the valley. In the late fall and winter, particulate matter from motor vehicles, agriculture, and wood burning in fireplaces and stoves can build up in the valley because of the high frequency of light winds and stable atmospheric conditions.

Pollutants of Concern

Criteria Air Pollutants

Concentrations of ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and particulate matter (PM) are commonly used as indicators of ambient air quality conditions. **These pollutants are known as “criteria pollutants” and are regulated by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) through national and California ambient air quality standards (NAAQS and CAAQS), respectively.** Ozone and NO₂ are considered regional pollutants because they (or their precursors) affect air quality on a regional scale. Pollutants such as CO, SO₂, and lead are considered local pollutants that tend to accumulate in the air locally. PM₁₀ and PM_{2.5} are both regional and local pollutants.

The primary criteria pollutants of concern in the planning area are ozone (including its precursors, nitrogen oxides [NO_x] and reactive organic gases [ROG]¹), CO, and PM. Principal characteristics surrounding these pollutants are discussed below, on the U.S. Environmental Protection Agency’s (EPA) website for Criteria Air Pollutants and the CARB Glossary of Air Pollution Terms (U.S. Environmental Protection Agency, 2018). In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Nitrogen Dioxide. Most NO₂, like O₃, is not directly emitted into the atmosphere but is instead formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO₂ are collectively referred to as NO_x and are major contributors to O₃ formation. High concentrations of NO₂ can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis, and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

Reactive Organic Gases. ROGs (also known as Volatile Organic Compounds, or VOCs) are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Negative effects on human health are not caused directly by ROG, but rather by reactions of ROG to form secondary pollutants such as ozone.

Ozone. O₃ is a colorless gas that is formed in the atmosphere when ROGs and NO_x react in the presence of ultraviolet sunlight. O₃ is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROGs and NO_x, the precursors of O₃, are automobile exhaust and industrial sources.

¹ ROG is synonymous with volatile organic compounds (VOC), which is commonly used to describe compound limits for architectural coatings such as paint.

Meteorology and terrain play major roles in O₃ formation, and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O₃ at levels typically observed in Yolo and Solano Counties can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Carbon Monoxide. CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. Generally, automobile exhaust accounts for a majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. While primary contributors of CO are carbon-based fuels, wildfires may intermittently contribute to high CO concentrations as the pollutant is carried by strong winds (NASA, 2018). Climate change, discussed in Section 3.5: Energy, Climate Change, and GHG Emissions, can exacerbate the intensity, frequency, and risk of future wildfires, and therefore high CO concentrations, in California (Borunda, 2018). In terms of health, CO competes with oxygen, **often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs.** The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM_{2.5} and PM₁₀ represent fractions of particulate matter. Fine particulate matter, or PM_{2.5}, is roughly 1/28 the diameter of a human hair. PM_{2.5} results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM_{2.5} can be formed in the atmosphere from gases such as sulfur oxides (SO_x), NO_x, and ROG. Inhalable or coarse particulate matter, or PM₁₀, is about 1/7 the thickness of a human hair. Major sources of PM₁₀ include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM_{2.5} and PM₁₀ pose a greater health risk than larger-size particles. When inhaled, these tiny **particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract.** PM_{2.5} and PM₁₀ can increase the number and severity of asthma attacks, cause or aggravate **bronchitis and other lung diseases, and reduce the body's ability to fight infections.** Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM₁₀ tends to collect in the upper portion of the respiratory system, PM_{2.5}

is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Toxic Air Contaminants.

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and non-carcinogenic effects. Non-carcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC. CARB has identified diesel engine exhaust particulate matter as the predominant TAC in California. Diesel particulate matter (DPM) is emitted into the air by diesel-powered mobile vehicles, including heavy-duty diesel trucks, construction equipment, and passenger vehicles. Certain ROGs may also be designated as TACs.

Although NAAQS and CAAQS have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. The California Office of Environmental Health Hazard Assessment (OEHHA) identifies TACs and studies their toxicity.

Local Air Quality

Air Pollutants and Contaminants of Concern in Dixon

State and federal ambient air quality standards cover a wide variety of pollutants. However, only a few of these pollutants are problems in the planning area, either due to the strength of the emission or the climate of the region. Problematic air pollutants in Dixon and the Sacramento Valley include O₃, PM₁₀, PM_{2.5}, and TACs. As shown in Table 3.3-1, the Yolo-Solano Air Quality Management District area is currently classified as a federal and state nonattainment area for ozone, a federal nonattainment area for PM_{2.5}, and a state nonattainment area for PM₁₀.

Ozone

Emissions from motor vehicle use in the area may contribute to elevated ozone levels in Dixon and high ozone levels in other parts of the Sacramento Valley and nearby Bay Area. Motor vehicles are the largest source of ozone precursor emissions (i.e., nitrogen oxides and reactive organic gases) in the Sacramento Valley. Typically, ozone levels in Dixon are within the healthy range. However, emissions of ozone and its precursors generated within Yolo-Solano may affect surrounding areas including the greater Sacramento region. Therefore, the Yolo-Solano Air Quality Management District is included in the Sacramento Federal Non-attainment (SFNA) Area by the U.S.

Environmental Protection Agency (EPA), and is responsible for helping the regional air districts meet health standards for ozone through the cooperative planning efforts of the air districts within the region.

Particulate Matter

Although particulates are found naturally in the air, most particulate matter found in the planning area is emitted either directly or indirectly by motor vehicles, industry, construction, agricultural activities, and wind erosion of disturbed areas. Most PM_{2.5} is comprised of combustion products such as smoke or formed in the atmosphere from regional emissions of nitrogen oxides. There are many sources of PM₁₀ emissions, including combustion, industrial processes, grading and construction, and motor vehicles. The greatest quantity of PM₁₀ emissions associated with motor vehicle uses is generated by re-suspended road dust. Wood burning in fireplaces and stoves is another significant source of particulate matter, primarily PM_{2.5}, in the City of Dixon. Although the Yolo-Solano Air Quality Management District generally does not experience unhealthy levels of PM_{2.5} and PM₁₀, the District is included in the Sacramento Federal Non-Attainment Area for fine particulate pollution by the EPA and is responsible for helping the Sacramento Air District meet Clean Air Act health standards for particulate matter. Additionally, smoke from major wildfires in Northern California in the summer through late fall can contribute to high levels of particulate matter in Sacramento Valley. Wildfire risk within the Planning Area is discussed further in Chapter 3.8: Hazards, Hazardous Materials, and Wildfire.

Toxic Air Contaminants (TACs)

TACs are another group of pollutants of concern in the Sacramento Valley. Common sources of TACs include industrial processes, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Diesel particulate matter from exhaust has been identified as a TAC. Mobile sources, such as trucks, buses, and construction equipment are by far the largest source of diesel emissions. DPM is the most prevalent TAC in the state, due to the toxicity of DPM and the common sources that include trucks and construction equipment. There are very few stationary sources of TAC emissions in northwest Solano County, however, due to the general land uses present in the County, DPM from on-road transportation emissions and off-road emissions from the agricultural sector is a concern within the planning area.

Table 3.3-1: Yolo-Solano Air Quality Attainment Status (2016)

<i>Pollutant</i>	<i>Federal Standards Classification¹</i>	<i>State Standards Classification²</i>
Ozone - One Hour	Nonattainment	Nonattainment
Ozone - Eight Hour	Nonattainment	Nonattainment
PM 10	Unclassified	Nonattainment
PM 2.5	Nonattainment ³	No information available
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment ⁴	Attainment
Lead (Particulate)	Attainment	Attainment
Hydrogen Sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility Reducing Particles	No federal standard	Unclassified
Vinyl Chloride	No federal standard	Unclassified

Notes:

1. See 40 CFR Part 81.
2. See CCR Title 17 Sections 60200-60210.
3. Yolo-Solano AQMD has attained the 1997 and 2012 federal standards for annual arithmetic mean but has exceeded the 2006 federal 24-hour standard for PM 2.5.
4. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010).
5. **ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.**

Source: (Yolo-Solano Air Quality Management District, Attainment Status, 2019)

Air Quality Monitoring

Since 1987, the California Air Resources Board (CARB) has operated a multi-pollutant monitoring site at the University of California, Davis campus in Davis, which allows the analysis of trends in air quality. Table 3.3-2 shows the Air Quality Monitoring Data from the UC Davis monitoring site, the closest monitoring site to the planning area, from 2016 to 2018. Air quality in and around Dixon is generally good due to the rural nature of the area and lack of upwind air pollution sources.

Table 3.3-2. UC Davis Monitoring Station Air Quality Data^a

<i>Pollutant Standards</i>	2016	2017	2018
<i>Ozone (O₃)</i>			
Maximum 1-hour concentration (ppm)	0.083	0.078	0.107
Maximum 8-hour concentration (ppm)	0.072	0.071	0.080
Number of days standard exceeded ^b			
CAAQS 1-hour (>0.09 ppm)	0	0	1
CAAQS 8-hour (>0.070 ppm)	1	1	1
NAAQS 8-hour (>0.070 ppm)	1	1	1
<i>Carbon Monoxide (CO)</i>			
Maximum 8-hour concentration (ppm)	1.3	1.2	3.0
Maximum 1-hour concentration (ppm)	2.5	1.9	3.3
Number of days standard exceeded ^b			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (≥9.0 ppm)	0	0	0
NAAQS 1-hour (≥35 ppm)	0	0	0
CAAQS 1-hour (≥20 ppm)	0	0	0
<i>Nitrogen Dioxide (NO₂)</i>			
State maximum 1-hour concentration (ppb)	38	28	38
State second-highest 1-hour concentration (ppb)	32	26	35
Annual average concentration (ppb)	*	*	4
Number of days standard exceeded ^b			
CAAQS 1-hour (180 ppb)	0	0	0
<i>Particulate Matter (PM₁₀)^a</i>			
National ^c maximum 24-hour concentration (μg/m ³)	69.4	128.5	201.1
State ^d maximum 24-hour concentration (μg/m ³)	68.7	130.8	212.4
National annual average concentration (μg/m ³)	19.2	21.7	25.3
State annual average concentration (μg/m ³) ^e	19.7	22.0	26.1
Measured number of days standard exceeded ^{b,f}			
NAAQS 24-hour (>150 μg/m ³)	0	0	6.1
CAAQS 24-hour (>50 μg/m ³)	12.2	18.4	24.5
<i>Particulate Matter (PM_{2.5})^a</i>			
National ^g maximum 24-hour concentration (μg/m ³)	16.4	60.1	165.4
State ^h maximum 24-hour concentration (μg/m ³)	30.5	59.2	165.4
National annual average concentration (μg/m ³)	6.3	8.6	12.7
State annual average concentration (μg/m ³)	6.3	8.6	12.7
Measured number of days standard exceeded ^b			
NAAQS 24-hour (>35 μg/m ³)	0	12.3	12.3

Table 3.3-2. UC Davis Monitoring Station Air Quality Data^a

Pollutant Standards	2016	2017	2018
Notes:			
Ppm = parts per million			
NAAQS = National Ambient Air Quality Standards			
CAAQS = California Ambient Air Quality Standards			
$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter			
mg/m^3 = milligrams per cubic meter			
- = data not available			
* = insufficient data available to determine the value			
a	Data for Carbon Monoxide, Particulate Matter (PM ₁₀) and comprehensive data for PM _{2.5} was unavailable from the UC Davis Monitoring Station. Consequently, PM ₁₀ and PM _{2.5} monitored data presented are taken from the Woodland Monitoring Station at Gibson Road, which is the next nearest monitoring station (located approximately 20 miles north of the planning area in Yolo County and in the Yolo-Solano AQMD) that monitors these two pollutants. Only data for the state maximum 24-hour concentration of PM _{2.5} was available from the UC Davis Monitoring Station and is therefore used in conjunction with monitoring data taken from the Woodland Monitoring Station. CO monitored data presented is taken from the Sacramento Monitoring Station at Bercut Drive, which is the next nearest monitoring station (located approximately 20 miles northeast of the planning area in Sacramento County) that monitors this pollutant.		
b	An exceedance is not necessarily related to a violation of the standard.		
c	National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.		
d	State statistics are based on approved local samplers and local conditions data.		
e	State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.		
f	Measurements usually are collected every 6 days.		
g	National statistics are based on samplers using federal reference or equivalent methods.		
h	State statistics are based on local approved samplers.		

Source: California Air Resources Board, 2019; U.S. Environmental Protection Agency, 2019.

The most recent set of monitoring data from the UC Davis site indicates that 1-hour ozone levels in Dixon exceeded state standards once between 2016 and 2018. During this same period, 8-hour ozone levels basin-wide exceeded state and federal standards on one day per year.

The UC Davis monitoring station only provides real time data on ozone and PM_{2.5}. The UC Davis monitoring station had insufficient data to measure the national maximum 24-hour concentration, national annual average concentration, or numbers of days above the federal standard for PM_{2.5} during the time period specified, and had insufficient data to measure the state annual average concentration for 2016 through 2018. Therefore, data points for PM_{2.5} (with the exception of 2016-2018 state maximum 24-hour PM_{2.5} concentration) and PM₁₀ are obtained from the second closest monitoring site to the planning area (Woodland, approximately 20 miles north of the planning area). In 2016, the Woodland station measured 12 days of levels above the PM₁₀ state standard. In 2017, the Woodland station measured 18 days above the PM₁₀ state standard and 12 days of levels

above the PM_{2.5} federal standard. In 2018, the Woodland station measured 6 days above the PM₁₀ federal standard, 25 days over the PM₁₀ state standard, and 12 days of levels above the PM_{2.5} federal standard.

Measured levels of other criteria air pollutants such as nitrogen dioxide and carbon monoxide are well below federal and State standards in the Sacramento Valley. Some pollutants, such as lead and sulfur dioxide, are not measured in or near Dixon because there is no evidence that they would be at levels that would warrant concern (i.e., lack of emission sources). Current levels of nitrogen dioxide at the UC Davis monitoring station are about one-sixth of the most stringent federal and state standards. The closest monitoring station measuring carbon monoxide concentrations is the Sacramento Monitoring Station at Bercut Drive, approximately 20 miles northeast of the planning area (California Air Resources Board, 2019). Current levels of carbon monoxide are about one-eighth of the most stringent federal and state standards. Carbon monoxide concentrations are expected to decrease further in the future as newer and cleaner vehicles replace older vehicles on the roadway.

Existing Sources of Air Pollution

Besides various permitted sources, there are no substantial sources of air pollution or toxic air contaminants in Dixon. The primary source of air pollution within the City of Dixon is vehicle traffic, particularly on State Route 113 (SR-113) and Interstate 80 (I-80). The Yolo-Solano AQMD issues and enforces the following types of permits: stationary source permits, Title V permits, agricultural operating permits, confined animal facility permits, agricultural engine registrations, and portable equipment registrations. A stationary source permit is required for any facility, process, machine or equipment that has the potential to directly emit air pollution. This includes commercial diesel engines, boilers, automotive paint booths, gas stations and a host of other sources. Because Yolo-Solano AQMD does not meet all air quality health standards set forth by the U.S. Environmental Protection Agency or the California Air Resources Board, the District is required to create and implement plans designed to improve air quality. Issuing permits allows the District to work with businesses to ensure that their operations comply with District air quality strategy (Yolo-Solano Air Quality Management District, 2019).

Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and the air district. Common sources of odors within Dixon come from farming operations, manufacturing operations, restaurants, auto body shops, and the wastewater treatment facility in the southeast portion of the city.

Sensitive Populations and Receptors

Populations most likely to be affected by air pollution, as identified by CARB, include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers,

convalescent centers, and retirement homes. Thus, there are numerous sensitive receptors in the planning area.

REGULATORY SETTING

Federal Air Quality Standards

Federal Clean Air Act

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CAA). At the federal level, the U.S. EPA administers the CAA.

Under the CAA, the U.S. EPA has established concentration-based NAAQS for criteria air pollutants (see Table 3.3-3) and has identified hazardous air pollutants, for which emissions standards are developed. The NAAQS are periodically reviewed as new health information is made available.

State Air Quality Standards

California Clean Air Act

The California Clean Air Act (CCAA) is administered by CARB at the state level and by the Air Quality Management Districts at the regional and local levels. Yolo-Solano Air Quality Management District regulates air quality at the regional level for Yolo County and northeast Solano County, including Dixon.

CAAQS are established by CARB for criteria air pollutants and also address some industry-specific pollutants that are not found to be an issue in the Sacramento Valley (see Table 3.3-3). The CAAQS are established based on health effects and are also periodically reviewed and updated, if necessary, as new information is made available. CARB also identifies TACs, which are similar to hazardous air pollutants identified by the U.S. EPA.

Table 3.3-3: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone ⁸ (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		–		
Fine Particulate Matter (PM _{2.5}) ⁹	24-Hour	–	–	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry	35 ppm (40 mg/m ³)	–	Non-Dispersive Infrared Photometry
	8-Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	–	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–	–	
Nitrogen Dioxide (NO ₂) ¹⁰	1-Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	–	Gas Phase Chemilumi- nescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1-Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	–		–	0.5 ppm (1300 µg/m ³)	

Table 3.3-3: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ⁹	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ⁹	–	
Lead (Pb) <small>12, 13</small>	30-Day Average	1.5 µg/m ³	Atomic Absorption	–	–	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average ⁹	–		0.15 µg/m ³		
Visibility-Reducing Particles ¹⁴	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

- Notes: ppm= parts per million by volume $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter mg/m^3 = milligrams per cubic meter
1. California standards for O₃, carbon monoxide (except 8-hour Lake Tahoe), SO₂ (1- and 24-hour), NO₂, and suspended particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
 2. National standards (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu\text{g}/\text{m}^3$ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the USEPA for further clarification and current federal policies.
 3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr.
Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
 4. Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.
 5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
 6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
 7. **Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.**
 8. On October 1, 2015, the national 8-hour O₃ primary and secondary standards were lowered from 0.075 ppm to 0.070 ppm.
 9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 $\mu\text{g}/\text{m}^3$ to 12.0 $\mu\text{g}/\text{m}^3$. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 $\mu\text{g}/\text{m}^3$, as was the annual secondary standard of 15 $\mu\text{g}/\text{m}^3$. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 $\mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
 10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of ppb. California standards are in units of ppm. To directly compare the national standards to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
 11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standards to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm
 12. **CARB has identified Pb and vinyl chloride as “toxic air contaminants” with no threshold level of exposure for adverse health effects determined.** These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
 13. The national standard for Pb was revised on October 15, 2008, to a rolling 3-month average. The 1978 Pb standard (1.5 $\mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
 14. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB, 2016

CARB Air Quality and Land Use Handbook: A Community Health Perspective

In 2005, CARB released the final version of the Air Quality and Land Use Handbook, which is intended to encourage local land use agencies to consider the risks from air pollution before making decisions that approve the siting of new sensitive receptors, such as homes or day care centers, near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits but could result in adverse air quality issues. The primary purpose of the handbook is to highlight the potential health impacts associated with close proximity to common air pollution sources and to have those issues considered in the planning process. CARB makes recommendations regarding the distance of new sensitive land uses near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing stations.

CARB acknowledges that land use agencies have to balance other siting considerations, such as housing and transportation needs, economic development priorities, and other quality-of-life issues. In addition, siting some sensitive receptors, such as residences, near transportation facilities, employment centers, and services would reduce overall emissions from a community.

These “advisory” siting recommendations (or buffer distances), summarized in Table 3.3-4, are based primarily on modeling information and may not be entirely reflective of conditions in the Planning Area. The siting of new sensitive land uses within the identified buffer distances may be possible, but only after site-specific studies are conducted to identify the potential health risks.

In April 2017, CARB released a supplement to the Air Quality and Land Use Handbook, entitled “Strategies to Reduce Air Pollution Exposure Near High Volume Roadways: Technical Advisory” (California Air Resources Board, 2017). The Technical Advisory demonstrates that it is possible to pursue infill development while simultaneously reducing exposure to traffic-related pollution. The Technical Advisory includes a list of recommended strategies to reduce exposure, including practices and technologies that reduce traffic emissions, increase dispersion of traffic pollution (or the dilution of pollution in the air), or remove pollution from the air.

Table 3.3-4 CARB Recommendations on Siting New Sensitive Uses

<i>Source Category¹</i>	<i>Advisory Recommendations</i>
Freeways and High-Traffic Roads	Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
Distribution Centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Dry Cleaners Using Perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline Dispensing Facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Notes:

1. Additional Source Categories can be found on Table 1-1 of the Handbook.

Source: CARB, 2005

CARB Revised Proposed 2016 State Strategy for the State Implementation Plan

On March 7, 2017, CARB released the Revised Proposed 2016 State Strategy for the State Implementation Plan (SIP), describing the proposed commitment to achieve the reductions necessary from mobile sources, fuels, and consumer products to meet federal ozone and PM_{2.5} standards over the next 15 years. The State SIP Strategy proposes a suite of regulatory and incentive programs, referred to as State SIP measures, which, in combination with local actions, are designed to achieve the required emission reductions to meet federal air quality standards. The Revised Proposed 2016 State Strategy for the SIP was certified by CARB on March 23, 2017.

CalEPA / CARB Technical Advisory

The California Environmental Protection Agency (CalEPA) and CARB released a Technical Advisory titled, “Strategies to Reduce Air Pollution – Exposure Near High-Volume Roadways” in April 2017. The advisory is a technical supplement to CARB’s Air Quality and Land Use Handbook: A Community Health Perspective. The Technical Advisory provides planners and other stakeholders involved in land use planning and decision-making with information on scientifically-based strategies to reduce exposure to traffic emissions near high-volume roadways in order to protect public health and promote equity and environmental justice. The Technical Advisory is intended to provide “guidance” for planners weighing options for reducing exposure to traffic emissions and is not intended as guidance for any specific project, nor does it create any presumption regarding the feasibility of mitigation measures for the purposes of compliance with CEQA.

The Technical Advisory identifies strategies to reduce air pollution exposure near high-volume roadways, such as: speed reduction mechanisms; traffic signal management; speed limit reductions on high-speed roadways (>55 mph); design that promotes air flow and pollutant dispersion along street corridors; solid barriers, such as sound walls; vegetation for pollutant dispersion; and indoor high efficiency filtration.

CARB’s Mobile Source Strategy 15 contains a suite of measures that are being considered to simultaneously meet air quality standards, achieve GHG emission reduction targets, reduce petroleum consumption, and decrease health risk from transportation emissions over the next 15 years. Statewide, the Mobile Source Strategy would result in a 45 percent reduction in greenhouse gas emissions and a 50 percent reduction in the consumption of petroleum-based fuels.

Assembly Bill 2588

The Air Toxics "Hot Spots" Information and Assessment Act, or Assembly Bill 2588 (AB 2588), was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

Building Energy Efficiency Standards (Title 24) and CALGreen

California’s Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24 California Code of Regulations [CCR], Part 6) were first established in 1978 in response to a legislative mandate to reduce California’s energy consumption.

In 2007, Governor Schwarzenegger directed the California Building Standards Commission (CBSC) to work with State agencies on the adoption of green building standards for residential, commercial, and public building construction for the 2010 code adoption process. A voluntary version of the California Green Building Standards Code, referred to as CalGreen, was added to Title 24 as Part 11 in 2009. The 2010 version of CalGreen took effect January 1, 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals.

The most recent CalGreen code was adopted in 2019 and became effective January 1, 2020. Under the 2019 CalGreen code, all new multifamily projects which provide residential parking to the occupants must prewire 10 percent of these spaces for future EV charging station infrastructure. Additionally, all residential developments will be required to adhere to the Model Water Efficient Landscape Ordinance (MWELO) and all new residential projects within 200 feet of a municipally supplied reclaimed water system must connect to that supply unit. The 2019 edition of CalGreen also requires new residential and non-residential projects to exceed Title 24 by 15 percent or 30 percent for Tier 1 and Tier 2, respectively.

The 2016 edition of CalGreen has been amended and adopted as Chapter 16.17 of the City of Dixon Municipal Code. The 2016 edition of CalGreen contains voluntary Tier 1 and Tier 2 levels, which are designed to exceed energy efficiency and other standards by 15 percent or 30 percent, respectively. Notably, CalGreen sets VOC content limits for architectural coatings, sealants, adhesives, and formaldehyde for residential and non-residential buildings and construction projects.

The California Building Code (CBC) has been amended and adopted as Section 16.03.020 of the City of Dixon Municipal Code and regulates all building and construction projects within the city.

Local Regulations

Yolo-Solano Air Quality Management District

Air quality districts have local responsibility in overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and State air quality laws and for ensuring that NAAQS and CAAQS are met.

The air quality study area falls under the jurisdiction of Yolo-Solano Air Quality Management District. Under the CCAA, Yolo-Solano AQMD is required to develop an air quality plan for nonattainment criteria pollutants in the air district. The Yolo-Solano AQMD has prepared a 2019 Triennial Assessment and Plan Update. This is the eighth **update to the District's original 1992 Air Quality Attainment Plan** and includes: information about emissions reductions achieved during the 2015-2017 period, district emission inventory and emissions forecasts, air quality data and analysis of air quality trends through 2017, and proposed commitments for the 2018-2020 period (Yolo-Solano Air Quality Management District, 2019). This plan addresses ozone and particulate matter air quality concerns.

In order to achieve the five percent annual emission reduction required by the CCAA, the Yolo-Solano AQMD is obligated to adopt every feasible measure to reduce ozone precursors. In addition to control strategies identified within the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan, described below, the Yolo-Solano AQMD provides two triennial update control measure commitments through 2020. The first, Rule No. 2.27, establishes NO_x and CO limitations for all institutional, commercial, and industrial boilers, steam generators, and process heaters within the Yolo-Solano AQMD's jurisdiction, and was adopted May 15, 2019. The second,

Rule No. 2.32, which establishes NO_x limitations for stationary internal combustion engines, has not yet been adopted.

Future development under the Proposed Plan may be subject to one or more of the following district rules, depending on the specific components of the individual project. These rules have been adopted by Yolo-Solano AQMD to reduce emissions throughout the area (California Air Resources Board, 2019).

- Regulation 2, Rule 3 (Ringelmann Chart). This regulation restricts emission of PM darker than No. 2 on the Ringelmann Chart to less than 3 minutes in any 1 hour.
- Regulation 2, Rule 5 (Nuisance). This regulation restricts the discharge of any air contaminants or material which may cause injury or nuisance to the public or may endanger the health or safety of the public. Rule 2.6 states that this regulation does not apply to agricultural operations in the growing of crops or raising of fowl, animals, or bees.
- Regulation 2, Rule 8 (Open Burning, General). This regulation restricts open outdoor fires within the boundaries of the Yolo-Solano AQMD with the exception of permissive burn days.
- Regulation 2, Rule 11 (Particulate Matter Concentration). This regulation restricts emissions of PM to less than 0.1 grain per cubic foot of gas at dry standard conditions.
- Regulation 2, Rule 12 (Specific Contaminants). This regulation establishes particulate matter combustion contaminants and sulfur compound emission standards. Emissions of sulfur compounds are restricted to less than 0.2% sulfur dioxide, and combustion contaminants may not exceed 0.1 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions.
- Regulation 2, Rule 14 (Architectural Coatings). This regulation establishes VOC content limits for architectural coatings.
- Regulation 2, Rule 19 (Particulate Matter Process Emissions Rate). This regulation establishes PM emissions rates for a range of process weights (both in lb/hour), with the exception of motor vehicles and certain agricultural facilities provided that the emissions from such facilities do not cause a nuisance.
- Regulation 2, Rule 20 (Organic Liquid Storage and Transfer). This regulation establishes guidelines to limit VOC emissions from the storage and transfer of organic liquids, but does not apply to small capacity storage tanks.
- Regulation 2, Rule 37 (Natural Gas-Fired Water Heaters and Small Boilers). This regulation establishes NO_x emissions limits for natural gas fired water heaters and small boilers, and prohibits the manufacture, sale, or installation of water heaters and small boilers generating NO_x emissions in excess of these standards.
- Regulation 2, Rule 40 (Wood-Burning Appliances). This regulation prohibits the sale or installation of any wood-burning appliance that does not meet the U.S. EPA PM emission standard of less than 7.5 grams per hour for a noncatalytic wood fired appliance or 4.1 grams per hour for a catalytic wood fired appliance. This regulation does not apply to wood-burning cookstoves.

- Regulation 3, Rule 4 (New Source Review). This regulation contains requirements for Best Available Control Technology and emission offsets.
- Regulation 3, Rule 13 (Toxics New Source Review). This regulation requires the installation of best available control technology for toxics (T-BACT) at any constructed or reconstructed major source of hazardous air pollutants (HAPs).
- Regulation 9, Rule 9 (Asbestos). This regulation limits the emission of asbestos to the atmosphere and requires appropriate work practice standards and waste disposal procedure.
- Regulation 11, Rule 3 (Agricultural Engine Standards). This regulation restricts emission of PM from internal combustion (IC) engines used in agricultural operations as dark or darker than No. 1 on the Ringelmann Chart or equivalent 20% opacity to less than 3 minutes in any 1 hour.

Additionally, Yolo-Solano AQMD's **CEQA Guidelines document** provides guidance to assist lead agencies in determining the level of significance of project-related emissions, and contain thresholds of significance for ozone, CO, PM₁₀, PM_{2.5}, TACs, and odors (Yolo-Solano Air Quality Management District, 2007). More information these significance thresholds can be found in the **"Methodology and Assumptions" subsection below**.

Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan

The Yolo-Solano AQMD is included in the Sacramento Federal Non-attainment (SFNA) Area for ozone and particulate matter by the U.S. Environmental Protection Agency (EPA). Because emissions created here impact the air quality of neighboring jurisdictions, the Yolo-Solano AQMD is responsible for helping the regional air districts meet health standards under the Clean Air Act. Air districts within the Sacramento region, including Yolo-Solano AQMD, jointly develop plans to achieve those standards by federal deadlines. The Sacramento planning region has developed multiple control strategies to reduce air pollutants, including the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan (updated in 2017 and 2018), PM_{2.5} Maintenance Plan and Redesignation Request (2013, updated version to be prepared and submitted), PM₁₀ Implementation/Maintenance Plan and Redesignation Request for Sacramento County (2010, updated version to be prepared and submitted in 2020), the 2004 Revision to the California State Implementation Plan for Carbon Monoxide, and the Wildfire Mitigation Plan for the Sacramento Federal Nonattainment Area for PM_{2.5} (California Air Resources Board, 2018) (Sacramento Metropolitan Air Quality Management District, 2017).

The 2017 SIP Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan was approved on November 17, 2017. This revision incorporates improvements and updates in reasonable further progress and transportation conformity analyses, emissions inventories, and existing and proposed control measures developed since adoption of the original 2009 Plan. In response to court decisions, some elements included in the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Further Reasonable Progress Plan required updates. CARB staff prepared the 2018 Updates to the California State Implementation Plan (2018 SIP Update) to update SIP elements for nonattainment areas throughout the State as needed. CARB adopted the 2018 SIP Update on October 25, 2018.

Plan Bay Area

SB 375 provides for a new planning process that coordinates land use planning, regional transportation plans (RTPs), and funding priorities to help California meet the GHG reduction goals established in AB 32. SB 375 requires regional transportation plans, developed by metropolitan planning organizations (MPOs), to incorporate a sustainable communities strategy (SCS). The goal of the SCS is to reduce regional vehicle miles traveled (VMT) through land use planning and consequent transportation patterns. ARB released the regional targets in September 2010.

The Metropolitan Transportation Commission (MTC) is the MPO for the nine counties, including Solano County and the City of Dixon, that comprise the San Francisco Bay Area and the San Francisco Bay Area Air Basin (SFBAAB). MTC adopted an SCS as part of their regional transportation plan (RTP) for the SFBAAB in 2013 known as Plan Bay Area. On July 26, 2017, the strategic update to this plan, known as Plan Bay Area 2040, was adopted by the Association of Bay Area Governments (ABAG) and MTC. As a limited and focused update, Plan Bay Area 2040 builds upon the growth pattern and strategies developed in the original Plan Bay Area but with updated planning assumptions that incorporate key economic, demographic, and financial trends since 2013.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Conflict with or obstruct implementation of the applicable air quality plan;
- Criterion 2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard;
- Criterion 3: Expose sensitive receptors to substantial pollutant concentrations; or
- Criterion 4: Result in other emissions (such as those leading to odors) affecting a substantial number of people.

METHODOLOGY AND ASSUMPTIONS

Air Quality Modeling

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Proposed Plan. Air quality impacts are regional, and thus cumulative, in nature, as no single project anticipated under the Proposed Plan would by itself generate enough emissions to cause the Yolo-Solano AQMD area to be designated a nonattainment area but could contribute to overall emissions in the basin. Air pollutant emissions associated with the Proposed Plan would result from operation of future land uses that would be developed in the City of Dixon and from traffic volumes generated by these new developments. These emissions would not occur at once but over the course of the Proposed Plan's buildout period. Construction activities would also generate air pollutant emissions within the City of Dixon and on roadways resulting from construction-related traffic.

For this analysis, impacts of the Proposed Plan's **criteria** pollutant emissions on air quality from construction were assessed qualitatively, while emissions from the Proposed Plan's operations were assessed quantitatively using standard and accepted software tools, techniques, and emission factors. The primary assumptions and key methods used to quantify emissions and estimate potential impacts are described below. Model inputs and calculation files are provided in Appendix B.

The impact analysis below provides a program-level overview of construction and operational emissions that could occur with buildout of the Proposed Plan. The planning area for the Proposed Plan **includes land within the City of Dixon's Sphere of Influence (SOI) and Areas of Concern** in unincorporated Solano County. Existing conditions related to air quality in the whole of the planning area are documented above; however, as the City does not have jurisdiction outside of the city limits and SOI, and the Proposed Plan does not encourage any new development within the study areas, air pollutant emissions are shown only for the City of Dixon and SOI. Any growth in the study areas between 2018 and 2040 buildout is the result of continued growth within unincorporated Solano County and not directly as the result of change areas or land use designation modifications identified within the Proposed Plan. Implementation of the Proposed Plan would not result in direct impacts related to air quality in the study areas, but could result in indirect impacts as air pollution is, by nature, a cumulative impact and increased emissions from the Proposed Plan could affect air quality in surrounding areas. Similarly, while Proposed Plan policies and actions would not apply in the study areas, a decrease in air pollution in the City of Dixon could have positive impacts on air quality throughout the planning area.

Construction Emissions

Land uses that could be developed under the Proposed Plan would generate construction-related emissions from mobile and stationary construction equipment exhaust, employee and haul truck vehicle exhaust, dust from land clearing, and application of architectural coatings. However, the specific size, location, and construction techniques and scheduling that would be utilized for each individual development project occurring within the City of Dixon from implementation of the Proposed Plan is not currently known. With an anticipated buildout year of 2040, development of the various land uses associated with the Proposed Plan would occur over an extended period of time and would depend on factors such as local economic conditions, market demand, and other

financing considerations. As such, without specific project-level details it is not possible to develop a refined construction inventory.² Consequently, the determination of construction air quality impacts for each individual development project, or a combination of these projects, would require the City to speculate regarding such potential future project-level environmental impacts. Thus, in the absence of the necessary construction information required to provide an informative and meaningful analysis, the evaluation of potential construction-related impacts resulting from implementation of the Proposed Plan is conducted qualitatively in this EIR. The analysis discusses the potential for future individual developments in the City of Dixon to generate construction emissions that exceed Yolo-Solano AQMD's project-level thresholds and, where necessary, mitigation measures that are available to reduce those emissions.

Operational Emissions

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors, including mobile- and area-source emissions, were quantified for the Proposed Plan using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Mass mobile-source emissions were modeled based on the daily vehicle trips and vehicle miles traveled (VMT) data provided by DKS, the Proposed Plan's **traffic engineers**, for the existing (2018) and Proposed Plan buildout year (2040) conditions.

Area and energy (natural gas) emissions were modeled according to the amount (i.e., commercial/industrial square footage or number of dwelling units) and type of land uses proposed. Area sources account for direct sources of air emissions, and includes those generated from hearth (e.g., natural gas fireplaces) usage, consumer product use, landscape maintenance equipment, and architectural coatings used for the repainting of buildings. Energy sources account for emissions associated with the combustion of natural gas for building heating and hot water. Emissions were quantified for existing (2018) and Proposed Plan buildout (2040) conditions based on current and anticipated land uses. CalEEMod defaults were assumed. Land use assumptions and CalEEMod output files are in Appendix B.

To evaluate the Proposed Plan's **potential operational air quality impacts, the increase in criteria pollutant emissions** resulting from its implementation in the City of Dixon over existing conditions is assessed against Yolo-Solano AQMD's **project-level thresholds** (see "Establishing Thresholds" section below for more information).

Establishing Thresholds

Supplemental Criteria Pollutant Guidance

Yolo-Solano AQMD has provided guidance to assist lead agencies in determining the significance of criteria pollutant emissions. This analysis evaluates the impacts of the Proposed Plan using a two-tiered approach that considers both project- and plan-level guidance recommended by Yolo-Solano AQMD in their CEQA Guidelines (2007).

² Project-level information includes details such as the size and scale of the project to be constructed, construction schedule, equipment fleet, construction worker crew estimates, and demolition and grading quantities.

First, this analysis considers whether the Proposed Plan would conflict with the most recent air quality plan, the 2019 Triennial Assessment and Plan Update, which is the eighth update to the District’s original 1992 Air Quality Attainment Plan (AQAP). The analysis evaluates whether the Proposed Plan supports the primary goals of the 2019 update to the AQAP, include applicable control measures, and whether it would disrupt or hinder implementation of any 2019 AQAP control measure.

Second, criteria pollutant emissions, calculated using the methodology described above, are compared to Yolo-Solano AQMD’s project-level thresholds. The ROG, NO_x, and PM thresholds are based on emissions levels identified under the New Source Review (NSR) program. The NSR program is a permitting program that was established by Congress as part of the CAA Amendments to ensure that air quality is not significantly degraded by new sources of emissions. The NSR program requires stationary sources receive permits before starting construction or use of the equipment. By permitting large stationary sources, the NSR program assures that new emissions would not slow regional progress toward attaining NAAQS. Yolo-Solano AQMD has concluded that the stationary pollutants described under the NSR program are equally significant to those pollutants generated with land use projects. Yolo-Solano AQMD’s thresholds identified in Table 3.3-5 were set as the total emission thresholds associated within the NSR program to help attain NAAQS. As discussed above, Yolo-Solano AQMD Regulation 3, Rules 4 and 13 contain requirements for Best Available Control Technology and emission offsets.

According to Yolo-Solano AQMD, projects with emissions in excess of the thresholds shown in Table 3.3-5 would be expected to have a significant impact on air quality because an exceedance of the thresholds is anticipated to contribute to CAAQS and NAAQS violations, and should be mitigated where feasible (Yolo-Solano Air Quality Management District, 2007). The thresholds apply to both construction and operational impacts.

Table 3.3-5. Yolo-Solano AQMD Project-Level Emission Thresholds

<i>Regional Criteria Pollutant</i>	<i>Threshold of Significance</i>
ROG	10 tons/year
NO _x	10 tons/year
PM ₁₀ and PM _{2.5}	80 lbs/day
CO	Violation of a state ambient air quality standard for CO

Notes:

ROG = reactive organic gases

Lbs = pounds

NO_x = nitrogen oxide

PM10 = particulate matter that is 10 microns in diameter and smaller

PM2.5 = particulate matter that is 2.5 microns in diameter and smaller

CO = carbon monoxide

Source: Yolo-Solano Air Quality Management District, 2007.

It should be noted that the Yolo-Solano AQMD’s project-level thresholds were developed to analyze emissions generated by a single project, and thus do not lend well to an evaluation of emissions from a land use plan being evaluated at a programmatic level. Large-scale land use plans,

including general plans, that consist of numerous individual projects will, by their nature, produce more criteria pollutants than single projects, even if the plans include efficiency measures to reduce future emissions. Use of the project-level thresholds to evaluate land use plans may therefore unfairly penalize the plans, yielding a significant and unavoidable conclusion simply due to scale. However, because a comparison to the project-level thresholds is informative to the analysis of the Proposed Plan's **impacts on air quality, this analysis accounts for both project-level thresholds and overall consistency with the 2019 Triennial Air Quality Attainment Plan Update.**

Although Yolo-Solano AQMD's **CEQA Guidelines are intended** to help lead agencies navigate through the CEQA process, Yolo-Solano AQMD indicates that the guidelines for implementation of its significance thresholds are advisory only and should be followed by local governments at their own discretion. Nonetheless, **Yolo-Solano AQMD's proposed thresholds are supported by substantial evidence and are well-grounded in air quality regulations, scientific evidence, and scientific reasoning concerning air quality and GHG emissions. Yolo-Solano AQMD's Justification Report, found in Appendix B of Yolo-Solano AQMD's July 2007 CEQA Guidelines, explains the agency's reasoning and provides substantial evidence for developing and adopting their thresholds.**

Supplemental Health Risk Guidance

As discussed in the Environmental Setting section above, all criteria pollutants are associated with some form of health risk (e.g., asthma, asphyxiation). Negative health effects associated with criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). Moreover, ozone precursors (ROG and NO_x) affect air quality on a regional scale. Health effects related to ozone, therefore, are the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and as such, translating project-generated criteria pollutants to specific health effects would produce meaningless results. In other words, minor increases in regional air pollution from project-generated ROG and NO_x would have nominal or negligible impacts on human health.

Because localized pollutants generated by a project that could result from implementation of the Proposed Plan can directly affect adjacent sensitive receptors, the analysis of impacts on human health focuses only on those localized pollutants with the greatest potential to result in a significant, material impact on human health. This analysis is consistent with the current state-of-practice and published guidance by Yolo-Solano AQMD (2007), California Air Pollution Control Officers Association (CAPCOA) (2009), Office of Environmental Health Hazard Assessment (OEHHA) (2015), and CARB (2000). The pollutants of concern include (1) TACs and (2) localized CO.

Toxic Air Contaminants

The ARB Handbook indicates that mobile sources continue to be the largest overall contributors to **the State's air pollution problems, representing the greatest air pollution health risk to most Californians.** The ARB Handbook recommends minimum separations between new sensitive land uses and eight categories of existing sources but has not provided specific thresholds of significance for TACs. Housing and other facilities accommodating sensitive receptors in new development projects that are located more than the ARB recommended distances from any source category identified in the ARB Handbook are not considered to be at elevated risk. Housing and other

facilities accommodating sensitive receptors in new development projects located within the ARB recommended distance from the source categories identified in the ARB Handbook are considered to be exposed to an elevated risk. A significant impact would occur if the project would place sensitive receptors in the area immediately adjacent to the source of air toxics or near potential TAC sources not listed in the ARB Handbook.

Yolo-Solano AQMD has established project-level thresholds for cancer and non-cancer health hazards from TACs.³ The health risk thresholds defined by Yolo-Solano AQMD are the probability of contracting cancer for the maximally exposed individual (MEI) exceeding 10.0 in 1 million, or the ground-level concentrations of non-carcinogenic TACs resulting in a hazard index (HI) greater than 1.0 for the MEI. While the district continues to evaluate a threshold of significance for mobile source TAC, no specific mobile source TAC threshold is proposed at this time.

With respect to asbestos, which is a TAC, there are no quantitative thresholds related to receptor exposure. However, Yolo-Solano AQMD establishes procedures to prevent emissions of particulate asbestos material from the demolition or renovation of asbestos containing building materials.

Localized Carbon Monoxide

Yolo-Solano AQMD considers localized CO emissions to result in significant impacts if concentrations exceed CAAQS (Table 3.3-5). The air district utilizes a screening approach, originally developed by San Joaquin Valley Unified Air Quality Management District (AQMD), to provide a conservative indication of whether project-generated traffic will cause a potential CO hot spot. If either of the following criteria is true of any intersection affected by the project traffic, then the project can be said to have the potential to create a violation of the CO standard.

1. A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to an unacceptable LOS (typically LOS E or F); or
2. A traffic study indicates that the project will substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity. **“Substantially worsen” includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.**

Supplemental Odor Guidance

CARB has identified several types of land uses as being commonly associated with odors, such as landfills, wastewater treatment facilities, and animal processing centers. The general nuisance rule (H&SC §41700 and District Rule 2.5) is the basis for this threshold. A project may reasonably be expected to have a significant adverse odor impact where it **“generates odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or**

³ DPM is the primary TAC of concern for mobile sources; of all controlled TACs, emissions of DPM are estimated to be responsible for approximately 70 percent of the total ambient TAC risk (California Air Resources Board, 2000). Given the risks associated with DPM, tools and factors for evaluating human health impacts from project-generated DPM have been developed and are readily available. Conversely, tools and techniques for assessing project-specific health outcomes as a result of exposure to other TACs (e.g., benzene) remain limited. These limitations impede the ability to evaluate and precisely quantify potential public health risks posed by TAC exposure.

to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.”

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Natural Environment

- NE-3.1 Promote reduction of solid waste production throughout Dixon and expand the range of programs and information available to local residents and businesses.
- NE-3.2 Ensure that 75 percent of solid waste generated be reduced at source, recycled, or composted by the year 2020 and beyond, per AB 341.
- NE-3.11 Reduce, through redevelopment and retrofitting, the amount of uncovered industrial and commercial areas where the work activity may contribute pollutants.
- NE-3.A Provide recycling receptacles in parks and public spaces, in addition to trash receptacles.
- NE-3.B Consider expanding compost collection services to residential customers in Dixon or implementing a backyard composting program for local residents.
- NE-3.C Work with commercial and industrial generators to develop and implement a source reduction and recycling plan tailored to their individual waste streams.
- NE-3.D Adopt a construction and demolition diversion ordinance based on the CalRecycle model ordinance to require diversion of construction and demotion debris as needed to meet State mandates.
- NE-5.1 Coordinate with the Yolo-Solano Air Quality Management District and other local, regional, and State agencies to protect and enhance air quality in Dixon.
- NE-5.2 Continue to use the Yolo-Solano Air Quality Management District’s Handbook for Assessing and Mitigating Air Quality Impacts for environmental review of proposed development projects.
- NE-5.3 Require dust abatement actions for all new construction and redevelopment projects, consistent with the Yolo-Solano Air Quality Management District’s Best Available Control Measures.
- NE-5.4 Ensure adequate buffer distances are provided between offensive odor sources and sensitive receptors, such as schools, hospitals, and community centers.
- NE-5.5 Encourage development to minimize grading related to the topography and natural features in order to limit soil erosion.

- NE-5.E Explore the feasibility of converting the City fleet of street sweepers, Read-Ride vans and other large-scale equipment from fossil fuel to alternative fuel types using funding and incentives offered by the Yolo-Solano Air Quality Management District.
- NE-5.G Consider developing a green infrastructure plan that employs tools such as bioswales, permeable pavement, rain gardens, rain barrels and cisterns, and green roofs to treat stormwater, attenuate floods, increase groundwater recharge, and reduce urban heat islands.

Land Use and Community Character

- LCC-1.2 Maintain designated urban-agricultural buffers within City jurisdiction to minimize conflicts with adjoining agricultural uses.
- LCC-1.3 Promote a compact **development pattern and limit “leap frog” development** in order to support efficient delivery of public services and infrastructure, conserve agricultural and open space lands, reduce vehicle trips, and improve air quality.
- LCC-5.3 Encourage infill development, adaptive reuse, and the restoration of historic buildings to revitalize Downtown Dixon as a center of community activity.
- LCC-5.6 Foster transit-oriented development within one-half mile of the train station in anticipation of future passenger rail service.
- LCC-5.B Update the Zoning Code with a pedestrian overlay applicable in the Downtown Commercial District to promote active, pedestrian-oriented street life by regulating building orientation, accessory parking facilities and the design of buildings and public spaces.
- L5C-5.C Identify and actively promote development of key vacant or underutilized sites for residential mixed use development in and adjacent to the downtown area.
- LCC-5.F Amend the Zoning Code to:
- Require parking for non-residential uses to locate at the rear or interior of the lot;
 - Reduce the required front yard setback for residential uses in downtown zones; and
 - Revise allowable uses, as needed, to reduce auto-oriented development.
- LCC-5.G Prepare for passenger rail service in Dixon by developing a land value capture program to generate funding for streetscape improvements, affordable housing, or other public benefits in the downtown area. Consider value capture strategies such as special assessment districts, impact fees, land value tax, and tax-increment financing.

- LCC-6.1 Promote the development of compact, complete residential neighborhoods by encouraging the location of services and amenities within walking and biking distance of residences so as to foster opportunities for social interaction and reduce the need to travel by car.
- LCC-6.3 Provide and maintain liveable residential neighborhoods by reducing noise and air pollution, discouraging pass-through traffic, minimizing traffic accidents, and promoting lower speeds.
- LCC-7.4 Enhance links between the neighborhood centers and surrounding residential neighborhoods by providing walkable and bikeable connections.

Economic Development

- E-1.7 Require industrial, light industrial, and agro-industrial development to meet performance standards based on factors of noise, odor, light, glare, traffic generation and air emissions, soil contamination, and surface and groundwater contamination in order to minimize its impacts on established or proposed residential areas and other adjacent uses.

Public Services

- PSF-6.E Consider developing and adopting a "healthy development" checklist to evaluate potential new development under appropriate criteria, which might include exposure to harmful levels of air pollution, effects on the noise environment, and relationship to the active transportation network.

Mobility and Transportation

- MT-1.3 **Design, construct, operate, and maintain city streets based on a "complete streets" concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.**
- MT-1.4 Make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle and automobile safety over motor vehicle level of service and motor vehicle parking.
- MT-1.5 Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders through appropriate roadway modifications and improvements.
- MT-1.6 Ensure that improvements to the transportation network support a land use pattern that connects the community, integrates neighborhoods, provides multi-modal access and facilitates travel among Dixon's neighborhoods.
- MT-1.8 **To the extent allowed by law, continue to utilize the City's Traffic Impact Fee to fund bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.**

- MT-1.D Provide new connections for vehicles, bicycles, and pedestrians across the railroad.
- MT-1.E Consider adopting the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide to direct future improvement projects.
- MT-2.7 Decrease dependence on single-occupant vehicles by increasing the attractiveness of other modes of transportation.
- MT-3.3 Foster an integrated multi-use trail system that provides universally accessible, safe, pleasant and convenient links within the city and to destinations beyond.
- MT-3.4 Expand the regional bicycle and pedestrian trail network, in collaboration with the Solano Transportation Authority, surrounding communities, and other partners.
- MT-3.5 Increase regional transit ridership to and from Dixon and expand shuttle service to Amtrak.
- MT-3.6 Participate in and contribute to regional programs to improve commute alternatives and efficiency.
- MT-3.7 Prioritize the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.
- MT-3.8 Encourage provision of a variety of transportation services for seniors and community members with limited mobility.
- MT-3.A Work with the Solano Transportation Authority to study the feasibility of expanding express bus routes and frequency to Davis and UC Davis, and Amtrak stations from a central location in Dixon.
- MT-3.B Conduct a mobility needs assessment and identify solutions to improve transit service for Dixon residents and employees. The study should assess park and ride facilities, shuttle service to Fairfield and Davis Amtrak stations, multi-modal connectivity, and safety among other issues and opportunities.
- MT-3.C Collaborate with the Rails to Trails Conservancy, UC Davis, Solano County Transportation Authority and other partners to explore the possibility of creating a "rail with trail," a multiuse path adjacent to the railroad in Dixon, or other protected bike trail with regional connections.
- MT-3.D Work with Caltrans, Solano County, Fairfield and Suisun Transit, and the Solano Transportation Authority to identify and seek funding for improvements that make intra-city travel easier, including for transit, bicycles, and pedestrians.
- MT-3.E In partnership with transit providers, explore the expansion of Redit-Ride services as funding allows, to offer greater connectivity within Dixon.

- MT-3.F Consider assessing through a study or survey the need for local bicycle and walking trail improvements that complement those included in the Countywide Bicycle Master Plan.
- MT-4.1 Promote cycling and walking as healthy, affordable and viable transportation options in Dixon for all residents through education, incentives, citywide events such as Sunday Streets events, and programs such as Safe Routes to School and Safe Routes for Seniors programs.
- MT-4.4 Regularly maintain bicycle and pedestrian paths and trails, including sweeping, weed abatement and surface maintenance.
- MT-4.5 Encourage pedestrian-friendly design features in new development such as sidewalks, street trees, on-street parking, gathering spaces, gardens, outdoor furniture, art and interesting architectural details.
- MT-4.6 Enhance the existing bicycle/pedestrian network by adding planting pockets with street trees to provide shade, calm traffic and enhance the pedestrian realm, prioritizing routes that link destinations such as employment centers, commercial centers, schools and downtown Dixon.
- MT-4.7 Continue to implement traffic calming measures to slow traffic on local and collector residential streets, and contribute to the safety of non-motorized road users.
- MT-4.8 Require new or redesigned parking lots to optimize pedestrian and bicycle safety and provide green infrastructure for aesthetic and stormwater management purposes.
- MT-4.A Work with bicycle advocacy groups, Solano Transportation Authority and other partners to identify obstacles and impediments to cycling and develop strategies to address them. The assessment could involve a survey and should consider safety, infrastructure availability, network maintenance, and ease of getting around.
- MT-4.B Collaborate with senior advocacy **organizations to develop a “safe routes for seniors” program that provides pedestrian improvements tailored to residents with limited mobility throughout Dixon, especially near senior living centers and destinations such as the Dixon Senior Center.**
- MT-5.1 Plan for a multi-modal downtown where the transportation network accommodates and balances the needs of pedestrians, cyclists, drivers, and rail, shuttle, and transit passengers.
- MT-5.2 Promote a walkable downtown and enhance the pedestrian environment with improvements for safety and amenities such as planters, street furniture, and public art.

- MT-5.3 Increase bicycle accessibility downtown by providing bike paths and bicycle parking infrastructure.
- MT-5.4 Support efforts to bring passenger rail to Downtown Dixon.
- MT-5.5 Improve connections to the Dixon Train Station and provide safe, easy, attractive access across the railway tracks for all roadway users.
- MT-5.A Seek funding for mobility improvements downtown, including pedestrian and bicycle improvements and a grade-separated rail crossing at A Street.
- MT-5.C Install buffered bicycle lanes along First Street to the High School and along A Street to the Civic Center, or a bicycle boulevard on residential streets parallel to current bicycle routes such as on Hall Park Drive to the High School and Mayes Street to the Civic Center.
- MT-5.D Provide secure bicycle racks along First Street and in key locations throughout the downtown, such as the train station and Dixon Public Library.

IMPACTS

- Impact 3.3-1 Development under the Proposed Plan would not conflict with or obstruct the implementation of the applicable air quality plan. (*Less than Significant*)

The California Clean Air Act (CCAA) requires that a State Implementation Plan (SIP) or an air quality control plan be prepared for areas with air quality violating the NAAQS. The SIP sets forth the strategies and pollution control measures that states will use to attain the NAAQS. The CCAA requires attainment plans to demonstrate a five percent per year reduction in nonattainment air pollutants or their precursors, averaged every consecutive three-year period, unless an approved alternative measure of progress is developed. Air quality attainment plans (AQAPs) outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As described in the Regulatory Setting, the current AQAP for Yolo-Solano AQMD is the 2019 Triennial Assessment and Plan Update, which discusses the progress the Yolo-Solano AQMD has made towards improving the air quality between 2015 and 2017 and includes proposed commitments for the 2018-2020 period. The Triennial Assessment also assesses emissions trends for ozone precursor pollutants (ROG and NO_x), including stationary and mobile source emissions reduction efforts.

In order to achieve the five percent annual emission reduction required by the CCAA, the Yolo-Solano AQMD is obligated to adopt every feasible measure to reduce ozone precursors. In addition to control strategies identified within the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan, described below, the Yolo-Solano AQMD provides two triennial update control measure commitments through 2020. The first, Rule No. 2.27, establishes NO_x and CO limitations for all institutional, commercial, and industrial boilers, steam generators, and process

heaters within the Yolo-Solano AQMD's jurisdiction, and was adopted May 15, 2019. The second, Rule No. 2.32, which establishes NO_x limitations for stationary internal combustion engines, has not yet been adopted. All development under the Proposed Plan would be subject to these control measures. Implementation of the Proposed Plan would not conflict with the emissions reduction efforts outlined in the 2019 Triennial Assessment or obstruct its implementation; therefore, this impact would be less than significant.

As described in the Environmental and Regulatory Setting, the Yolo-Solano AQMD is included in the Sacramento Federal Non-attainment (SFNA) Area for ozone and particulate matter by the U.S. Environmental Protection Agency (EPA). The five air districts that comprise the SFNA (Sacramento Metropolitan AQMD, Yolo-Solano AQMD, Feather River AQMD, Placer County AQMD, and El Dorado County AQMD) developed a plan to demonstrate attainment of the 2008 8-hour NAAQS of 75 ppb by an attainment year of 2024. On November 17, 2017, the 2017 SIP Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan was approved. This revision incorporates improvements and updates in reasonable further progress and transportation conformity analyses, emissions inventories, and existing and proposed control measures developed since adoption of the original 2009 Plan. In response to court decisions, some elements included in the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Further Reasonable Progress Plan required updates. CARB staff prepared the 2018 Updates to the California State Implementation Plan (2018 SIP Update) to update SIP elements for nonattainment areas throughout the State as needed. CARB adopted the 2018 SIP Update on October 25, 2018.

Typically, a general plan is deemed consistent with air quality plans if it would result in population, VMT, or emissions that are consistent with estimates set forth in the applicable air quality plan, and if it shows consistency with strategies described in the applicable AQAP and SIP. Yolo-Solano AQMD's *Handbook for Assessing and Mitigating Air Quality Impacts* states that **the potential air quality effects of general plans should be evaluated based on the plan's consistency with the most recently adopted AQAP and SIP.** The proposed General Plan update would redistribute certain land uses and change the definition of certain land use designations to allow for an increase in the density or intensity of development in the Planning Area. Consequently, the potential increases in density, and therefore population, in the Planning may not have been accounted for in the AQAP and SIP. However, the updated General Plan policies emphasize the importance of infill development, making the plan consistent with strategies described in the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan.

Photochemical modeling results within the 2017 SIP Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan indicate that the combined reductions from existing local strategies, regional, state, and federal control measures are sufficient to demonstrate attainment by 2024. Therefore, the plan does not propose adoption of any new regulatory VOC or NO_x control measures at the regional or local level. The 2018 SIP Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan also does not propose adoption of any new control measures.

The Proposed Plan includes multiple policies that support control measures proposed within the 2013 SIP Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, which are assumed to be implemented in the 2017 and 2018 SIP Revisions analysis. Specifically, Control Measure RP-1 from Appendix D of the 2013 SIP Revisions to the Sacramento

Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan is intended to encourage infill development. Proposed Plan policy LCC-4.3 would encourage infill development and adaptive reuse within downtown Dixon. Additionally, the Proposed Plan would implement three new mixed-use land use designations located near major corridors in Dixon: Commercial Mixed Use, Downtown Mixed Use, and Campus Mixed Use. Therefore, the Proposed Plan would not conflict with or obstruct the implementation of the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, resulting in a less than significant impact.

Mitigation Measures

None required.

Impact 3.3-2 Development under the Proposed Plan would result in a cumulatively considerable net increase of criteria pollutants for which the General Plan region is nonattainment under an applicable federal or State ambient air quality standard. (*Significant and Unavoidable*)

Air pollution is by nature a cumulative impact. No single project by itself would be sufficient in size to result in regional nonattainment of AAQS. **Instead, a project's individual emissions contribute** to existing adverse air quality conditions, and together with other past, present, and reasonably foreseeable projects could result in a significant impact. Development under the Proposed Plan that would exceed Yolo-Solano AQMD's **regional significance thresholds would** cumulatively contribute to the nonattainment designation of the Yolo-Solano AQMD area, which constitutes an air quality violation. The Yolo-Solano Air Quality Management District area is currently classified as a federal and state nonattainment area for ozone, a federal nonattainment area for PM_{2.5}, and a state nonattainment area for PM₁₀. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk (PM_{2.5}, TACs)
- Aggravates respiratory disease (O₃, PM_{2.5})
- Increases bronchitis (O₃, PM_{2.5})
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O₃)
- Reduces resistance to infections and increases fatigue (O₃)
- Reduces lung growth in children (PM_{2.5})
- Contributes to heart disease and heart attacks (PM_{2.5})
- Contributes to premature death (O₃, PM_{2.5})
- Linked to lower birth weight in newborns (PM_{2.5})

Any development under the Proposed Plan that could produce a significant regional air quality impact in an area that is in nonattainment and contribute to health impacts discussed above. Although Yolo-Solano AQMD's CEQA **Air Quality** Guidelines require an emissions inventory of

criteria air pollutants for project-level analyses, an inventory of criteria air pollutants was generated for the Proposed Plan, since enough information regarding the buildout of the Proposed Plan is available to identify the magnitude of emissions from buildout and whether development allowed under the Proposed Plan would contribute to an air quality violation. Consistency with the applicable air quality management plan is assessed in Impact 3.3-1 and below. Table 3.3-6 identifies the emissions associated with buildout of the Proposed Plan for the City of Dixon and its SOI. Emissions of ROG and NOx are provided in tons per year, while emissions of CO, PM10, and PM2.5 are provided in pounds per day to reflect Yolo-Sacramento AQMD project-level thresholds. Subsequent environmental review of development projects would be required to more accurately assess potential impacts under Yolo-Solano AQMD's project-level thresholds.

Table 3.3-6. Estimated Operational Emissions under the Proposed Plan

<i>Analysis Condition/Source</i>	<i>ROG¹</i>	<i>NOx¹</i>	<i>CO²</i>	<i>PM₁₀²</i>	<i>PM_{2.5}²</i>
<i>Baseline (2018)</i>					
Area	392	3	5,196	639	639
Energy	5	42	177	18	18
Mobile	19	112	1,932	25,744	2,640
Total³	416	157	7,305	26,401	3,297
<i>2040 With Proposed Plan</i>					
Area	600	5	7,785	979	979
Energy	5	44	180	19	19
Mobile	8	66	703	27,736	2,839
Total	614	114	8,669	28,733	3,836
<i>Net Increase with Proposed Plan</i>					
2040 With Proposed Plan vs. Existing	198	(43)	1,364	2,332	539
Threshold⁴	10	10	-	80	80
Exceed Threshold?	Yes	No	-	Yes	Yes

Notes:

1. In tons per year
2. In pounds per day
3. Numbers may not add due to rounding.
4. Yolo-Solano AQMD's project-level thresholds were developed to analyze emissions generated by a single project and so offer an extremely conservative evaluation of emissions from an entire general plan such as the Proposed Plan.

Source: Dyett and Bhatia, 2019.

Construction Emissions

Construction associated with development projects under the Proposed Plan update would result in the temporary generation of ozone precursors (ROG and Nox), CO, and particulate matter exhaust emissions that could result in short-term impacts on ambient air quality in the planning area. Potential sources of construction-related emissions include mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and ROG from architectural coatings and asphalt paving. Construction-related emissions would vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

The Proposed Plan does not propose any specific development projects, but construction would occur as buildout of the Planning Area proceeds under the Proposed Plan. The precise level of construction activities that buildout would entail is currently unknown. In addition, changes in the land use designations of certain areas could result in more intense construction activities under the Proposed Plan than would take place under the current General Plan. Because such details of future construction under the General Plan update are currently unknown, emissions from construction activities associated with buildout cannot be quantified and are evaluated qualitatively for purposes of this analysis.

According to the thresholds outlined by Yolo-Solano AQMD, a significant impact would occur if emissions from the construction of any project, including a project developed under the General Plan update, were to exceed 10 tons per year of ROG and NOX or 80 pounds per day of PM10. All construction projects that would occur under the Proposed Plan would be required to abide by Yolo-Solano Air Quality Management District rules adopted to reduce emissions throughout the region. The following rules, discussed above in the Regulatory Setting, would reduce the potential for substantial pollutant emissions from future construction projects under the Proposed Plan.

- Regulation 2, Rule 3 (Ringelmann Chart). This regulation restricts emission of PM darker than No. 2 on the Ringelmann Chart to less than 3 minutes in any 1 hour.
- Regulation 2, Rule 5 (Nuisance). This regulation restricts the discharge of any air contaminants or material which may cause injury or nuisance to the public or may endanger the health or safety of the public. Rule 2.6 states that this regulation does not apply to agricultural operations in the growing of crops or raising of fowl, animals, or bees.
- Regulation 2, Rule 11 (Particulate Matter Concentration). This regulation restricts emissions of PM to less than 0.1 grain per cubic foot of gas at dry standard conditions.
- Regulation 2, Rule 12 (Specific Contaminants). This regulation establishes particulate matter combustion contaminants and sulfur compound emission standards. Emissions of sulfur compounds are restricted to less than 0.2% sulfur dioxide, and combustion contaminants may not exceed 0.1 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions.
- Regulation 2, Rule 14 (Architectural Coatings). This regulation establishes VOC content limits for architectural coatings.

- Regulation 2, Rule 19 (Particulate Matter Process Emissions Rate). This regulation establishes PM emissions rates for a range of process weights (both in lb/hour), with the exception of motor vehicles and certain agricultural facilities provided that the emissions from such facilities do not cause a nuisance.

Additionally, future development would be required to comply with Proposed Plan policies aimed at reducing potential air quality impacts of construction and redevelopment activities. For example, policy NE-5.3 would require dust abatement actions for all new construction and redevelopment projects, consistent with the Yolo-Solano AQMD's **Best Available Control Measures**. Policy NE-5.5 encourages development to minimize grading related to the topography and natural features in order to limit soil erosion. Additional Proposed Plan policies, such as NE-5.1 and NE-5.2, encourage continued coordination with Yolo-Solano AQMD to protect air quality in Dixon, including use of the Yolo-Solano AQMD's Handbook for Assessing and Mitigating Air Quality Impacts for environmental review of proposed development projects.

Compliance with these measures would reduce the amount of criteria pollutant emissions from future development under the Proposed Plan. However, given the lack of specifics regarding construction projects at this time, it is uncertain what the intensity of future construction would be, and whether construction activities from individual future projects developed under the General Plan update would result in ROG, NO_x, PM₁₀, and PM_{2.5} emissions in excess of Yolo-Solano AQMD thresholds. Accordingly, this impact is conservatively determined to be significant. Implementation of Mitigation Measure AQ-1 would help reduce construction exhaust emissions and potential construction-related air quality impacts. However, because it may not be feasible in all cases to ensure that construction emissions are below applicable thresholds, this impact is considered to be significant and unavoidable.

Operational Emissions

As discussed, Yolo-Solano AQMD has provided both project- and plan-level guidance in determining the significance of criteria pollutant emissions. This analysis evaluates the impacts of the Proposed Plan using a two-tiered approach.

First, operational air quality impacts of the Proposed Plan are evaluated for consistency with the 2019 Triennial Assessment and Plan Update to determine whether criteria pollutant emissions attributed to population and economic growth are significant. Impact 3.3-1 determines that the Proposed Plan would support the goals of the 2019 Triennial Assessment and Plan Update, include all applicable control measures, and would not conflict with its implementation.

Yolo-Solano AQMD has stated that cumulative analysis of air quality impacts under the Proposed Plan must include a review of whether the proposed growth in the City of Dixon is consistent with the growth assumptions in Plan Bay Area 2040, the most recent Metropolitan Transportation Plan prepared by the Metropolitan Transportation Commission and Association of Bay Area Governments. Attainment plans prepared by the SFNA, including the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, rely on the growth assumptions in the applicable regional metropolitan transportation plans. To the extent that growth in future years exceeds the forecasts in Plan Bay Area, the SFNA's ability to attain the ozone standards by the appropriate deadlines could be affected. Plan Bay Area projects a total of 7,300 households and

5,400 jobs in the City of Dixon in 2040. Implementation of the Proposed Plan would increase total households in the City of Dixon from 6,281 in 2018 to 8,890 in 2040, and total jobs from 4,949 to 6,224 in 2040. Implementation of the Proposed Plan would exceed Plan Bay Area projections and therefore could have a cumulatively considerable impact on the continued nonattainment status of the Yolo-Solano AQMD area. Therefore, this impact is considered significant and unavoidable.

Second, criteria pollutant emissions under the Proposed Plan, shown in Table 3.3-6, are compared to Yolo-Solano AQMD's **project-level** thresholds. According to Yolo-Solano AQMD, projects with emissions in excess of the thresholds shown in Table 3.3-5 would be expected to have a significant impact on air quality because an exceedance of the thresholds is anticipated to contribute to CAAQS and NAAQS violations, and should be mitigated where feasible. As discussed above, Yolo-Solano AQMD's **project-level** thresholds were developed to analyze emissions generated by a single project and so offer a conservative evaluation of emissions from implementation of an entire general plan.

Buildout of the Proposed Plan has the potential to result in air quality impacts from mobile, area, and energy sources. Mobile sources would include vehicle trips generated by land uses proposed within the city. Area sources would include hearth usage, landscaping equipment, off-gassing during the reapplication of architectural coatings, and consumer products (e.g., solvents, cleaning supplies, cosmetics, toiletries). Energy sources would include onsite natural gas combustion for space and water heating. Each of these sources was taken into account in calculating the Proposed **Plan's long-term** operational emissions, which were quantified using the CalEEMod (see methodology discussion above).

Table 3.3-6 summarizes daily mobile, area, and energy source emissions generated under baseline (2018) and buildout (2040) conditions with the Proposed Plan. To evaluate the magnitude of the change in the air quality environment due to implementation of the Proposed Plan, the emissions under the Proposed Plan at buildout in 2040 are compared to the emissions under existing conditions, and the resulting net increase in emissions is compared to Yolo-Solano AQMD's project-level thresholds for the purpose of a conservative analysis. As air quality is by nature a cumulative impact, the results of CalEEMod for the entire Planning Area are presented.

As indicated in Table 3.3-6, operational sources under the Proposed Plan for the City of Dixon and its SOI would result in a net increase in criteria pollutant emissions of ROG, CO, PM₁₀, and PM_{2.5}. Emissions of ROG, PM₁₀, and PM_{2.5} under the Proposed Plan exceed Yolo-Solano AQMD project-level thresholds and would cumulatively contribute to the nonattainment designation of the Yolo-Solano AQMD area. Emissions of NO_x show a net reduction would occur under the Proposed Plan when compared to existing conditions, which is primarily attributed to the continued improvement in mobile source emissions in California over time due to vehicle fleet turnover and the implementation of more advanced vehicle technologies, including lower emission fuels.

The Proposed Plan includes numerous policies to reduce criteria air pollutants. Policies within the Proposed Plan, including NE-5.1 and NE-5.3, address adhering to air quality standards and reducing air pollution. Additionally, policy NE-5.2 recommends using Yolo-Solano Air Quality Management District's **Handbook for Assessing and Mitigating Air Quality Impacts** for environmental review of proposed development projects. Implementing Action PSF-6.E calls for the adoption of a "healthy development" checklist to evaluate potential new development under

appropriate criteria, which might include exposure to harmful levels of air pollution, effects on the noise environment, and relationship to the active transportation network. The Proposed Plan also includes policies specifically related to the reduction of VMT, which would reduce mobile-source emissions. Policies that reduce VMT address increasing density and promoting compact growth, including LGC-1.1, LGC-3.3, and LGC-3.C. Policies that encourage walking, biking, public transit, and other alternatives to single-occupancy automobile use include NE-5.E, LCC-4.6, LCC-4.B, LCC-4.H, LGC-6.1, LGC-6.3, LGC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6, MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D.

In addition to policies and implementing actions within the Proposed Plan, Mitigation Measures AQ-1, AQ-2, and AQ-3 are recommended to further reduce criteria air pollutants. Mitigation Measure AQ-1 aims to reduce PM through best management practices (BMPs) for construction-related pollution. Mitigation Measure AQ-2 addresses a decrease in ROG by requiring the use of low VOC coatings for developments. Pursuant to Mitigation Measure AQ-3, all development applications with the potential to create point-source air quality impacts must be referred to Yolo-Solano AQMD for review and comment to ensure compliance with Yolo-Solano AQMD requirements prior to approval of the project.

Future development under the Proposed Plan would be required to comply with applicable air quality plans, SIP, CARB motor vehicle standards, Yolo-Solano AQMD regulations for stationary sources and architectural coatings, Title 24 energy efficiency standards, and the Proposed Plan policies; however, there is no guarantee emissions would be mitigated below Yolo-Solano AQMD thresholds. Accordingly, operational sources under the Proposed Plan would result in a significant and unavoidable air quality impact associated with ROG, PM₁₀, and PM_{2.5} emissions.

Significance Before Mitigation: Significant

Mitigation Measures

MM-AQ-1 Implement construction dust control mitigation measures described in Yolo-Solano AQMD's CEQA Handbook. The following construction dust and construction equipment exhaust control measures will be implemented, when feasible, to reduce the amount of dust emissions from construction activities in the Planning Area.

- Dust Control Measures
 - Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
 - Haul trucks hauling dirt, sand, or loose materials shall maintain at least 2 feet of freeboard or shall be covered.
 - Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area.
 - Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).

- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Sweep streets if visible soil material is carried out from the construction site.
- Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips, mulch or gravel.
- Construction Equipment Emissions Control Measures:
 - Restrict unnecessary vehicle idling to 5 minutes.
 - Incorporate catalyst and filtration technologies.
 - Modernize the equipment fleet with cleaner repower and newer engines

MM-AQ-2 Require that applicants proposing development of projects within the City of Dixon require contractors, as a condition of contract, to reduce construction-related fugitive ROG emissions by ensuring that low-VOC coatings that have a VOC content of 10 grams/liter (g/L) or less be used during construction. All project applicants shall submit evidence of the use of low-VOC coatings to Yolo-Solano AQMD prior to the start of construction.

MM-AQ-3 Require all development applications with the potential to create point-source air quality impacts be referred to the Yolo-Solano Air Quality Management District (Yolo-Solano AQMD) for review and comment to ensure compliance with Yolo-Solano AQMD requirements prior to approval of the project.

Significance After Mitigation: Significant and Unavoidable. The Proposed Plan includes policies and implementing actions that would minimize air pollution to the extent feasible. Mitigation Measures AQ-1, AQ-2, and AQ-3 would further reduce ROG emissions from architectural coating, and PM from construction, as well require all development with the potential to create point-source air quality impacts to receive Yolo-Solano AQMD review prior to approval. Additionally, an analysis of emissions generated from the operation of development allowed under the Proposed Plan would be individually compared to Yolo-Solano AQMD's project-level significance thresholds during individual environmental review. However, the total criteria air pollutant emissions from operation of future development under the Proposed Plan is likely to be substantial and could contribute to increases in concentrations of air pollutants, which could contribute to ongoing violations of air quality standards. Because the detail of future projects allowed under the Proposed Plan cannot be known at this time, the impact is considered significant and unavoidable.

Impact 3.3-3 Development under the Proposed Plan would expose sensitive receptors to substantial pollutant concentrations. (*Significant and Unavoidable*)

Localized Carbon Monoxide

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in the greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds.

Yolo-Solano AQMD considers localized CO emissions to result in significant impacts if concentrations exceed CAAQS (Table 3.3-5). The air district utilizes a screening approach, originally developed by San Joaquin Valley Unified Air Quality Management District (AQMD), to provide a conservative indication of whether project-generated traffic will cause a potential CO hot spot. If either of the following criteria is true of any intersection affected by the project traffic, then the project can be said to have the potential to create a violation of the CO standard.

1. A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to an unacceptable LOS (typically LOS E or F); or
2. A traffic study indicates that the project will substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity. **“Substantially worsen” includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.**

Chapter 3.13: Traffic and Transportation identifies three intersections that would meet the above criteria following implementation of the Proposed Plan. Under the Proposed Plan, PM peak-hour LOS at First Street & B Street would be reduced from LOS D to LOS F, and delay would increase by 22.9 seconds. AM peak-hour LOS at First Street & West Cherry Street would be reduced from LOS D to LOS E, and delay would increase by 13.9 seconds. Additionally, implementation of the Proposed Plan would substantially worsen an existing AM and PM peak-hour LOS F at Jackson Street & West A Street, increasing delay by 126.7 seconds and 199.7 seconds, respectively.

Under existing conditions and the Proposed Plan, land uses around the intersection of Jackson Street & West A Street are mostly non-residential and would not expose sensitive receptors, such as residences, schools, day care centers, retirement facilities, or rehabilitation centers, to CO emissions from traffic at this intersection. Existing land uses are also mostly non-residential near the intersection of First Street & B Street; however, they are designated as Downtown Mixed Use under the Proposed Plan and could include new residences. Existing land uses near the intersection of First Street & West Cherry Street include Single Family Residential and Multi Family Residential, and a school and retirement facility are located nearby. Under the Proposed Plan, this area would be designated as Downtown Mixed Use and High Density Residential. Therefore, sensitive

receptors occur near these intersections and may be susceptible to health impacts from CO emissions.

The Proposed Plan, once adopted, includes policies and implementing measures that would encourage bicycle, pedestrian, and transit use to tie land use and transportation, which may reduce traffic impacts (NE-5.E, LCC-3.6, LCC-3.B, LCC-3.H, LCC-6.1, LCC-6.3, LCC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6, MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D). However, the analysis for Impact 3.13-1 does not recommend signalization of either First Street & B Street or First Street & West Cherry Street, and concludes that mitigation would not be feasible to reduce LOS impacts at these intersections. Therefore, implementation of the Proposed Plan could have a significant and unavoidable impact on sensitive receptors with regards to CO emissions.

Asbestos

Demolition of existing structures results in particulates that may disperse to adjacent sensitive receptor locations. Asbestos containing materials (ACM) were commonly used as fireproofing and insulating agents prior to the 1970s. The U.S. Consumer Product Safety Commission banned use of most ACM in 1977 due to their link to mesothelioma. However, buildings constructed prior to 1977 that would be demolished by the development supported by the Proposed Plan may have used ACM and could expose receptors to asbestos, which may become airborne with other particulates during demolition.

Many buildings that would be considered sensitive receptors, including schools, child care centers, rehabilitation centers, and residences, are located within the City of Dixon. These facilities are clustered in the center of the city, where most development in Dixon can be found. Land use change areas under the Proposed Plan are similarly clustered in this area and may be adjacent to sensitive receptors. Figure 3.8-4 shows proposed land use within a quarter mile of schools in Dixon, which includes Residential, Commercial, Downtown, Mixed Use, and Governmental/Institutional. The Proposed Plan does not propose any Agricultural or Industrial land uses within a quarter miles of schools in the Planning Area. Additional land use change areas near sensitive receptors could result in demolition of existing structures to accommodate the new land use designations of Commercial Mixed Use, Downtown Mixed Use, and Campus Mixed Use. If structures to be demolished in this central area used ACM, nearby sensitive receptors could be exposed to asbestos.

However, all demolition activities are **subject to EPA's asbestos NESHAP if asbestos is present at the existing facilities**. The asbestos NESHAP regulations protect the public by minimizing the release of asbestos fibers during activities involving the processing, handling, and disposal of ACM. Additionally, all development under the Proposed Plan would be subject to Yolo-Solano AQMD Regulation 9, Rule 9 (Asbestos), which limits the emission of asbestos to the atmosphere and requires appropriate work practice standards and waste disposal procedure. Consequently, regulatory mechanisms exist that would ensure that impacts from ACM, if present during demolition under the Proposed Plan, would be less than significant.

Toxic Air Contaminants

Construction

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the State and federal governments as TACs or hazardous air pollutants (HAPs). State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem in California. The State has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs. As examples, TACs include acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and DPM. Some of the TACs are groups of compounds that contain many individual substances (for example, copper compounds and polycyclic organic matter). The greatest potential for TAC emissions during construction would be diesel particulate emissions from heavy equipment operations and heavy-duty trucks and the associated health impacts to sensitive receptors. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Sensitive receptors are spread throughout the city but are highly concentrated in downtown Dixon. This portion of the city contains the majority of medium and high density residential land, schools, and facilities such as rehabilitation centers and retirement homes. Development under the Proposed Plan would be concentrated in the downtown area, potentially exposing sensitive receptors clustered around I-80 and SR-113 to diesel particulate emissions from related construction activities.

Off-road diesel construction equipment and heavy-duty diesel trucks (e.g., concrete trucks, building materials delivery trucks), which are sources of diesel exhaust particulate matter, are regulated under three airborne toxic control measures (ATCMs) adopted by CARB. The ATCM for diesel construction equipment specifies particulate matter emission standards for equipment fleets, which become increasingly stringent over time. Furthermore, most newly-purchased construction equipment introduced into construction fleets after 2013–2015, depending on the engine horsepower rating, are equipped with high-efficiency diesel particulate filters. One of ATCMs for heavy-duty diesel trucks specifies that commercial trucks with a gross vehicle weight rating over 10,000 pounds are prohibited from idling for more than 5 minutes unless the engines are idling while queuing or involved in operational activities. In addition, starting in model year 2008, new heavy-duty trucks must be equipped with an automatic shutoff device to prevent excessive idling or meet stringent NO_x requirements. Lastly, fleets of diesel trucks with a gross vehicle weight rating greater than 14,000 pounds are subject to another ATCM. This ATCM requires truck fleet operators to replace older vehicles and/or equip them with diesel particulate filters, depending on the age of the truck.

Construction activities under the Proposed Plan would be dispersed intermittently over a 22-year period and would not expose an individual to a continuous source of pollution. However, without specific details on the locations of building footprints or their construction schedules, a quantitative evaluation of potential health risk impacts is not possible. Recommended Mitigation Measures AQ-1, AQ-4, and AQ-5, would mitigate air quality impacts from construction as they affect the community and associated health risks. Mitigation Measure AQ-1 addresses construction-related

fugitive dust emissions. Mitigation Measure AQ-4 requires development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures. Mitigation Measure AQ-5 requires development projects in proximity to I-80 and SR-113 to include an analysis of mobile source TAC health risks in order to protect sensitive receptors and identify additional mitigation strategies.

With implementation of the above mitigation measures, the diesel exhaust particulate matter emissions from off-road construction equipment and trucks will be controlled substantially over the life of the project. Therefore, impacts of construction on sensitive receptors would be less than significant with mitigation.

Operation

STATIONARY SOURCES

When siting new sensitive receptors, the Yolo-Solano AQMD Guidelines advise that lead agencies examine existing or future proposed sources of TAC emissions that would adversely affect individuals within the planned project. New residences and sensitive receptors could be located near stationary sources of TACs located throughout the city, such as emergency back-up diesel generators. Without proper setbacks or mitigation measures, these sources could result in TAC or PM levels that would be significant for new sensitive receptors. The 2005 CARB Air Quality and Land Use Handbook: A Community Health Perspective recommends a minimum setback of 1,000 feet between new sensitive land uses and distribution centers with 100 or more daily truck trips. There is one distribution center located in downtown Dixon, as well as a distribution center located in the Northeast Quadrant that is scheduled to open in 2020 and would be located away from sensitive uses. Additionally, there is one distribution center located outside of the northeast boundary of the Planning Area located away from sensitive uses.

The City of Dixon has several permitted stationary sources. These sources are located throughout the City, but mostly in commercial or semi-rural areas. The majority of sensitive receptors, such as schools, residences, and facilities like retirement homes and rehabilitation centers, are located in the downtown area of the city, though residences are located throughout Dixon and the SOI. The impact of these sources can only be addressed on a project-by-project basis, since impacts are generally localized. Facilities and equipment that require permits from the Yolo-Solano AQMD are screened for risks from toxic emissions and are required to install Toxic Best Available Control Technology (T-BACT) to reduce the risks to below significance. If a significant impact remains after T-BACT is implemented, an air permit may not be issued unless it meets the discretionary approval criteria of the Yolo-Solano AQMD's Risk Management Policy for Permitting New and Modified Sources.

Yolo-Solano AQMD rules applicable to stationary source emissions include the following:

- Regulation 2, Rule 5 (Nuisance). This regulation restricts the discharge of any air contaminants or material which may cause injury or nuisance to the public or may endanger the health or safety of the public. Rule 2.6 states that this regulation does not apply to agricultural operations in the growing of crops or raising of fowl, animals, or bees.

- Regulation 2, Rule 12 (Specific Contaminants). This regulation establishes particulate matter combustion contaminants and sulfur compound emission standards. Emissions of sulfur compounds are restricted to less than 0.2% sulfur dioxide, and combustion contaminants may not exceed 0.1 grains per cubic foot of gas calculated to 12 percent of carbon dioxide (CO₂) at standard conditions.
- Regulation 3, Rule 4 (New Source Review). This regulation contains requirements for Best Available Control Technology and emission offsets.
- Regulation 3, Rule 13 (Toxics New Source Review). This regulation requires the installation of best available control technology for toxics (T-BACT) at any constructed or reconstructed major source of hazardous air pollutants (HAPs).

Mitigation Measure AQ-4 would require development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses, or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures. Additionally, Mitigation Measure AQ-3 requires any new use with the potential to generate point source pollution to be referred to the Yolo-Solano AQMD for review and comment prior to adoption. There are also policies within the Proposed Plan (policies NE-5.4, NE-5.11, LCC-1.2, LCC-1.3) that evaluate the need for buffers and transitional zones between existing and potential sources of TACs and PM, such as industrial and agricultural uses. Additionally, implementing action PSF-6.E calls for the adoption of a "healthy development" checklist to evaluate potential new development under appropriate criteria, which might include exposure to harmful levels of air pollution. With the implementation of these policies and mitigation measures, impacts would be reduced to a less than significant level.

GASOLINE STATIONS

The 2005 CARB Air Quality and Land Use Handbook: A Community Health Perspective recommends a setback of 300 feet for large gasoline dispensing facilities (3.6 million gallons of throughput a year or greater) and 50 feet for typical gas dispensing facilities. The City of Dixon currently has four gas stations located along SR-113 (United Petroleum, Shell, Chevron, and 76), three gas stations located along West A Street (Dixon Gas & Shop, Chevron, Arco, Sinclair Gas), three gas stations located at Pitt School Road and Stratford Avenue (76, Chevron, Safeway Fuel Station), and two gas stations located at the I-80 on-ramp at Pedrick Road (76, Chevron). However, none of these gas stations are considered to be a large volume gasoline station. Multiple schools in Dixon are located along SR-113 (see Figure 3.8-4). However, none of these sensitive receptors are located within 300 feet of existing gasoline stations. However, land uses under the Proposed Plan around the gas stations listed above are limited to Regional Commercial, Downtown Mixed Use, and Neighborhood Mixed Use. Mitigation Measure AQ-4 would require development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures. Additionally, Mitigation Measure AQ-3 requires any new use with the potential to generate point source pollution to be referred to the Yolo-Solano AQMD for review and comment prior to adoption.

DRY CLEANING FACILITIES

There is one dry cleaning facility in Dixon, which is located on Stratford Avenue and Pitt School Road over 3,000 feet from the nearest school. The Proposed Plan does not change any of the surrounding land uses near the dry cleaning facility. Perchloroethylene (Perc) is the solvent used commonly in past dry-cleaning operations. Perc is a TAC because it has the potential to cause cancer. In 2005, CARB recommended setbacks of 300 feet between dry cleaning facilities that emit Perc and sensitive land uses. If two or more machines are in operation, setbacks are greater. Since then, CARB has enacted new rules to substantially reduce Perc emissions and phase out the use of TACs in dry cleaning by 2023. Most of these operations have phased out Perc use and are no longer considered TAC sources. Implementation of Mitigation Measure AQ-4 would require development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures. Additionally, Mitigation Measure AQ-3 requires any new use with the potential to generate point source pollution to be referred to Yolo-Solano AQMD for review and comment prior to adoption. New dry cleaning facilities could be constructed in commercial or mixed-use areas in the Proposed Plan. Land adjacent to the current dry cleaning facility or potential future facilities would be designated as Low Density Residential under implementation of the Proposed Plan. Given existing CARB measures regarding setback and emissions requirements in combination with the recommended mitigation measures, emissions from dry cleaning facilities would have a less than significant impact on sensitive receptors.

HIGHWAY AND ROADWAY TRAFFIC

While the Yolo-Solano AQMD's Risk Management Policy provides a basis for a threshold for TACs from stationary sources, this policy does not cover TACs from mobile sources. The District has no permitting or other regulatory authority over mobile sources. While the district continues to evaluate a threshold of significance for mobile source TAC, no specific mobile source TAC threshold has been proposed as of December 2019. CARB recommends that new sensitive land uses should be setback at least 500 feet from the following: a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. SR-113 is not classified as a freeway⁴ and the vehicles/day on **the urban and rural roads in the city do not exceed CARB's thresholds**. Buildout of the Proposed Plan could increase traffic volume and congestion at multiple intersections but would not reach the volumes describes above (see Section 3.13, Transportation and Traffic).⁵The Proposed Plan introduces a new Commercial Mixed Use designation, which may include residential uses at a density up to 24 dwelling units per acre, along I-80 (which is classified as a freeway). However, buildout of the Proposed Plan assumed that all residential uses in the Commercial Mixed Use areas along North Lincoln Street would occur on the southeast side of North Lincoln Street. This constitutes a setback of 500 feet, and is further established in Mitigation measure AQ-5. Mitigation Measure AQ-5 requires discretionary projects in proximity to SR-113 and I-80 to include an analysis of mobile source TAC health risks and identify feasible mitigation measures to reduce health risks to acceptable levels.

⁴A freeway is a highway where access to the roadway is controlled. Drivers can only enter a controlled-access highway by ramps. Traffic traveling in opposite directions is usually separated by a median, and vehicles wanting to cross a freeway must use an overpass or underpass. Freeways are usually in an urban setting and have higher speed limits.

⁵ DKS, 2018

In conclusion, the Proposed Plan would allow growth of new residential land uses that would be sensitive receptors and new non-residential land uses that are a potential for new emissions sources. Typically, these sources would be evaluated through the Yolo-Solano AQMD permit process and/or the CEQA process to identify and mitigate any significant exposures. Additionally, policies within the Proposed Plan aim to establish buffers between potential air pollution sources and sensitive receptors, as well as limit pollution during construction. Mitigation Measures AQ-1, AQ-2, AQ-3, AQ-4, AQ-5, and AQ-6 are recommended to reduce potential impacts on sensitive receptors. Specifically, Mitigation Measure AQ-6 is consistent with Yolo-Solano AQMD's guidelines to conduct a health risk assessment for all projects that would place a sensitive receptor near a TAC source at a distance that is less than is indicated in the ARB handbook. Therefore, potential future increases in TACs and their impacts on sensitive receptors would be less than significant. However, impacts associated with emissions of CO would be significant and unavoidable.

Significance before Mitigation: Significant and unavoidable.

Mitigation Measures

Mitigation Measures AQ-1, AQ-2, and AQ-3, as listed under Impacts 3.3-1, as well as the following measures:

MM-AQ-4 Require development projects to meet CARB setback recommendations from air contaminant sources for sensitive uses, or conduct specific air quality and health risk impact analyses and identify project specific mitigation measures.

MM-AQ-5 To protect sensitive receptors require discretionary projects in proximity to SR-113 and I-80 to include an analysis of mobile source toxic air contaminant health risks. The analysis, if necessary, shall identify feasible mitigation measures to reduce health risks to acceptable levels

MM-AQ-6 All applicants proposing development of projects that may include sensitive receptors within 1,000 feet of existing stationary sources shall prepare a site-specific construction health risk assessment (HRA) taking into account both project-level and cumulative health risks (including existing TAC sources). If the HRA demonstrates, to the satisfaction of the City, that the health risk exposures for potential receptors will be less than Yolo-Solano AQMD project-level and cumulative thresholds (as appropriate), then additional mitigation would be unnecessary. However, if the HRA demonstrates that health risks would exceed Yolo-Solano AQMD project-level and/or cumulative thresholds (as appropriate), additional feasible on- and offsite mitigation shall be analyzed by the applicant to help reduce risks to the greatest extent practicable.

Significance After Mitigation: Significant and Unavoidable. While implementation of Proposed Plan policies and mitigation measures AQ-1 through AQ-6 could reduce potential health risks associated with TAC emissions, there is no feasible mitigation to reduce significant and unavoidable traffic impacts at three intersections in the Planning Area that may create CO hotspots.

Impact 3.3-4 Development under the Proposed Plan would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (*Less than Significant*)

Potential impacts could occur if new sources of objectionable odors are placed near sensitive receptors. Objectionable odors can be generated from certain types of commercial and/or industrial land uses. In general, residential land uses are not associated with odor generation, but they do serve as sensitive receptors. Common sources of odors within Dixon come from agricultural operations, manufacturing operations, restaurants, auto body shops, and wastewater treatment facilities. Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and Yolo-Solano Air Quality Management District. A significant impact would occur if development under the Proposed Plan introduced new sources of odor that would be offensive to a substantial portion of the population within the planning area.

According to the California Health and Safety Code (H&SC §41700), development under the Proposed Plan may reasonably be expected to have a significant adverse odor impact where it **“generates odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property.”**

Buildout permitted under the Proposed Plan could include new sources of odors, such as composting; food processing; manufacturing operations; and painting/coating operations, because these are permitted uses in the commercial and/or industrial areas in the Planning Area. Future environmental review could be required for industrial projects to ensure that sensitive land uses are not exposed to objectionable odors. Additionally, odor impacts from project-level construction and operational emissions would be limited given compliance with VOC content limits for architectural coatings established by Yolo-Solano AQMD Regulation 2, Rule 14 and the California Green Building Code, adopted by the Dixon Municipal Code.

California Health and Safety Code Section 41700 states that **“no person can discharge air contaminants that cause injury, nuisance or annoyance to any considerable number of persons or the public, or discharge air contaminants that endanger the comfort, health or safety of such persons.”** This is supported by Yolo-Solano AQMD Regulation 2, Rule 5 (Nuisance). If District rules are violated by a person or business, Yolo-Solano AQMD may pursue enforcement action to eliminate the nuisance and protect air quality. Additionally, the Proposed Plan includes policies to discourage the siting of residential uses and sensitive receptors in close proximity to sources of odors, and vice versa. Policy E-1.7 requires industrial, light industrial, and agro-industrial development to meet performance standards based on factors including odor in order to minimize its impacts on established or proposed residential areas and other adjacent uses.

Compliance with Yolo-Solano AQMD Regulation 2, Rules 5 and 14, California Green Building Code, and Proposed Plan policies would discourage siting sensitive receptors in proximity to odor sources and maintain performance standards for new industrial development, thus ensuring that odor impacts are minimized and are less than significant.

Mitigation Measures

None required.

3.4 Biological Resources

This section assesses potential environmental impacts on existing biological resources from future development under the proposed Plan, including those related to sensitive species and/or habitats, riparian or streamside resources under the jurisdiction of federal or State agencies, and adopted regulations or policies. The section describes biological resources in the Planning Area, including habitats, wetlands, critical habitat, and special-status species, as well as relevant federal, State, and local regulations and programs.

There was one comment on the NOP related to biological resources. The State of California Department of Fish and Wildlife submitted a comment regarding the presence of endangered species in and around the project site, including Swainson's hawk, burrowing owl, fairy shrimp, and tricolored blackbird, and outlining the requirements that the EIR address potential for "take" of special status species; direct and indirect impacts to fish and other aquatic species resulting from increased water usage in new development; loss or modification of breeding, nesting, dispersal, and foraging habitat; habitat modifications; and permanent and temporary habitat disturbances. This comment is addressed in Impacts 3.4-1, 3.14-2, and 3.14-4.

Environmental Setting

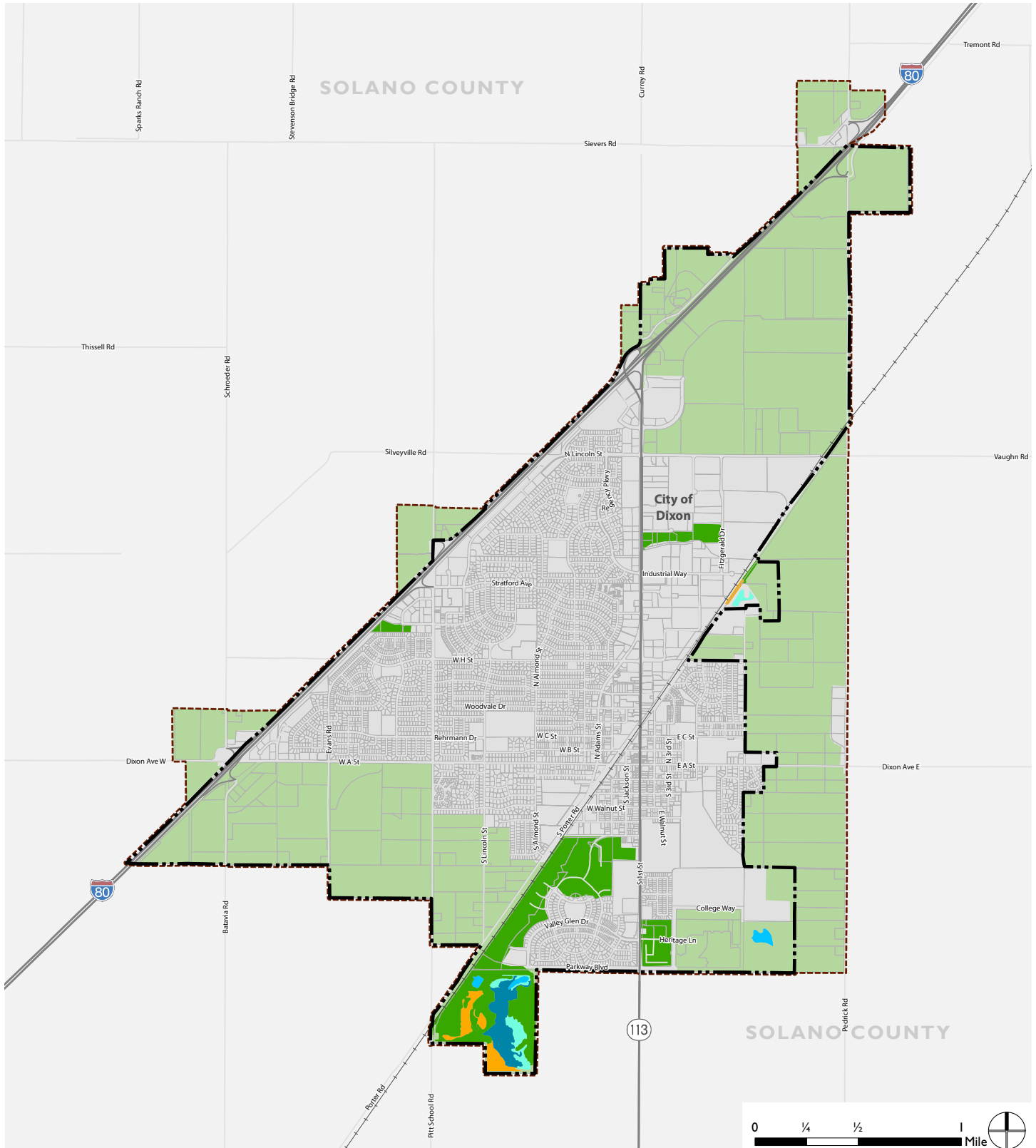
PHYSICAL SETTING

Habitat Types

Dixon is characterized by a mix of urban development and agricultural uses, with small band of riparian marshland in the southern portion of the Planning Area, and the northwest corner near the Dixon Wastewater Treatment Plant. Surrounding the city are irrigated agricultural lands, mixed with pockets of grassland.

The value of an area to wildlife depends on a number of physical and biological factors, including the quality of the remaining habitat and extent of protective cover, location relative to other land uses, and the uniqueness of the habitat within a regional context. The following habitat types have been mapped within the Planning Area by the California Department of Fish and Wildlife (CDFW) as of April 2018. These classifications and descriptions are taken from the California Wildlife Habitat Relationships System (CWHRS System) and identify vegetative communities and potentially associated wildlife. While each classification may not be completely accurate in identifying exact species or conditions on the ground, they do provide useful information on what is likely to be found, as well as a starting point for further site-specific study for individual projects. Habitat types are shown in Figure 3.4-1: Habitat Types.

Figure 3.4-I: Habitat Types



Data Source: Vegetation Dataset for Great Valley Ecoregion, CA Department of Fish & Wildlife, 2018; City of Dixon, 2019; Dyett & Bhatia, 2019

- Annual Grassland
 - Deciduous Orchard, Evergreen Orchard, Vineyard, Irrigated Row and Field Crops
 - Fresh Emergent Wetland
 - Fresh Emergent Wetland, Urban
 - Lacustrine, Riverine
 - Valley Foothill Riparian
 - Urban
-
- Railroad
 - Dixon City Limit
 - Sphere of Influence

Annual Grassland

Annual Grassland is mapped on approximately 208 acres within the Planning Area, including portions between Fitzgerald Way and Highway 113, and the southern edge of the city. Annual Grassland habitats are open grasslands composed primarily of annual plant species. Introduced annual grasses are the dominant plant species in this habitat, and can include species such as wild oats, brome grasses, and others, as well as forbs and perennial grasses. Different species of wildlife and plants benefit from different grazing intensities or mowing regimes, and frequencies of burning. Annual grasslands can be extremely productive wildlife habitats, providing abundant seed and insects as a food source for small mammals and birds, which in turn provide prey for numerous raptors and other predators. A variety of reptiles and mammals are characteristic of grassland habitats. These species include western fence lizard, common garter, gopher snake, black-tailed jackrabbit, California ground squirrel, **Botta's** pocket gopher, western harvest mouse, California vole, and coyote. Common birds that breed in or near grassland habitats include western kingbird, loggerhead shrike, California horned lark, Savannah sparrow, western bluebird, **Say's** phoebe, and western meadowlark. Grasslands also provide important foraging habitat for a number of raptors, including golden eagle, northern harrier, American kestrel, white-tailed kite, red-tailed hawk, and wintering ferruginous.

Agricultural Land

Deciduous Orchard, Evergreen Orchard, Vineyard, Irrigated Row and Field Crops make up the majority of Dixon and surrounding areas, mapped on 2,577 acres in the Planning Area around the **periphery of Dixon's developed urban area.**

These developed habitats have been planted on deep fertile soils which once supported productive and diverse natural habitats. Larger and more diverse populations of wildlife were also supported by these native habitats. However, some species of birds and mammals have adapted to the developed habitats, and many have become "agricultural pests" which has resulted in efforts to reduce crop losses through fencing, trapping, poisoning, sound guns, or other management techniques. Wildlife, such as, deer and rabbit browse on the trees; other wildlife such as squirrel and numerous birds feed on fruit. Cover crops can provide a source of food for wildlife that feed on seeds or leafy vegetation. Some wildlife (e.g. morning dove, California quail) are more passive in their use of the habitat for cover and nesting sites.

Fresh Emergent Wetland

The Planning Area contains about 37 acres of fresh Emergent Wetlands, characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots to 2 m (6.6 ft) tall. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment (surviving without oxygen). Fresh emergent wetlands are among the most productive wildlife habitats in California. They provide food, cover, and water for more than 160 species of birds, and numerous mammals, reptiles, and amphibians. Many species rely on Fresh Emergent Wetlands for their entire life cycle. The endangered Santa Cruz long toed salamander and rare black toad require pond water for breeding, while the rare giant garter snake use these wetlands as its primary habitat. The endangered Aleutian Canada goose, bald eagle, and peregrine falcon use Fresh Emergent Wetlands as feeding areas and roost sites. **Within the**

Planning Area, about two-thirds of the Fresh Emergent Wetlands are characterized as urban.

Lacustrine, Riverine

Lacustrine habitats, or agricultural ponds, and areas characterized by intermittent or continually running water (riverine) are two aquatic habitats in the Planning Area, mapped on approximately 137 acres in small portions of the south and southeast areas.

Lacustrine habitats are inland depressions or dammed riverine channels containing standing water, varying from small ponds to large areas. Typical lacustrine habitats include permanently flooded lakes and reservoirs (e.g., Lake Tahoe and Shasta Lake), intermittent lakes (e.g., playa lakes) and ponds (including vernal pools) so shallow that rooted plants can grow over the bottom. Most permanent lacustrine systems support fish life; intermittent types usually do not. Suspended organisms such as plankton are found in the open water of lacustrine habitats. Because these tiny plants alone carry on photosynthesis in open water, they are an essential part of the ecosystem. Duckweed may cover the surface of shallow water, and submerged plants such as algae and pondweeds serve as supports for smaller algae and as cover for swarms of minute aquatic animals. As accumulation of organic matter increases toward the shore, floating rooted aquatics such as water lilies and smartweeds often appear. Floating plants offer food and support for numerous herbivorous animals that feed both on phytoplankton and the floating plants.

Riverine habitats support many species of waterfowl and provide hunting ground for gulls, terns, osprey and bald eagle hunt in open water. Near-shore waters provide food for waterfowl, herons, shorebirds, belted kingfisher and American dipper. Many species of insectivorous birds (swallows, swifts, flycatchers) hawk their prey over water. Some of the more common mammals found in riverine habitats include river otter, mink, muskrat and beaver.

Urban

Urban areas makeup 2,544 acres of the Planning Area, covering the developed portions of the city and Planning Areas. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. Tree groves, common in city parks, green belts, and cemeteries, vary in height, tree spacing, crown shape, and understory conditions, depending upon the species planted and the planting design. However, they have a continuous canopy. Street tree strips show variation in spacing of trees, depending upon species and design considerations. Shade trees and lawns are typical of residential areas and reminiscent of natural savannas. Structural variation in the shade tree/lawn type is typical when a large number of species are incorporated in the landscape. Lawns are structurally the most uniform vegetative units of the California urban habitat. A variety of grass species are employed, which are maintained at a uniform height and continuous ground cover. The juxtaposition of urban vegetation types within cities produces a rich mosaic with considerable edge areas. The overall mosaic may be more valuable as wildlife habitat than the individual units in that mosaic.

Valley Foothill Riparian

Valley foothill riparian habitats are mapped on 17 acres in the Planning Area, in the southernmost part of Dixon. Canopy height is approximately 98 ft in a mature riparian forest, with a canopy cover of 20 to 80 percent. Most trees in this habitat are winter deciduous. There is a subcanopy tree layer and an understory shrub layer. Dominant species in the canopy layer are cottonwood, California sycamore and valley oak. Subcanopy trees are white alder, boxelder and Oregon ash. Typical understory shrub layer plants include wild grape, wild rose, California blackberry, blue elderberry, poison oak, buttonbrush, and willows. The herbaceous layer consists of sedges, rushes, grasses, miner's lettuce, Douglas sagewort, poison-hemlock, and hoary nettle. Valley-foothill riparian habitats provide food, water, migration and dispersal corridors, and escape, nesting, and protection from extreme temperatures for an abundance of wildlife, including over 50 species of amphibians and reptiles, over 140 species of birds, and over 50 species of mammals.

Special-Status Species

While urbanization and extensive agricultural use limit the extent of native vegetation communities and associated high-quality wildlife habitats within Dixon, a number of certain special-status species have been known to occur in the Planning Area.

Special-status species are those plants and animals that, because of their acknowledged rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, State, or other agencies as deserving special consideration. The California Natural Diversity Database (CNDDDB), an inventory of the status and locations of rare plants and animals in California maintained by CDFW, was used to identify CDFW Species of Special Concern with the potential to occur in the Planning Area based on previously reported occurrences of special-status species within five miles of the Planning Area. Five such species that have been known to occur within and around the Planning Area; the generalized range of their sightings is shown in Table 3.4-1.

The CNDDDB is regularly updated to track occurrences of previously documented special-status species; however, it contains only those records that have been submitted to CDFW. Thus, there may be additional occurrences of special-status species within this area that have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area does not imply that the species does not occur or that there is a lack of diversity in that area. Additionally, species shown in Figure 3.4-2 have the potential to occur outside of the area delineated in the figure.

Table 3.4-1: CNDDDB Special-Status Species Mapped in the Planning Area

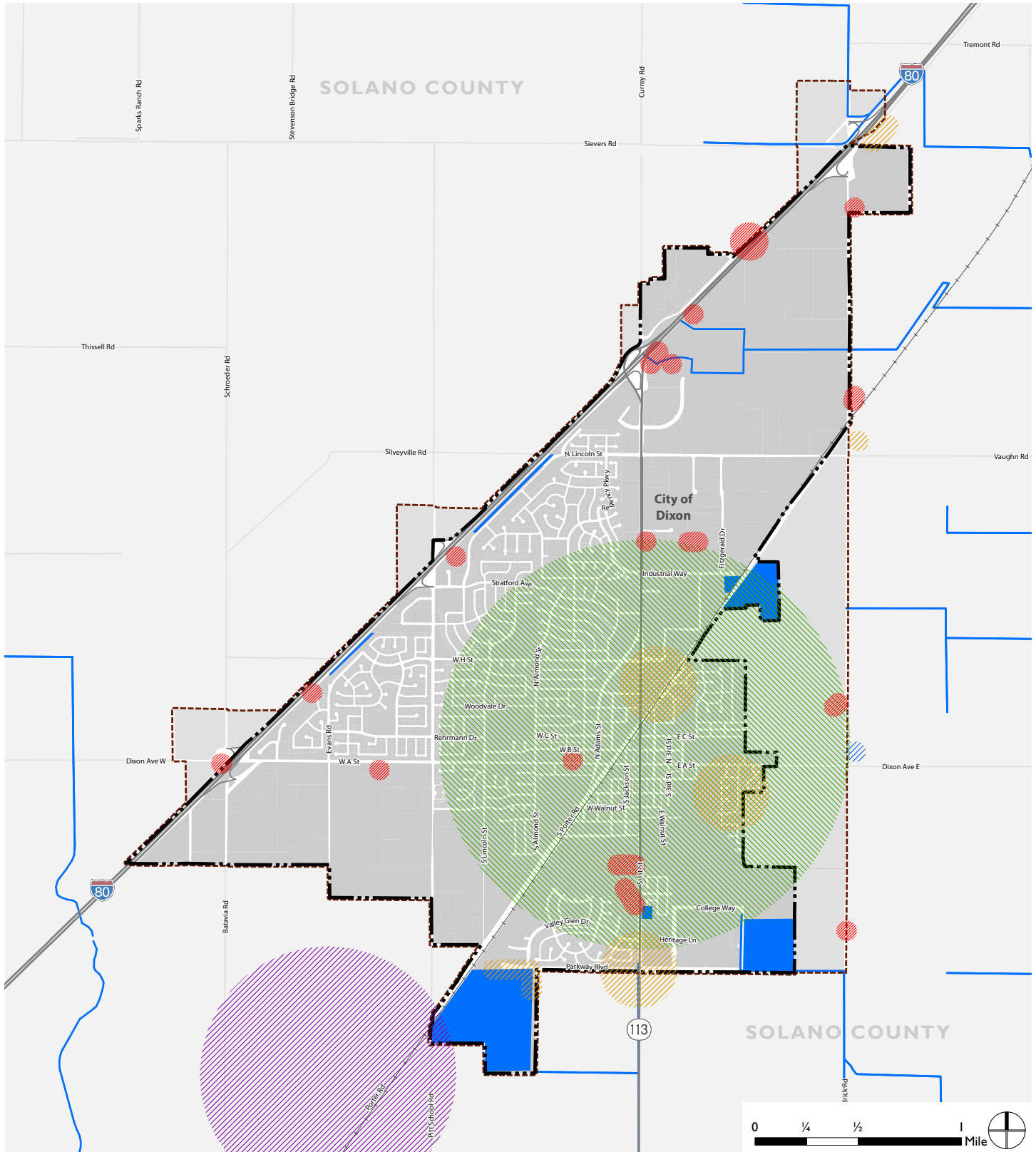
<i>Common Name (Scientific Name)</i>	<i>Rank¹</i>	<i>Federal/State Listing</i>	<i>Other Status²</i>	<i>Range of Sightings</i>
Adobe lily (<i>Fritillaria pluriflora</i>)	G2G3/S2S3	None/None	BLM:S SB:RSABG	
Burrowing owl (<i>Athene cunicularia</i>)	G4/S3	None/None	BLM:S IUCN:LC USFWS:BCC	
Swainson's Hawk (<i>Buteo swainsoni</i>)	G5/S3	None/ Threatened	BLM:S IUCN:LC USFWS:BCC	
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	G3T2/S2	Threatened/ None	--	
Vernal Pool Fairy Shrimp (<i>Brancinecta lynchi</i>)	G3/S3	Threatened/ None	IUCN:VU	

Notes:

1. The global rank (G-rank) is a reflection of the overall status of an element throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status **only within California's state boundaries**. Uncertainty about a rank is expressed as a range of values or by adding a "?" to the rank. A "?" represents more certainty than a range. Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies.
2. G1/S1 = Critically Imperiled; G2/S2 = Imperiled; G3/S3 = Vulnerable; G4/S4 = Apparently Secure; G5/S5 = Secure; T = Rank applies to a subspecies or variety; Q = There are taxonomic questions associated with the element.
3. BLM: S = Sensitive by the Bureau of Land Management; IUCN: LC = Least Concern by the International Union for Conservation of Nature; IUCN: EN = Endangered by the International Union for Conservation of Nature; IUCN: VU = Vulnerable by the International Union for Conservation of Nature; NABCI:RWL = Red Watch List by the North American Bird Conservation Initiative; SB:RSABG = Seed Banked by the Rancho Santa Ana Botanic Garden; USFS: S = Sensitive by the United States Forest Service; USFWS: BCC = U.S. Fish and Wildlife Service Birds of Conservation Concern.

Source: California Natural Diversity Database (CNDDDB), 2018.

Figure 3.4-2: Special Status Species Occurrences



Data Source: California Department of Fish and Wildlife, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

- Adobe-Lily
- Valley Elderberry Longhorn Beetle
- Water
- Dixon City Limit
- Burrowing Owl
- Vernal Pool Fairy Shrimp
- Railroad
- Sphere of Influence
- Swainson's Hawk

* The area of occurrence indicates an area in which a species has been known to occur.

Disclaimer: Information presented in this map is based on data from CNDDDB version 08/2019. Areas of occurrence on this map represent areas in which known locations of the species listed here have been found as of the date of this version. There may be additional occurrences of additional species within this area which have not yet been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.

Special-Status Animal Species

Table 3.4-2 lists special-status animal species mapped with previously reported occurrences within five miles of the Planning Area, based on a search of the CNDDDB conducted in November 2018. The CNDDDB lists 23 animal species, including six species listed as Endangered or Threatened under the Federal Endangered Species Act (FESA), and five species listed under the California Endangered Species Act (CESA) as Endangered, Threatened, or Candidate Threatened.

Table 3.4-2: CNDDDB Special-Status Animal Species Mapped Within Five Miles of the Planning Area

<i>Common Name (Scientific Name)</i>	<i>Federal/State Status</i>	<i>Rank¹</i>	<i>Other Status²</i>	<i>Habitat</i>
<i>Amphibians</i>				
California tiger salamander (<i>Ambystoma californiense</i>)	Threatened/ Threatened	G2G3/S2S2	IUCN:VU	Typical habitat is grasslands and low foothills with pools or ponds that are necessary for breeding. Also lives underground, using burrows made by squirrels and other burrowing mammals.
<i>Birds</i>				
Burrowing owl (<i>Athene cunicularia</i>)	None/None	G4/S3	BLM:S IUCN:LC USFWS:BCC	Needs flat, open terrain with soft soil, short grass and sparsely distributed vegetation or exposed ground. Often found in association with other burrowing animals near roads and ravines.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	None/None	G4T1/S1	IUCN:LC	Typical habitat is grasslands, prairies, hayfields, and open pastures with little to no scrub cover and often with some bare ground. Can tolerate some brushy habitat but avoid areas that are too overgrown.
Swainson's hawk (<i>Buteo swainsoni</i>)	None/ Threatened	G5/S3	BLM:S IUCN:LC USFWS:BCC	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves.
Tricolored blackbird (<i>Agelaius tricolor</i>)	None/ Candidate Endangered	G2G3/S1S2	BLM:S IUCN:EN NABCI:RWL USFWS:BCC	Breeds in large freshwater marshes. Forages in open habitats such as farm fields, pastures, cattle pens, large lawns.

Table 3.4-2: CNDDDB Special-Status Animal Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	Other Status ²	Habitat
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Threatened/ Endangered	G5T2T3/S1	BLM:S IUCN:VU USFS:S	Occupies a variety of riparian habitats (particularly woodlands with cottonwoods and willows). Requires large blocks of riparian habitat for mating and nesting.
White-tailed kite (<i>Elanus leucurus</i>)	None/None	G5/S3S4	BLM:S IUCN:LC	Typical habitat is savannas, open woodlands, marshes, desert grasslands, partially cleared lands, and cultivated fields. Avoids heavily grazed areas.
<i>Crustaceans</i>				
California linderiella (<i>Linderiella occidentalis</i>)	None/None	G2G3/S2S3	IUCN:NT	Typical habitat is large, fairly clear vernal pools and lakes, but can survive in clear to turbid water with pH of 6.1–8.5.
Midvalley fairy shrimp (<i>Branchinecta mesovallensis</i>)	None/None	G2/S2S3	--	Found in shallow ephemeral pools in grasslands and lower elevation foothills.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	Threatened/ None	G3/S3	IUCN:VU	Found in vernal pools in southern Oregon and parts of California.
Vernal pool tadpole shrimp (<i>Lepidurus packardi</i>)	Endangered/ None	G4/S3S4	IUCN:EN	Typical habitat is vernal pools and other freshwater aquatic habitats including ponds, reservoirs, ditches, road ruts, and other natural and artificial temporary water bodies. The southeastern Sacramento Valley contains about 35% of the known occurrences of <i>L. packardi</i> .
<i>Mammals</i>				
American badger (<i>Taxidea taxus</i>)	None/None	G5/S3	IUCN:LC	Typical habitat is grasslands and open grasslands, which can include agricultural lands, protected land trust and open space lands, and even regional and state and national park lands with

Table 3.4-2: CNDDDB Special-Status Animal Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	Other Status ²	Habitat
				grassland habitat. Occasionally found in open chaparral and riparian zones.
Hoary bat (<i>Lasiurus cinereus</i>)	None/None	G5/S3	IUCN:LC WBWG:M	Found in trees at the edge of clearings and trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.
Pallid bat (<i>Antrozous pallidus</i>)	None/None	G5/S3	BLM:S SB:RSABG	Occupies a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging.
Silver-haired bat (<i>Lasionycteris noctivagans</i>)	None/None	G5/S3S4	IUCN:LC WBWG:M	Typically found in temperate woodland and montane coniferous forest, close to streams, ponds or rivers.
<i>Insects</i>				
Antioch mutillid wasp (<i>Myrmosula pacifica</i>)	None/None	GH/SH	--	Ground nester in sandy areas.
Blennosperma vernal pool andrenid bee (<i>Andrena blennospermatis</i>)	None/None	G2/S2	--	Typical habitat is upland areas near vernal pools. Restricts foraging activity to near-neighbor flowers.
Crotch bumble bee (<i>Bombus crotchii</i>)	None/None	G3G4/S1S2	--	Occurs primarily in California, inhabiting open grassland and scrub habitats. Can pollinate a limited range of flowers.
Sacramento Valley tiger beetle (<i>Cicindela hirticollis abrupta</i>)	None/None	G5TH/SH	--	Endemic to the Sacramento Valley and typically found on sandy soils near water, including sandy riverbanks and sand bars.
Valley elderberry longhorn beetle (<i>Desmocerus</i>)	Threatened/ None	G3T2/S2	--	Endemic to the Central Valley and found in riparian habitats and associated upland habitats. Nearly

Table 3.4-2: CNDDDB Special-Status Animal Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	Other Status ²	Habitat
<i>californicus dimorphus</i>)				always found on or close to its host plant, red or blue elderberry, along streams and rivers.
Western bumble bee (<i>Bombus occidentalis</i>)	None/None	G2G3/S1	USFS:S XERCES:IM	Found in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows.
<i>Reptiles</i>				
Giant gartersnake (<i>Thamnophis gigas</i>)	Threatened/ Threatened	G2/S2	IUCN:VU	Inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands in the Central Valley. Often found in rice fields.
Western pond turtle (<i>Emys marmorata</i>)	None/None	G3G4/S2	BLM:S IUCN:VU USFS:S	Associated with permanent or nearly permanent water in a wide variety of habitats.
Notes:				
<p>1. The global rank (G-rank) is a reflection of the overall status of an element throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries. Uncertainty about a rank is expressed as a range of values or by adding a "?" to the rank. A "?" represents more certainty than a range. GH/SH = Possibly Extinct; G1/S1 = Critically Imperiled; G2/S2 = Imperiled; G3/S3 = Vulnerable; G4/S4 = Apparently Secure; G5/S5 = Secure; T = Rank applies to a subspecies or variety; Q = There are taxonomic questions associated with the element.</p> <p>2. AFS: TH = Threatened by the American Fisheries Society; BLM: S = Sensitive by the Bureau of Land Management; CDF: S = Sensitive by the California Department of Forestry and Fire Protection; CDFW: FP = Fully Protected by the California Department of Fish and Wildlife; CDFW: SSC = California Department of Fish and Wildlife Species of Special Concern; CDFW: WL = California Department of Fish and Wildlife Watch List; IUCN: LC = Least Concern by the International Union for Conservation of Nature; IUCN: NT = Nearly Threatened by the International Union for Conservation of Nature; IUCN: VU = Vulnerable by the International Union for Conservation of Nature; USFS: S = Sensitive by the United States Forest Service; USFWS: BCC = U.S. Fish and Wildlife Service Birds of Conservation Concern; WBWG: H = Western Bat Working Group High Priority; XERCES: IM = Imperiled by the Xerces Society.</p>				

Sources: CNDDDB, 2018; CDFW, 2018; CWHR, 2018

The burrowing owl (*Athene cunicularia*) is not federally- or State-listed, but the U.S. Fish and Wildlife Service (USFWS) has identified it as a Birds of Conservation Concern and the California Department of Fish and Wildlife (CDFW) has identified it as a Species of Special Concern; it has been found in the central and southeastern portions of the Planning Area. Swainson's hawk (*Buteo swainsoni*) has been listed as Threatened by the State of California and has been identified as a Birds of Conservation Concern by the USFWS; it has been sighted throughout the Planning Area.

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is federally listed as Threatened and has been found near the eastern boundary of the Planning Area. The vernal pool fairy shrimp (*Branchinecta lynchi*) is federally listed as Threatened and has been found near the southern boundary of the Planning Area.

Special-Status Plant Species

Table 3.4-3 lists special-status plant species mapped with previously reported occurrences within five miles of the Planning Area, based on a search of the CNDDDB. The CNDDDB lists 17 plant species, including one species listed as endangered under the FESA and one species listed as rare under the CESA. The two-fork clover (*Trifolium amoenum*) is federally listed as endangered, and, while it has been mapped within five miles of the Planning Area, it has not been mapped as occurring within the Planning Area. The adobe-lily (*Fritillaria pluriflora*) is not federally- or State-listed, but has a California Native Plant Society (CNPS) ranking of 1B.2, meaning that it is rare, threatened, or endangered in California and elsewhere; known occurrences of this species has been found in the vicinity of Dixon’s downtown area.

Table 3.4-3: CNDDDB Special-Status Plant Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	California Rare Plant Rank ²	Other Status ³	Habitat and Blooming Period
Adobe lily (<i>Fritillaria pluriflora</i>)	None/None	G2G3/S2S3	1B.2	BLM:S SB:RSABG	Found in heavy soil in grasslands and in brush. Blooms February-April. Found at elevations 60 and 4,620 feet.
Alkali milk vetch (<i>Astragalus tener</i> var. <i>tener</i>)	None/None	G2T2/S2	1B.2	--	Found in alkaline flats, and vernal moist meadow habitat. Blooms March–June. Found at elevations 0 and 196 feet.
Baker’s navarretia (<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>)	None/None	G4T2/S2	1B.1	BLM:S	Found in wetlands and vernal pools north of the San Francisco Bay Area. Blooms April-July. Found at elevations 16 and 5,710 feet.
Bearded popcornflower (<i>Plagiobothrys hystriculus</i>)	None/None	G2/S2	1B.1	--	Found in grassland and vernal pools at low elevation in Solano County. Blooms April-March. Found at elevations 0 and 164 feet.

Table 3.4-3: CNDDDB Special-Status Plant Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	California Rare Plant Rank ²	Other Status ³	Habitat and Blooming Period
California alkali grass (<i>Puccinellia simplex</i>)	None/None	G3/S2	1B.2	--	Found in alkaline, vernally mesic sinks, flats, and lake margins in chenopod scrub, meadows, and seeps, valley, and foothill grassland, and vernal pools. Blooms March– May. Found at elevations 6 and 3,051 feet.
Carquinez goldenbush (<i>Isocoma arguta</i>)	None/None	G1/S1	1B.1	--	Found in alkaline flats, valley and foothill grassland. Blooms August-December. Found at elevations 9 and 248 feet.
Dwarf downingia (<i>Downingia pusilla</i>)	None/None	GU/S2	2B.2	--	Found in grassland (mesic) and vernal pools. Blooms March– May. Found at elevations 15 and 1,475 feet.
Ferris' milk vetch (<i>Astragalus tener</i> <i>var. ferrisiae</i>)	None/None	G2T1/S1	1B.1	BLM:S	Found in vernal mesic meadows and mildly alkaline flats in valley and foothill grassland, usually on dry, heavy clay or adobe soil. Blooms April-March. Found at elevations 6 and 246 feet.
Heckard's pepper- grass (<i>Lepidium</i> <i>latipes var.</i> <i>heckardii</i>)	None/None	G4T1/S1	1B.2	--	Found in alkaline soils in vernal pool margins, salt marsh edges, and grasslands. Blooms March–May. Found at elevations 0 and 675 feet.
Legenere (<i>Legenere limosa</i>)	None/None	G2/S2	1B.1	BLM:S	Found in vernal pools. Blooms April–June. Found at elevations 0 and 2,900 feet.

Table 3.4-3: CNDDDB Special-Status Plant Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	California Rare Plant Rank ²	Other Status ³	Habitat and Blooming Period
Mason's lilaepsis (<i>Lilaeopsis masonii</i>)	None/Rare	G2/S2	1B.1	--	Found in riparian, freshwater marsh, brackish marsh, and wetland habitats. Blooms April–November. Found at elevations 0 to 71 feet.
Saline clover (<i>Trifolium hydrophilum</i>)	None/None	G2/S2	1B.2	--	Found in marshes and swamps, mesic and alkaline grasslands, and vernal pools. Blooms April–June. Found at elevations 0 to 1,000 feet.
San Joaquin spearscale (<i>Extriplex joaquinana</i>)	None/None	G2/S2	1B.2	BLM:S SB:RSABG	Found in alkaline soils in chenopod scrub, meadow and seep, playa, and grassland habitats. Blooms April–October. Found at elevations 0 to 2,800 feet.
Suisun Marsh aster (<i>Symphyotrichum lentum</i>)	None/None	G2/S2	1B.2	SB:RSABG SB:USDA	Found in freshwater and brackish marshes and swamps. Blooms April–November. Found at elevations 0 to 25 feet.
Two-fork clover (<i>Trifolium amoenum</i>)	Endangered/ None	G1/S1	1B.1	SB:RSABG SB:USDA	Found in coastal bluff scrub and valley and foothill grassland. Blooms April–June. Found at elevations 13 to 429 feet.
Valley Needlegrass Grassland	None/None	G3/S3.1	--	--	Found throughout California and dominated by non-native annual grasses in genera such as wild oat, brome grass, and barley. On localized sites, native perennial bunchgrasses such as purple needle grass

Table 3.4-3: CNDDDB Special-Status Plant Species Mapped Within Five Miles of the Planning Area

Common Name (Scientific Name)	Federal/State Status	Rank ¹	California Rare Plant Rank ²	Other Status ³	Habitat and Blooming Period
					may dominate. Annual grassland with spring blooming period. Found at a wide range of elevations below sea level to 9,884 feet.
Woody rose-mallow (<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>)	None/None	G5T3/S3	1B.2	SB:RSABG	Found in marshes and swamps, and often in riprap on the sides of levees. Blooms June–September. Found at elevations 0 to 400 feet.

Notes:

- The global rank (G-rank) is a reflection of the overall status of an element throughout its global range. The state rank (S-rank) is assigned much the same way as the global rank, but state ranks refer to the imperilment status only within California's state boundaries. Uncertainty about a rank is expressed as a range of values or by adding a "?" to the rank. A "?" represents more certainty than a range.
G1/S1 = Critically Imperiled; G2/S2 = Imperiled; G3/S3 = Vulnerable; G4/S4 = Apparently Secure; G5/S5 = Secure; T = Rank applies to a subspecies or variety; Q = There are taxonomic questions associated with the element.
- 1A = Presumed extirpated in California and either rare or extinct elsewhere; 1B = Rare or Endangered in California and elsewhere; 2A = Presumed extirpated in California, but more common elsewhere; 2B = Rare or Endangered in California, but more common elsewhere; 3 = Plants for which we need more information – Review list; 4 = Plants of limited distribution – Watch list.
The California Rare Plant Ranks (CRPR) use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. .1 = Seriously threatened in California (over 80% of occurrences threatened); .2 = Moderately threatened in California (20-80% of occurrences threatened); .3 = Not very threatened in California (<20% of occurrences threatened).
- BLM: S = Sensitive by the Bureau of Land Management.

Sources: CNDDDB, 2018; CDFW, 2018; CNPS, 2018

Sensitive Habitats

Critical Habitat

Critical habitat is defined by the Endangered Species Act as a specific geographic area that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. There are currently no critical habitats, as designated by the United States Fish and Wildlife Service (USFWS), within the Planning Area. Designated critical habitats for the Delta smelt and the vernal pool fairy shrimp are located between two to five miles south of the Planning Area.

Wetlands and Other Waters

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils (EPA). Wetlands provide a multitude of ecological, economic, and social benefits. They provide habitat for fish, wildlife, and plants, allow for groundwater recharge, reduce flooding, and support cultural and recreational activities. As discussed further below under Regulatory Framework, technical standards for delineating wetlands have been developed by the U.S. Army Corps of Engineers (USACE) and the USFWS. Based on existing information from CDFW, there are seasonal wetlands mapped within the Planning Area at Pond A; however, this does not preclude the future identification of wetlands during site-specific study.

REGULATORY SETTING

Federal Regulations

On the federal level, the U.S. Fish and Wildlife Service (USFWS) is responsible for protection of inland non-anadromous fish through implementation of the federal Endangered Species Act¹ and the Migratory Bird Treaty Act. The National Marine Fisheries Service (NOAA Fisheries) is responsible for protection of anadromous fish and marine wildlife. The USACE has primary responsibility for protecting wetlands under Section 404 of the Clean Water Act.

Federal Endangered Species Act

The FESA was enacted to protect any species of plant or animal that is endangered or threatened **with extinction. Section 9 of the FESA prohibits “take” of federally threatened or endangered wildlife.** Take, as defined under the FESA, means to harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct (16 USC 1532[19]). Section 9 also prohibits the removal and reduction of endangered plants from lands under federal jurisdiction, and the removal, cutting, digging, damage, or destruction of endangered plants on any other area **in “knowing violation of State law or regulation.”** Section 9 of the FESA (16 USC 1538) prohibits take of a federally listed endangered species of fish or wildlife except pursuant to a permit and habitat conservation plan (HCP) approved under Section 10(a) of the FESA (16 USC 1539). The FESA prohibitions and requirements are different, however, for endangered species of plants. Section 9 prohibits the take of endangered plants only from areas under federal jurisdiction, or if such take would violate state law. For listed plants located on private land, formal consultation with **the USFWS is required when a project has a federal “nexus” (i.e., a federal permit is required or federal funding is involved).** In the absence of a federal nexus, a project does not require a permit under the FESA for impacts on listed plants on private lands.

¹ The Federal Endangered Species Act (ESA) declares that all federal departments and agencies shall use their authority to protect endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of the ESA and pertains to California species.

Migratory Bird Treaty Act (MBTA)

The MBTA (16 United States Code 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive, and is listed at 50 Code of Federal Regulations (CFR) 10.13. The **regulatory definition of “migratory bird” is broad and includes any mutation or hybrid** of a listed species and any part, egg, or nest of such birds (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the FESA. The MBTA, which is enforced by the USFWS, **makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird, or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).**

Clean Water Act (CWA)

The USACE regulates discharges of dredged or fill material into waters of the United States. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. The USACE regulatory jurisdiction pursuant to Section 404 of the Federal Clean Water Act (CWA) is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or indirect (through a nexus identified in the USACE regulations). The USACE typically regulates as non-wetland waters of the United States any body of water displaying an ordinary high water mark (OHWM). In order to be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied in order for that particular wetland characteristic to be met.

In 2006, the United States Supreme Court addressed CWA jurisdiction over wetlands adjacent to or abutting navigable, non-navigable, and ephemeral tributaries, and over permanent and relatively permanent non-navigable tributaries. According to the United States Supreme Court, the CWA does not assert jurisdiction over upland erosional features, gullies, or roadside ditches that have **infrequent, low volume, and short duration of water flow; instead, the USACE uses a “significant nexus” analysis. A water body is considered to have a “significant nexus” with a traditional navigable water (TNW) if its flow characteristics and functions, in combination with the ecologic and hydrologic functions performed by all wetlands adjacent to such a tributary, affect the chemical, physical, and biological integrity of a downstream TNW. Additional information is provided in two joint documents prepared by the U.S. Environmental Protection Agency (EPA) and the USACE: (1) a memorandum titled “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Caravell v. United States*,” dated June 5, 2007; and (2) “Jurisdictional Determination Form Instructional Guidebook.”**

State Regulations

California Endangered Species Act

Under the CESA (Fish and Game Code Sections 2050 to 2116), the CDFW has the responsibility for maintaining a list of threatened and endangered species (California Fish and Game Code 2070). **The CDFW also maintains a list of “candidate species,” which are species formally noticed as being under review for addition to either the list of endangered species or the list of threatened species. In addition, CDFW maintains lists of “species of special concern,” which serve as “watch lists.”** Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may impact a candidate species.

California Fish and Game Code

Section 1602

Under Section 1602 of the California Fish and Game Code, public agencies are required to notify the CDFW before undertaking any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review occur generally during the environmental process. When an existing fish or wildlife resource may be substantially adversely affected, the CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a streambed-alteration agreement that becomes part of the plans, specifications, and bid documents for the project.

Sections 3503 and 3503.5

Section 3503 of the California Fish and Game Code prohibits the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and the destruction of raptor nests.

Section 3511 (Fully Protected Birds)

The California Fish and Game Code provides protection from take for a variety of species, referred to as fully protected species. Section 3511 lists fully protected birds and prohibits take of these species. **The California Fish and Game Code defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”** Except for take related to scientific research, all take of fully protected species is prohibited.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), **which directed the CDFW to carry out the legislature’s intent to “preserve, protect, and enhance endangered plants in this state.”** The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare and to require permits for collecting, transporting, or selling such plants. The California Endangered Species Act expanded upon the original NPPA and enhanced legal protection for plants. CESA established threatened and endangered species categories, and grandfathered all rare animals—but not rare plants—into the act as threatened species. Thus, there are three listing categories for plants in California: rare, threatened, and endangered.

Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) is responsible for the administration of Section 401 of the CWA at the State level, through water quality certification of any activity that may result in a discharge to jurisdictional waters of the U.S. The RWQCB may also regulate **discharges to “waters of the State,” including wetlands, under the California Porter-Cologne Water Quality Control Act** (see Section 3.9: Hydrology and Water Quality).

Local Regulations

Solano Multi-Species Habitat Conservation Plan

The US Bureau of Reclamation is responsible for water management and constructed many of the dams, powerplants, and canals in the western United States. The Solano County Water Agency (SCWA) is a whole water agency providing untreated water throughout Solano County. The US Bureau of Reclamation, together with the SCWA and its member agency contracts, have agreed to implement conservation measures to ensure the protection of threatened and endangered species and their habitat within the SCWA contract service area. Full implementation of the conservation measures outlined in the Solano Project Water Service Contract Renewal Biological Opinion is key to the survival and recovery of listed species. As such, SCWA and the member agencies are developing the Solano MultiSpecies Habitat Conservation Plan (HCP) for the Solano Project contract service area. The HCP is intended to support the issuance of a Section 10(a)1(B) **“incidental take permit” and establishes a framework for complying with State and Federal** endangered species regulations while accommodating future urban growth, development of infrastructure, and ongoing operations and maintenance activities associated with flood control, irrigation facilities, and other public infrastructure undertaken by or under the permitting authority/control of the Plan Participants within Solano County over the next 30 years. The HCP effectively shifts endangered species regulations compliance from a federal and State level to the local level under the authority of a well-regulated, regional plan. While Dixon does not have a member agency contract with SCWA, the City of Dixon has voluntarily chose to participate in the HCP and will be responsible for its implementation.

Dixon Municipal Code

Chapter 13.05 of the Dixon Municipal Code is the street tree ordinance of the City of Dixon. Section 13.05.30 enables the Planning Commission to adopt a list of recommended tree species to be planted in the street tree area to be provided to developers of new development projects as a recommendation for landscaping design. Section 13.05.040 prohibits planting the following trees in the street tree area: blackwood acacia, black walnut, eucalyptus, elm, European hackberry, palm, poplar, sweet gum, tree of heaven, sycamore, locust, fruiting mulberry. Section 13.05.040 prohibits planting willow, cottonwood, or poplar trees unless the City Engineer or Public Works Director approves the site as one where roots would not interfere with a public sewer. Chapter 13.05 further establishes standards for maintenance and enforcement of the regulations discussed in this chapter.

Chapter 17.10 of the Dixon Municipal Code pertains to subdivision design standards. Section 17.10.010, General Design Standards, states that the density, timing or sequence of development may be restricted by considerations of safety, traffic access or circulation, the slope of the natural terrain, the physical suitability of the site (including soil conditions), the nature or extent of existing development, the availability of public utilities, environmental habitat or wildlife preservation or

protection, or other provisions of this title. Section 17.1.320, Protection of Natural Resources, states the configuration of lots and the design of improvements shall, to the extent deemed reasonable by the approving authority, preserve indigenous natural resources such as, but not limited to, trees, shrubs, wildlife and their habitat.

Chapter 18.33 of the Dixon Municipal Code pertains to landscaping requirements. Section 18.33.070, Required landscaping, establishes landscaping requirements for neighborhood shopping and professional office districts, industrial districts, highway commercial and service commercial districts, nonresidential and multiple-family uses in residential zoning districts, single-family use in one (1) family residential districts, and automotive and equipment use building sites. Landscaping is required in accordance with the regulations of Dixon Municipal Code Section 18.33.090 as discussed below. **Required street trees are encouraged to be from the City's approved street tree list.** Section 18.33.090, Standards applicable to required landscaping, establishes required landscaping materials, separation standards, standards for incorporation of existing vegetation and maintenance, and requirements for parking area tree shading.

Solano County General Plan

The 2008 Solano County General Plan includes a conservation element that addresses natural resources in the unincorporated county. Goals related to biological resources include preserving wetlands, including jurisdictional wetlands and saltwater and freshwater marshes consistent with federal and state requirements, protecting and developing in watersheds and aquifer recharge areas, which includes subgoals of conserving riparian vegetation, protecting special status species and their habitats, protecting wildlife movement corridors, conserving oak woodlands, promoting energy conservation and renewable energy, and implementing water conservation programs. The **Solano County General Plan currently applies to Dixon's Sphere of Influence.**

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Criterion 2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service;
- Criterion 3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal

pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Criterion 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Criterion 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Criterion 6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

METHODOLOGY AND ASSUMPTIONS

The Proposed Plan's Land Use Diagram was compared against existing biological conditions shown in Figures 3.4-1 and 3.4-2 to determine potential impacts on biological resources that could result from implementation of the Proposed Plan. No new field studies or other research were conducted for the preparation of this EIR, as existing resources contained information on all pertinent aspects of biological resources in the Planning Area at an appropriate level of detail for a program level environmental assessment. Future project specific detailed biological surveys may be necessary to confirm presence or absence of sensitive resources on future development sites. Cumulative impacts related to biological resources are discussed in Chapter 5: CEQA Required Conclusions.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

The following relevant policies and implementing actions of the Proposed Plan address biological resources:

Economic Development

- E-1.7 Require industrial, light industrial, and agro-industrial development to meet performance standards based on factors of noise, odor, light, glare, traffic generation and air emissions, soil contamination, and surface and groundwater contamination in order to minimize its impacts on established or proposed residential areas and other adjacent uses.

Natural Environment

- NE-1.1 Preserve the natural open space and agricultural lands that surround Dixon through continued leadership in cross-jurisdictional conservation initiatives such as the Vacaville-Dixon Greenbelt and the Davis-Dixon greenbelt.
- NE-1.2 Support regional efforts to place additional land under permanent conservation easements and continue to use the Agricultural Land Mitigation Fund to collect development impact fees for the purpose of funding greenbelt expansion.

- NE-1.3 Encourage open space preservation through easements, open space designation, or dedication of lands for the purpose of connecting conservation areas, protecting biodiversity, accommodating wildlife movement, and sustaining ecosystems.
- NE-1.4 Prior to annexing land into the city or expanding the SOI, continue to require agricultural mitigation consistent with the Solano County Local Agency Formation **Commission's Standards and Procedures when agricultural lands would be converted to nonagricultural purposes.**
- NE-1.5 Continue to allow agriculture as an interim use on land within the City that is designated for future urban use.
- NE-1.A Adopt a Right to Farm ordinance that protects the rights of agricultural operations in areas adjacent to the City to continue operations and seeks to minimize conflicts with adjacent urban uses in Dixon.
- NE-1.C Collaborate with landowners, neighbors, the school district, and others, to create a program that establishes and maintains landscaping, school gardens, or community gardens on vacant or idle sites within the City.
- NE-1.9 Ensure that drainage ditches which discharge directly to or are located within open space lands are regularly repaired and maintained.
- NE-1.10 Support regional habitat conservation efforts, including implementation of the Solano Countywide Multispecies Habitat Conservation Plan.
- NE-1.11 Ensure that adverse impacts on sensitive biological resources, including special-status species, sensitive natural communities, sensitive habitat, and wetlands are avoided or mitigated to the greatest extent feasible as development takes place.
- NE-1.12 In areas where development (including trails or other improvements) has the potential for adverse effects on special-status species, require project proponents to submit a study conducted by a qualified professional that identifies the presence or absence of special-status species at the proposed development site. If special-status species are determined by the City to be present, require incorporation of appropriate mitigation measures as part of the proposed development prior to final approval.
- NE-1.13 Protect the nests of raptors and other birds when in active use, as required by State and federal regulations. In new development, avoid disturbance to and loss of bird nests in active use by scheduling vegetation removal and new construction during the non-nesting season or by conducting a pre-construction survey by a qualified biologist to confirm nests are absent or to define appropriate buffers until any young have successfully fledged the nest.

- NE-1.14 Recognize the importance of the urban forest to the natural environment in Dixon and expand the tree canopy on public and private property throughout the community.
- NE-1.15 Enhance tree health and the appearance of streets and other public spaces through regular maintenance as well as tree and landscape planting and care of the existing canopy.
- NE-1.16 Minimize removal of, and damage to, trees due to construction-related activities and continue to require replacement of trees, including street trees lost to new development.
- NE-1.17 Require new development to provide and maintain street trees suitable to local climatic conditions.
- NE-1.E Maintain a list of tree species well-adapted to local conditions and provide this information to local property owners, businesses, and developers.
- NE-1.F Explore establishing a tree planting and maintenance program in partnership with local community groups or non-profit organizations.
- NE-1.G Provide on-going education for local residents, businesses, and developers regarding landscape, maintenance and irrigation practices that protect the urban forest and wildlife species.
- NE-2.6 Conserve water through the provision of water-efficient infrastructure, drought tolerant plantings, greywater usage to support public parks and landscaped areas.
- NE-2.7 Conserve water through the planting and maintenance of trees, which will provide for the capture of precipitation and runoff to recharge groundwater, in addition to providing shading for other landscaping to reduce irrigation requirements. Ensure **that any 'community greening' projects utilize water-efficient landscape.**
- NE-5.6 Require construction projects that disturb 10,000 square feet of ground cover revegetate graded areas with native or locally-appropriate vegetation to restore biological diversity and minimize erosion and soil instability.
- NE-5.7 Coordinate with Yolo and Solano counties, the Resource Conservation District, and the Natural Resources Conservation Service in implementing programs to reduce soil erosion by wind and water and prevent soil contamination.
- NE-5.8 Coordinate with the Dixon Resource Conservation District, California Water Service, Solano Subbasin Groundwater Sustainability Agency, Solano County and others to promote, protect, and improve water quality in Dixon.
- NE-5.9 Protect surface water and groundwater resources from contamination from point (single location) and non-point (many diffuse locations) sources by pursuing

strategies to minimize the pollutant and sediment levels entering the hydrological system through stormwater, agricultural, and other urban runoff.

- NE-5.10 Encourage, through redevelopment and retrofitting, phasing out of commercial and industrial building materials such as galvanized roofs that leach metals into storm water runoff.
- NE-5.11 Reduce, through redevelopment and retrofitting, the amount of uncovered industrial and commercial areas where the work activity may contribute pollutants.
- NE-5.12 Support programs that encourage residents and business owners to cleanup trash and debris as well as pet waste before it enters the storm drain systems.
- NE-5.13 Work with the Solano County Agricultural Commissioner and other responsible agencies to identify and enforce mechanisms to control residual pesticides and pesticide runoff to prevent significant risk to water quality, vegetation, wildlife, and humans.
- NE-5.B **Update the City's Storm Water Quality Management Plan as needed to comply with the NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems, Order No. 2003-0005-DWQ, or as amended.**
- NE-5.C Consider developing a green infrastructure plan that employs tools such as bioswales, permeable pavement, rain gardens, rain barrels and cisterns, and green roofs to treat stormwater, attenuate floods, increase groundwater recharge, and reduce urban heat islands.
- NE-5.D Install grease/oil separators in storm drains along roadways with heavy traffic to keep these contaminants out of storm runoff.

Land Use

- LCC-1.1 Recognize and maintain Dixon as a community surrounded by productive agricultural land and greenbelts.
- LCC-1.2 Maintain designated urban-agricultural buffers within City jurisdiction to minimize conflicts with adjoining agricultural uses.
- LCC-1.3 **Promote a compact development pattern and limit "leap frog" development in order to support efficient delivery of public services and infrastructure, conserve agricultural and open space lands, reduce vehicle trips, and improve air quality.**
- LCC-6.6 Encourage new development to incorporate greenery, including climate appropriate trees and plants as well as rain gardens, and as new development occurs, acquire easements or development rights for open space, planting street trees, and landscaping adjacent to public rights-of-way.

IMPACTS

Impact 3.4-1 Implementation of the Proposed Plan would have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (*Less than Significant*)

A range of special-status species have been observed in and around the Planning Area as described above in the Physical Setting and listed in Tables 3.4-2 and 3.4-3. Existing habitat within the Planning Area includes annual grassland, fresh emergent wetland, lacustrine, riverine, valley foothill riparian, and agricultural habitats including deciduous orchard, evergreen orchard, vineyard, and irrigated row and fresh crops. However, the Planning Area is largely developed under existing conditions. Future development under the Proposed Plan could have a significant direct or indirect impact on these species if it would result in the removal or degradation of the species or potentially suitable habitat.

Development under the Proposed Plan is anticipated to take place primarily within the developed footprint of the Planning Area, limiting the potential for adverse impacts on special-status species and sensitive natural communities. As discussed in Chapter 2: Project Description, the land use designations under the Proposed Plan are based on the land use designations in the current Dixon General Plan. Implementation of the Proposed Plan would simplify and consolidate eight of the current land use designations and would introduce a new Corridor Mixed Use land use designation in area currently designated as Planned Business/Industrial, Commercial Services, Highway Commercial, Highway Commercial/Professional/Administrative Offices, and Future Residential. Additionally, the land use change areas are generally clustered around the center of the city on urban parcels rather than parcels mapped within the habitats shown in Figure 3.4-1. While land use changes are found in areas mapped as Deciduous Orchard, Evergreen Orchard, Vineyard, Irrigated Row and Fresh Crops, these parcels are designated for commercial and industrial use under existing conditions. Additionally, the Proposed Plan identifies parcels of land associated with the Solano County Agricultural Reserve Overlay and Dixon/Vacaville Greenbelt and does not propose new land uses in these areas.

Outside of the land use change areas, the Proposed Plan includes urban land use designations on parcels where special-status species have been observed. These include the Adobe lily and **burrowing owl in the central part of the city; Swainson's hawk throughout the Planning Area; the valley elderberry longhorn beetle along the eastern edge of Dixon's Sphere of Influence (SOI); and the vernal pool fairy shrimp at the southwest edge of the Dixon City Limits.** If future development were to degrade or remove suitable habitat for special-status species in these or any as-yet unmapped habitats, there could be a significant impact on special-status species. This could occur as a result of grading, excavation, and construction activities, or from ongoing operation and/or maintenance of a project.

Policies in the Proposed Plan would serve to reduce potential impacts. Policies NE-1.11 and NE-1.12 address development-related impacts on sensitive special-status species and their habitats, including requirements to conduct studies identifying the presence of special-status species and sensitive habitats at proposed development sites and ensuring incorporation of appropriate

mitigation measures to ensure no loss of habitat or values. Additionally, policy NE-1.10 supports development and implementation of regional habitat conservation efforts, including the Solano Countywide Multispecies Habitat Conservation Plan. Policies NE-1.1, NE-1.2, NE-1.3, NE-1.4, NE-1.5, NE-1.A, and LCC-1.3 address preservation of agricultural and open space as development associated with implementation of the Proposed Plan expands urban development within agricultural habitat in the City of Dixon and its Sphere of Influence.

Additionally, existing local policies and regulations would ensure that development under the Proposed Plan would not have an adverse impact on special-status species or critical habitats within Dixon City Limits and its Sphere of Influence. Chapter 17.10 of the Dixon Municipal Code restricts density, timing, and sequence of development, the configuration of lots, and the design of improvements of subdivisions within the City of Dixon to preserve existing natural resources including wildlife and environmental habitat. The Solano County General Plan includes a conservation element applicable to unincorporated land outside of the Dixon City Limits that establishes goals for the protection and preservation of special-status species, critical habitats, riparian vegetation, and wetlands.

With implementation of these policies and adherence to the Dixon Municipal Code and Solano County General Plan policies, the impact of future development under the Proposed Plan on species identified as candidate, sensitive, or special-status species would be reduced to less than significant.

Mitigation Measures

None required.

Impact 3.4-2 Implementation of the Proposed Plan would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service. (*Less than Significant*)

As shown in Figure 3.4-1, the Planning Area includes Valley Foothill Riparian habitat located along the eastern side of the Union Pacific Railroad tracks and habitat for five species located throughout the Planning Area. Implementation of the Proposed Plan could have a significant impact on riparian habitat or other sensitive natural communities if future development under the Proposed Plan resulted in the removal or degradation of the habitat.

As discussed under Impact 3.4-1, future development under the Proposed Plan would take place primarily in previously developed portions of the Planning Area, limiting the potential for disruption to undeveloped habitat areas. Additionally, both parcels of land that contain Valley Foothill Riparian Habitat and serve as habitat for the adobe lily, vernal pool fairy shrimp, and burrowing owl are designated as Governmental/Institutional under the Proposed Plan. The Proposed Plan does not propose any new development in these areas and retains existing land use designations from the current Dixon General Plan. Therefore, implementation of the Proposed Plan would not result in the degradation or removal of any riparian habitat identified within the Planning Area.

While the Proposed Plan includes urban land use designations on parcels mapped with critical habitats, these areas are largely developed under existing conditions. As discussed under Impact 3.4-1, impacts on sensitive natural communities would be minimized with the implementation of Proposed Plan policies addressing the preservation of natural resources, wildlife, habitat, and tree canopy (NE-1.10, NE-1.11, NE-1.12, NE-1.13, NE-1.14, NE-1.15, NE-1.16, NE-1.17, NE-1.E, NE-1.F, NE1.G, LHC.1.3). Specifically, policy NE-1.12 would require the proponents of new development projects to submit a study identifying the presence or absence of special-status species and/or sensitive habitats at proposed development sites, and to incorporate appropriate mitigation measures into the proposed development if necessary. Compliance with Dixon Municipal Code restrictions on the development of subdivisions and Solano County General Plan conservation goals would further ensure that impacts on critical habitats located outside of land designated as Governmental/Institutional would be minimized.

With implementation of these policies and adherence to local regulations as discussed above and in Impact 3.4-1, impacts of future development under the Proposed Plan on riparian habitat or sensitive natural communities would be less than significant.

Mitigation Measures

None required.

Impact 3.4-3 Implementation of the Proposed Plan would have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (*Less than Significant*)

As shown in Figure 3.4-1, the Planning Area includes Lacustrine, Riverine, Fresh Emergent Wetland, and Fresh Emergent Wetland, Urban habitat located along the eastern side of the Union Pacific Railroad tracks and habitat for five species located throughout the Planning Area. Implementation of the Proposed Plan could have a significant impact on federally protected wetlands if future development under the Proposed Plan resulted in the direct removal, filling, hydrological interruption, or otherwise degradation of the habitat.

Land identified in Figure 3.4-1 as Fresh Emergent Wetland and Fresh Emergent Wetland, Urban habitat is located adjacent to Valley Foothill Riparian habitat. As discussed under Impact 3.4-2, this habitat is entirely contained in parcels of land designated as Governmental/Institutional under both the Proposed Plan and current Dixon General Plan. Land identified as Lacustrine, Riverine is located in these parcels and in an additional parcel of land also designated as Governmental/Institutional under both the Proposed Plan and current General Plan. Implementation of the Proposed Plan would not result in development or land use changes of these parcels, and therefore would not result in direct removal, filling, hydrological interruption, or other means of degradation of these wetland habitats.

Future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed

Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources.

Furthermore, development under the Proposed Plan would be subject to Proposed Plan policies requiring the protection of natural habitat and special-status species (NE-1.11, NE-1.12, NE-1.13, NE-1.14) and limit potential sources of water pollution (NE-5.8, NE-5.9, NE-5.10, NE-5.11, NE-5.12, NE-5.13, NE-5.B, NE-5.C, and NE-5.D). Future development within the Dixon City Limits and SOI would be subject to Solano County General Plan conservation goals to preserve wetlands, including jurisdictional wetlands and saltwater and freshwater marshes consistent with federal and state requirements. Therefore, compliance with these policies and regulations would ensure that development under the Proposed Plan would be less than significant in regard to the direct removal, filling, hydrological interruption, or other means of degradation of wetland habitat.

Mitigation Measures

None required.

Impact 3.4-4 Implementation of the Proposed Plan would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

In the Planning Area, continuous undeveloped areas outside of the Dixon City Limits and agricultural land may serve as wildlife corridors for common and special-status species. The Planning Area's **Fresh Emergent Wetland and Lacustrine, Riverine habitat** may also provide corridors for aquatic and riparian species. Implementation of the Proposed Plan would have a significant impact on migratory species, corridors, or nursery sites if the siting, construction, or operation of development allowed under the Proposed Plan would impede on or remove migratory corridors or nursery sites.

The Sacramento Valley lies on the southerly end of the Pacific Flyway migratory route and is one the most prominent wintering sites for waterfowl in the world. Waterfowl migrate to the Sacramento Valley by the millions from as far away as Alaska, Canada, and Siberia. Sacramento Valley habitat supports approximately 44 percent of wintering waterfowl using the Pacific Flyway, attracting more than 1.5 million ducks and 750,000 geese to its seasonal marshes. The limited amount of natural wetlands in the area makes small-grain production fields (mostly rice) critical to the survivability of the large numbers of waterfowl wintering in California (Northern California Water Association, 2018). Habitat loss, water shortages, diminishing food sources, and climate change all threaten the birds of the Pacific Flyway (Audubon Society, 2018). Tidal waterways, flooded rice fields, and wetlands within the Planning Area provide suitable habitat for migratory birds. Implementation of the Proposed Plan could further threaten the viability of the Pacific Flyway if associated development resulted in increased building heights, destruction of wetland habitat, removal of flooded rice fields, or development of open space within the Vacaville/Dixon Greenbelt southwest of the Planning Area.

As discussed under Impacts 3.4-1, 3.4-2, and 3.4-3, though the Proposed Plan includes urban land use designations on habitat suitable for a number of special-status species and native wildlife nursery sites, these areas are largely developed under existing conditions. Existing Lacustrine, Riverine, Valley Foothill Riparian, Fresh Emergent Wetland, and Fresh Emergent Wetland, Urban habitat would be important habitat for migratory wildlife and native wildlife nursery sites. However, all of this habitat is located in parcels designated as Governmental/Institutional land use under both the existing and Proposed General Plan and would not be impacted by future development. The Proposed Plan would leave the open space within the Vacaville/Dixon Greenbelt undeveloped in accordance with the Solano County General Plan Agricultural Reserve Overlay.

As discussed under Impact 3.4-3, future development under the Proposed Plan would be subject to the requirements of Clean Water Act Section 404 and 401 permitting requirements, which would limit and/or mitigate impacts from projects that would discharge pollutants or dredged or fill materials into waters of the state, including wetlands. Future development would also be subject to the CDFW Lake and Streambed Alteration Program, which would require any project that could substantially divert or obstruct the flow of; substantially change or use any material from; or deposit debris into a river, stream, or lake to agree to measures that would protect existing fish or wildlife resources. Additionally, future development within the Dixon City Limits would be subject to Dixon Municipal Code restrictions on subdivision development to ensure preservation of natural resources. **Future development within the City's SOI would be subject to Solano County General Plan conservation goals related to biological resources include preserving wetlands, including jurisdictional wetlands and saltwater and freshwater marshes consistent with federal and state requirements, protecting and developing in watersheds and aquifer recharge areas, which includes subgoals of conserving riparian vegetation, protecting special status species and their habitats, and protecting wildlife movement corridors.** Compliance with these requirements would ensure the preservation of wetland habitats utilized in the Pacific Flyway migratory route and by aquatic migratory channels and nursery sites.

Finally, the Proposed Plan includes policies and implementation actions to ensure that adverse impacts to special-status species and sensitive natural communities are avoided and mitigated to the greatest extent feasible as development takes place (NE-1.11 and NE-1.12). Other policies expand the tree canopy within the Planning Area, ensuring that development under the Proposed Plan would not reduce forested habitats that may provide nesting sites for birds and other species (NE-1.13, NE-1.14, NE-1.5, NE-1.6, NE-1.7, NE-1.E, and NE-1.F). Multiple Proposed Plan policies support conservation and preservation of agricultural land, greenbelts, and open space surrounding the City of Dixon (NE-1.1, NE-1.2, NE-1.3, NE-1.4, NE-1.5, NE-1.A, and LCC-1.3). With implementation of the Proposed Plan's **policies and existing regulations, impacts on wildlife movement or wildlife nursery sites would be less than significant.**

Mitigation Measures

None required.

Impact 3.4-5 Implementation of the Proposed Plan would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

The City of Dixon Municipal Code Chapter 13.05 is the City's tree ordinance, and the only local policy or ordinance applicable to Impact 3.4-5. It enables the Planning Commission to create a list of recommended tree species, prohibits planting of certain tree species, and establishes standards for maintenance of street trees. Chapter 18.33 of the Dixon Municipal Code establishes landscaping requirements for multiple districts within the City and encourages planting of tree species from the City's approved street tree list. The Dixon Municipal Code does not establish tree preservation ordinance, rather sets requirements for street tree planting to encourage a healthy tree canopy within the city. Policy RS.P-6 of the Solano County General Plan protects oak woodlands and heritage trees and encourages the planting of native tree species in new developments and along road rights-of-way.

Multiple Proposed Plan policies address the planting and preservation of street trees throughout the Planning Area. Policies NE-1.14, NE-1.17, and LCC-6.6 recognize the importance of the urban forest to the natural environment in the Planning Area and promote expansion of the tree canopy on public and private property, including new development sites. Policies NE-1.15 and NE-1.16 address regular maintenance and preservation of the existing tree canopy, and require replacement of street trees lost to development. Implementing action NE-1.E supports maintenance of a list of tree species suitable to local conditions as recommended in the Dixon Municipal Code. Implementing action NESH-2.C would provide on-going community education regarding landscape, maintenance and irrigation practices that protect the urban forest, while implementing action NE-1.F would establish a tree planting and maintenance program in partnership with local community groups or non-profit organizations, respectively. Compliance with Proposed Plan policies and implementing actions would encourage growth of the urban forest and community involvement in tree preservation, ensuring that impacts of the Proposed Plan on any local policies protecting biological resources would be less than significant.

Mitigation Measures

None required.

Impact 3.4-6 Implementation of the Proposed Plan would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. (*Less than Significant*)

There is one Habitat Conservation Plan (HCP) that would apply within the Planning Area. As discussed, the City of Dixon has voluntarily chosen to participate in the Solano Multispecies Habitat Conservation Plan as developed by the Solano County Water Agency (SCWA) and other member agencies of the US Bureau of Reclamation. The HCP effectively shifts endangered species regulations compliance from a federal and State level to the local level under the authority of a well-regulated, regional plan. There are no Natural Community Conservation Plans at the county level that include land within the Planning Area. Implementation of the Proposed Plan would have a significant impact if it would conflict with the provisions of the HCP.

The Solano HCP has been developed to support the issuance of a Section 10(a)1(B) incidental take permit under the federal Endangered Species Act of 1973 (as amended). This permit is required by the March 19, 1999 Solano Project Contract Renewal Biological Opinion between the USFWS and Bureau of Reclamation. The Solano HCP has expanded the scope of the Biological Opinion and includes additional voluntary applicants and additional species for incidental take coverage. These additional species include federally-listed fish species under the jurisdiction of the National Marine Fisheries Service (NOAA Fisheries) and **species listed as threatened or endangered under the State's Endangered Species Act**. The HCP further addresses other species of concern (i.e., species recognized by groups such as the California Department of Fish and Game (DFG) and California Native Plant Society (CNPS) as having declining or vulnerable populations, but not officially listed as threatened or endangered species). Thirty-seven (37) species are proposed to be covered under the Solano HCP.

The Proposed Plan does not include any policies that would interfere with the ability of the SCWA to implement an HCP. The intent of the Solano Multispecies HCP is generally consistent with the **Proposed Plan's policies to limit and mitigate impacts on special-status species**, particularly policies NE-1.11 and NE-1.12. Therefore, impacts related to conflicts with any applicable habitat conservation plan or natural community conservation plan from implementation of the Proposed Plan would be less than significant.

Mitigation Measures

None required.

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3.5 Cultural and Tribal Cultural Resources

This section assesses potential environmental impacts on historic and cultural resources from future development under the Proposed Plan, including those related to historic, archaeological, and tribal cultural resources (including human remains). Cultural resources refer broadly to prehistoric and historic buildings, structures, objects, districts, and sites exhibiting important historical, cultural, scientific, or technological associations. This definition extends to tribal cultural resources which refer to sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe. For the purposes of CEQA, cultural resources are separated into three subcategories: historic resources, archaeological resources, and Native American tribal resources and remains. The section describes the historical setting of the Planning Area, as well as the context for cultural resources in the Planning Area. It also includes a description of relevant federal, State, and local regulations and programs related to cultural resources. Appendix C includes a list of all historic and prehistoric resources identified in the Planning Area and correspondence related to tribal consultation.

There were two responses to the Notice of Preparation (NOP) regarding topics covered in this section. The Native American Heritage Commission (NAHC) provided a brief summary of portions of Assembly Bill (AB) 52 and Senate Bill (SB) 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **In accordance with the NAHC's comment letter**, a summary of AB 52 and SB 18 is included in the Regulatory Settings section of this chapter and the **NAHC's recommendations for conducting cultural resources assessments are incorporated** into the following analysis. A representative from the Yocha Dehe Wintun Nation concluded that the project is within the aboriginal territories of the Yocha Dehe Wintun Nation and is concerned that the project could impact known cultural resources. The representative requested the cultural resources study for the project, which is provided in this EIR chapter.

Environmental Setting

PHYSICAL SETTING

Historical Setting

Prehistory and Native Americans in the Historical Period

Indigenous peoples utilized the Sacramento Valley, including what is now the Dixon area, for many years before the first European settlers arrived. The first settlements in the Sacramento Valley likely occurred during the late Pleistocene and early Holocene (14,000 to 8,000 B.P.) period. **Sacramento's** location within a great valley and at the confluence of two rivers, the Sacramento River and the American River, shaped its early and modern settlements (City of Sacramento, 2015).

Over 4,000 years ago, the Patwin Indians occupied the lower western half of the Sacramento Valley west of the Sacramento River (Dyett & Bhatia, 2016). Native Americans were known to have settled along Putah Creek, northwest of the Planning Area (City of Sacramento, 2015). These tribes were hunter-gatherers who subsisted on acorns, fish, and small game (City of Winters, 1991). Hunting and fishing, as well as tool assemblage, such as nets, bows, and arrows, was the main responsibility of males in the tribe. Women produced some tools, though mostly baskets. Items that could not be produced locally were obtained through extensive trade routes, for which the currency of the region was mainly clam shell disk beads. The Patwin would often trade for items such as pine nuts, bear hides, and sinew-backed bows with the Wintun and for salt, clams, and obsidian within the Pomo. In exchange, the Patwin provided salmon, river otter pelts, and cordage. The Patwin also acted as middlemen in east-west or north-south trade routes (City of Davis, 2000).

At the time of Euroamerican contact, the Southern Patwin who inhabited the area were speakers of the Knight's Landing-Suisun dialect of the Wintuan language, part of the Penutian language family (Northwest Information Center, 2015). The missionization of California nearly eradicated Patwin settlements. The missions of San Francisco de Asis, San Jose, and San Francisco Solano recruited neophytes from Patwin villages. There, numerous diseases such as measles and small pox devastated Native American populations. European settlements and the Gold Rush further reduced the prevalence of indigenous peoples in the Sacramento Valley (City of Davis, 2000).

Early Development and Founding of the City

In 1840, the Mexican governor of the territory gave four Mexican leagues in an area then known as the Rancho Los Putos (located in the northern portion of what is now Solano County) to William Wolfskill. John Wolfskill was sent to the area to settle the land claim and arrived on the Solano County side of Rio Los Putos with some cattle. By the 1850s, traffic between San Francisco and Sacramento, through what is now Dixon, had increased as a result of the Gold Rush. Elijah S. Silvey first built a house and corral, and later a general store to serve travelers passing through the area (City of Dixon, 1993). By 1865, the community of Silveyville boasted a general store, post office, and blacksmith, and had a population of 150 people (City of Dixon, n.d.). The City of Dixon has its origins in the historic town of Silveyville, five miles west of present-day Dixon.

When the Vaca Valley Railroad was about to inaugurate its new line in Solano County in 1870, the residents of Silveyville were not happy that the tracks would not cross into their town (City of Dixon, n.d.). To ensure that the railroad would cross through, the town of Silveyville was moved to **a new location along the railroad line on a ten-acre site donated by Thomas A. Dickson**. As such, the town became known as Dixon, and began to grow, supported by nearby farms. The City of Dixon was incorporated by a special act of the Legislature during the 1877-1878 session. By 1877, Dixon had become a thriving community with a population of 1,200 (Dyett & Bhatia, 2016).

On November 19, 1883, a devastating fire started in the Centennial Hotel, where the Moose Lodge is located today, which almost completely destroyed the town. Gusty winds between 50 and 60 miles per hour fanned the fire quickly, engulfing homes and businesses. Many residents suffered loss. Most businesses, including the town's saloons and six churches, were destroyed in just a few hours. After the fire, due to a new city ordinance, brick and tin became the predominant building materials. The first firehouse in Dixon was built in 1891 on Jackson Street, and the first jailhouse was built alongside it (City of Dixon, n.d.).

In 1885 a group of men formed the Dixon Driving Park Association, capitalizing on the interest that was being generated in horse harness racing. The group purchased 20 acres of land from Peter N. Peters to construct a horse racing track and pavilion. In 1886, it became the site of the Dixon May Day celebrations (City of Dixon, n.d.).

Nine years after the fire that almost destroyed the town, disaster struck again on April 22, 1892 in the form of a major earthquake. Many of the brick buildings in the downtown area were damaged. Two fires broke out on First Street, but the new fire hydrants helped firemen to quickly put out the blaze (City of Dixon, n.d.).

20th Century Development

From its inception, the principal livelihood of Dixon was farming. Historically, agrarian pursuits consisted of subsistence farming and cattle-raising. A number of developments, among them fencing laws, the proliferation of small farmsteads, and competition for land with grain farmers made cattle-raising less profitable than sheep-raising. Subsequently, Dixon's chief agricultural products were alfalfa and small-grain production.

However, by the early 1900s Dixon was known as “The Dairy City” after hydraulic pumps became available to farmers. During this period, farming emphasized growing alfalfa for cows and milk production. The Timm Certified Dairy, originally known as the “World's Largest Certified Dairy”, operated with over 300 cows and provided milk to San Francisco, Oakland, and other Bay Area cities, as well as Sacramento and diners on the Southern Pacific railroad. By 1920, Dixon had approximately 30 dairy farmers (City of Dixon, n.d.).

Karl A. Hess opened the Dixon “Milk Farm” in 1919 and relocated his ranch and cabin rentals close to Highway 40, the “Lincoln Highway,” now known as Interstate 80 (I-80), for travelers in 1939. In its heyday, the Milk Farm served many travelers stopping at the restaurant and service station. The Gill Dairy, established at the Milk Farm, had 500 cows but ceased its dairy operation after World War II (City of Dixon, n.d.). The Milk Farm building was demolished in 2000.

In 1916, Dixon became the site of the Solano County Fair, indicating what a popular event horse racing had become. In 1933, the State of California legalized race horse betting and Watson Kilkenny, the May Day manager, organized with the California Horse Racing Board that Dixon receive a share of the pari-mutuel wagering money. By 1937 races were held for two days each year with over \$41,000 handled in pari-mutuel betting. The races in Dixon continued even when the State Racing Board closed and blacked out most other race tracks after Pearl Harbor and World War II began (City of Dixon, n.d.).

Today (as of 2018), Dixon is a city that maintains its agricultural heritage and distinct small-town feel. It is still home to the Dixon May Fair, the oldest district fair and fairgrounds in the state of California, and the central portion of Dixon boasts numerous historic resources dating back to its past as a 19th Century railroad town. The Union Pacific Railroad mainline bisects the city in a southwest-northeast direction, carrying freight and passengers, although trains do not currently stop in Dixon.

Historic Resources

A historic resource is a building, structure, object, prehistoric or historic archaeological site, or district possessing physical evidence of human activities over 45 years old. Historic resources are often designated and listed on the national, State, or a local register, making them eligible for certain protections or other benefits. The National Register of Historic Places (NRHP) is **the nation's** official list of historic places. The register is overseen by the National Park Service and requires that a resource eligible for listing on the register meet one of several criteria at the national, State, or local level and also retain sufficient physical integrity of those features necessary to convey historic significance.

The California Office of Historic Preservation (OHP) offers four different registration programs, including the California Historical Landmarks, California Points of Historical Interest, California Register of Historical Resources (CRHR), and the NRHP. Each registration program is unique in the benefits offered and procedures required. If a resource meets the criteria for registration, it may be nominated by any individual, group, or local government to any program at any time. Resources do not need to be locally designated before being nominated to a State program nor do they need to be registered at the State level before being nominated to the National Register. The California Register includes buildings, sites, structures, objects, and districts significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Resources listed in the National Register are automatically listed in the CRHR.

According to a comprehensive inventory search conducted in 2015 by the NWIC at Sonoma State University of the California Historic Resources Information System, the Planning Area contains 105 historic buildings or structures. The State OHP Historic Property Directory (HPD), which includes listings of the CRHR, California State Historical Landmarks, California State Points of Historical Interest, and the NRHP, lists 315 recorded buildings or structures within the Planning Area. Almost all of the historic resources are clustered in the Downtown area. Two of the resources are listed on the NRHP: the Jackson Fay Brown House at 6751 Maine Prairie Road and the Dixon Carnegie Library at 135 E. B Street. A list of historic structures was also compiled as part of the Northeast Solano County Historic Resource Inventory in 1980. Appendix C lists all the historic and prehistoric resources in Dixon.

Archaeological Resources

The National Parks Service defines archaeological resources as any material remains of human life or activities that are at least 100 years of age and are capable of providing scientific or humanistic understandings of past human behavior, cultural adaptation, and related topics. According to the 2015 NWIC records search, the Planning Area contains six recorded prehistoric archaeological resources and two historic-period archaeological resources.

There is also the potential for the discovery of additional archaeological resources in the Planning Area. NWIC basemaps show the prevalence of buried archaeological deposits in the lowlands of the Sacramento River Valley that may show no evidence on the surface. Additionally, the topography of the Planning Area is consistent with Holocene alluvial fan landforms and the soils are derived from Holocene alluvium. These factors increase the potential for buried prehistoric archaeological deposits that may show no evidence on the surface.

Based on the NWIC review of historical literature and maps, there is also the possibility of additional historic-period archaeological resources within the Planning Area. The City of Dixon and its surrounding area has been inhabited since the mid-1800s with the establishment of Silveyville in the 1850s. The long history of settlement in the Planning Area makes it likely that additional historic-period archaeological resources may be discovered.

Tribal Cultural Resources

Potential Resources

A tribal cultural resource is a site, feature, place, cultural landscape, sacred place, or object with cultural value to a tribe that is included or determined to be eligible for inclusion in the CRHR, included in a local register of historical resources, or otherwise determined to be significant by the lead agency of an environmental review process. The 2015 NWIC records search revealed no Native American resources in or adjacent to the Planning Area referenced in the ethnographic literature. However, there may be undiscovered tribal cultural resources within the Planning Area. Native American resources in this part of Solano County have been found primarily along the banks of major waterways, within the interface between the foothills of the eastern California Coast Ranges and the valley floor, and other productive ecotones. In addition, the NWIC basemaps show the prevalence of buried archaeological deposits in the lowlands of the Sacramento River Valley that may show no evidence on the surface. While the Planning Area is in close proximity to the Sacramento River Delta in the lowlands of the Sacramento River Valley and multiple waterways which are part of the Putah Creek Drainage Basin and flow into the Sacramento River, including Dickson and Dudley Creeks, there are no natural watercourses within the Planning Area. Given the similarity of one or more of these environmental factors to locations where Native American resources have been discovered, there is a moderate potential of identifying unrecorded Native American resources in the Planning Area (Northwest Information Center, 2015).

Tribal Consultation

In accordance with SB 18, the City contacted the NAHC in March 2015 to request a consultation list of tribes traditionally and culturally affiliated with the Planning Area. The NAHC provided a list of three tribes—the Yocha Dehe Wintun Nation, Kesner Flores, and the Cortina Band of Indians. The City contacted the three listed tribes and received a response from the Yocha Dehe Wintun Nation, who identified known cultural resources within the area of the General Plan Update; and the Iona Band of Miwok Indians, who were not originally on the NAHC list, but requested consultation.

Pursuant to SB 18 and AB 52, the City contacted the California Native American Heritage Commission (NAHC) again in December 2018 to request a search of its Sacred Lands File and to obtain a list of California Native American tribes whom the City would engage for the purposes of avoiding, protecting, and/or mitigating impacts on cultural resources. NAHC provided the City with a list of three California Native American tribes to contact in accordance with SB 18 and AB 52 –the Yocha Dehe Wintun Nation, the Kletsel Dehe Band of Wintun Indians, and the United Auburn Indian Community of the Auburn Rancheria. The City contacted the three listed tribes, per SB 18 and AB 52, providing information about the planning process and inviting them to initiate consultation if desired. The City received one response from the Yocha Dehe Wintun Nation, who requested consultation. City staff contacted Yocha Dehe Wintun Nation on June 19, 2020. Representatives from the Yocha Dehe Wintun Nation agreed that the City may provide

Proposed Plan and EIR documents to the tribe as part of the general distribution beginning on July 8, 2020 and set up a meeting soon thereafter to complete the consultation. Results of the consultation will be included in the Final EIR. Correspondence related to tribal consultation is included as Appendix C of this EIR.

A search of the Native American Heritage Commission (NAHC) Sacred Lands File for the Planning Area in December 2018 had negative results. However, the absence of specific resources information in the Sacred Lands File does not preclude the presence of Native American cultural resources in the Planning Area. As discussed above, the environmental setting of the Planning Area and the sites of known Native American archaeological resources in the region means that while the presence of Native American archaeological resources have not previously been reported in the Planning Area, there is potential for the Planning Area to contain tribal cultural resources from past Native American activities.

REGULATORY SETTING

Federal Regulations

National Historic Preservation Act and Section 106

The intent of the National Historic Preservation Act is to preserve historic and archaeological sites across the United States. The Act solidified the role of the National Parks Service as lead agency in the historic preservation program and created cooperative partners in the process, including the Advisory Council on Historic Preservation, State Historic Preservation Offices, and Tribal Historic Preservation Offices. Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their actions on historic properties. The goal of the Section 106 process is to identify historic properties potentially affected by the action in question, assess the effects, and provide ways to avoid, minimize, or mitigate any adverse effect that may occur to a historic property.

National Register of Historic Places

The NRHP is the nation's official list of historic places. The register is overseen by the National Park Service, and requires that a resource eligible for listing on the register meet one of several criteria at the national, state, or local level and also retain sufficient physical integrity of those features necessary to convey historic significance. Resources listed in the National Register are automatically listed in the California Register. The criteria are:

- Property is associated with events that have made a significant contribution to the broad patterns of our history.
- Property is associated with the lives of persons significant in our past. Eligible properties based on this criterion are generally those associated with the productive life of the individual in the field in which it achieved significance.
- Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- Property has yielded, or is likely to yield, information important to prehistory or history.

In addition to meeting at least one of these four criteria, listed properties must also retain sufficient physical integrity of those features necessary to convey historic significance. The register has identified the following seven aspects of integrity: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association. Properties are nominated to the register by the State Historic Preservation Officer of the state in which the property is located, by the Federal Preservation Officer for properties under federal ownership or control, or by the Tribal Preservation Officer if on tribal lands.

Listing in the NRHP provides formal recognition of a property's historic, architectural, or archeological significance based on national standards used by every state. Once a property is listed on the NRHP, it becomes searchable in the NRHP's database of research information. Documentation of a property's historic significance helps encourage preservation of the resource. Listing in the NRHP provides incentives to property owners such as: federal preservation grants for planning and rehabilitation federal investment tax credits, preservation easements to nonprofit organizations, international building code fire and life safety code alternatives, state tax benefits, and grant opportunities. The Federal Tax Incentive Program encourages private sector rehabilitation of historic buildings and is a successful and cost-effective community revitalization program, which generates jobs and creates moderate and low-income housing in historic buildings. Listing does not lead to public acquisition or require public access. In addition, listing does not place any obligations on the private property owners; and there are no restrictions on use, treatment, transfer, or disposition of private property. Two resources within the Planning Area are listed on the NRHP: the Jackson Fay Brown House at 6751 Maine Prairie Road and the Dixon Carnegie Library at 135 E. B Street.

National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970. NEPA created an environmental review process requiring federal agencies to consider the effects of their actions on the environment. Under NEPA, all federal agencies must carry out their regulations, **policies, and programs in accordance with NEPA's policies for environmental protection, including project compliance with Section 106 of the National Historic Preservation Act**, as previously discussed.

National Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) was passed in 1990 to **provide for the protection of Native American graves. The act conveys to Native American's** demonstrated lineal descent, the human remains, including the funerary or religious items, that are held by federal agencies and federally supported museums, or that have been recovered from federal lands. NAGPRA makes the sale or purchase of Native American remains illegal, whether or not they were derived from federal or Native American lands.

State Regulations

California Historic Resources

OHP offers four different registration programs, including the California Historical Landmarks, California Points of Historical Interest, CRHR, and the NRHP. Each registration program is unique in the benefits offered and procedures required. If a resource meets the criteria for registration, it

may be nominated by any individual, group, or local government to any program at any time. Resources do not need to be locally designated before being nominated to a state program nor do they need to be registered at the state level before being nominated to the National Register. The California Register includes buildings, the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Resources on the California Register have met criteria for designation or have been included due to their presence on the NRHP, the State Historical Landmark program, or the California Points of Historical Interest program. In total, over 300 properties are listed on the OHP, as listed in Appendix C.

State Historical Landmark Program

California Historical Landmarks are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of several criteria. The resource must be the first, last, only, or most significant of its type in the state or within a large geographic region; associated with an individual or group having a profound influence on California history; or be a prototype of, or outstanding example of, a period, style, architectural movement, or construction, or be one of the more notable works or best surviving work in a region of a pioneer, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest are sites, buildings, features, or events of local (city or county) significance, having anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Criteria are the same as those for Historical Landmarks, but directed to local areas. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a Landmark and a Point; if a Point is subsequently granted status as a Landmark, the Point designation will be retired.

California Environmental Quality Act

According to CEQA, a **“historical resource” includes, but is not limited to, any object, building, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.** CEQA mandates that lead agencies consider a resource **“historically significant” if it meets the criteria for listing in the CRHR.** Such resources meet this requirement if they (1) are associated with events that have made a significant contribution to the broad patterns of California history, (2) are associated with the lives of important persons in the past, (3) embody distinctive characteristics of a type, period, region, or method of construction, and/or (4) represent the work of an important creative individual or possesses high artistic value. These criteria mimic the criteria utilized to determine eligibility for the National Register.

In addition, Public Resources Code Section 21083.2 and CEQA Guidelines Section 15064.5(f) recognize that historical or unique archaeological resources other than potential Native American burials may be accidentally discovered during project construction. This guideline recommends that immediate evaluation defined by qualified archaeologists be included in mitigation measures. This guideline also recommends that if the find is determined to be a historical or unique archaeological resource, that contingency funding and time allotments sufficient to allow for implementation and avoidance measures be available.

California Government Code Section 65040.2(g)

California Government Code Section 65040.2(g) provides guidelines for consulting with Native American tribes for the following: (1) the preservation of, or the mitigation of impacts on places, features, and objects described in Sections 5097.9 and 5097.993 of the Public Resources Code; (2) procedures for identifying through NAHC the appropriate California Native American tribes; (3) procedures for continuing to protect the confidentiality of information concerning the specific identity, location, character, and use of those places, features, and objects; and (4) procedures to facilitate voluntary landowner participation to preserve and protect the specific identity, location, character, and use of those places, features, and objects.

Senate Bill 18 (SB 18)

Signed into law in September 2004, and effective March 1, 2005, SB 18 permits California Native American tribes recognized by the NAHC to hold conservation easements on terms mutually satisfactory to the tribe and the landowner. The term “California Native American tribe” is defined as “a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC.” The bill also requires that, prior to the adoption or amendment of a city or county’s general plan, the city or county consult with California Native American tribes for the purpose of preserving specified places, features, and objects located within the city or county’s jurisdiction. SB 18 also applies to the adoption or amendment of specific plans. This bill requires the planning agency to refer to the California Native American tribes specified by the NAHC and to provide them with opportunities for involvement.

The City contacted the NAHC in March 2015 to obtain a list of California Native American tribes whom the City should engage for the purposes of avoiding, protecting, and/or mitigating impacts on cultural resources pursuant to SB 18. The City contacted the five tribal contacts provided by the NAHC in April 2015, and received two responses, as discussed in the Physical Setting section above. Tribal correspondence is also provided in Appendix C.

Assembly Bill 52 (AB 52)

AB 52, passed in 2014, establishes a consultation process with all California Native American Tribes on the NAHC List and federally non-recognized tribes. It establishes a new class of resources: tribal cultural resources, and consideration is now given to Tribal Cultural Values in the determination of project impacts and mitigation. It requires Tribal notice and meaningful consultation (Public Resources Code 21080.3.2(b)). Consultation ends when Parties either agree to mitigation measures or avoid a significant effect on tribal cultural resources. The City contacted the NAHC in March 2015 to obtain a list of California Native American tribes who have requested the opportunity to consult on projects per AB 52. The NAHC provided a list of five contacts, whom the City contacted in April 2015. The City received two responses, as discussed in the Physical Setting section above and provided in Appendix C.

Tribes must submit a written request to the lead agency requesting to be notified of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe. (§21080.3.1(b)(1)). The Lead agency must submit written notification to the tribe that requested notification within 14 days of determining that an application for a project is complete – notification must include project description and proposed location. (§21080.3.1(d)). Tribes must

submit written response within 30 days of receiving notification requesting consultation. Tribes must designate a lead contact person. If no designation, or if a tribe designates multiple lead contacts, the lead agency shall consult with NAHC's SB 18 list contact person. (§21080.3.1(b)(2)). Consultation shall begin prior to the release of the environmental document. (§21080.3.1(b)). Consultation shall include discussion regarding alternatives, recommended mitigation measures, or significant effects, but only if the tribe requests consultation regarding these issues. (§21080.3.2(a)).

Consultation may include discussion concerning the type of environmental review necessary (in circumstances where consultation begins prior to that determination), the significance of tribal cultural resources, **the significance of a project's impacts on tribal cultural resources**, and, if necessary, project alternatives or mitigation measures. (§21080.3.2(a)). Any mitigation measures agreed upon during consultation must be recommended for inclusion in the environmental document. (§21082.3 (a)). Consultation shall be concluded when either occurs (§21080.3.2(b)):

- a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- b. A party, acting in good faith and after reasonable effort, concludes that a mutual agreement cannot be reached.

A “tribal cultural resource” is one of the following (§21074):

- a. A site, feature, place, cultural landscape, sacred place, and object with cultural value to the tribe that is either (1) included or determined to be eligible for inclusion in the California Register of Historical Resources or (2) included in a local register of historical resources; or
- b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying these criteria, the lead agency must consider the significance of the resource to a California Native American tribe.

California Public Resources Code

Sections 5097–5097.6 of the California Public Resources Code outline the requirements for cultural resource analysis prior to the commencement of any construction project on state lands. The state agency proposing the project may conduct the cultural resource analysis or they may contract with the State Department of Parks and Recreation. In addition, this section stipulates that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands and provides for criminal sanctions. This section was amended in 1987 to require consultation with the California NAHC whenever Native American graves are found. Violations for the taking or possessing remains or artifacts are felonies.

The Public Resources Code Section 5097.9-991, regarding Native American heritage, outlines protections for Native American religion from public agencies and private parties using or

occupying public property. Also protected by this code are Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property.

California Health and Safety Code

The California Health and Safety Code Section 7050.5 states that if human remains are discovered, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition. If the Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC. This regulation is applicable to any project where ground disturbance would occur. Section 7052 of the California Health and Safety Code makes the willful mutilation, disinterment, or removal of human remains a felony.

Local Regulations

Downtown Dixon Revitalization Plan

The Downtown Dixon Revitalization Plan was adopted in 1996 and outlines the following vision for the Downtown area:

- Street improvements, such as new trees, benches, signs, and colorful banners. Reducing vacancies in buildings and refreshing storefronts with paint, new signs, awnings, and flowers, and in some cases, restoring the old brick facades and detailed woodwork.
- Providing activities for residents and visitors downtown, such as restaurants, outdoor patios, and a historic walking tour.
- Creating a plaza at the corner of First and A streets surrounded by eateries and shops. Locating parking conveniently along the streets and in nearby parking lots.
- Foster existing events and create new events Downtown, like May Fair and Lamb Town, concerts, Art in the Park, sidewalk sales, farmers market, and a wide variety of seasonal promotions that are fun for families.
- **Expand the Women's Improvement Club Park and create a living museum in the Victorian house north of C street.** Provide evening activities like movies at the little theater or outdoor movies projected on the walls of the new buildings in one of the plazas.
- The Downtown Business Association will coordinate promotions and other resources to continue physical improvements to the buildings and businesses Downtown. It is envisioned that the Association, after several years of City and Agency help, will have its own part time staff person to help coordinate the events and promotions.
- Downtown is truly a vital part of Dixon.

Goals, policies, and implementation actions are laid out that help Dixon to achieve this vision. Specific aspect of the Downtown Revitalization Plan that are relevant to the protection of historic, cultural, and tribal cultural resources include programs to encourage business owners to make façade improvements and to maintain their properties; preserving and restoring historic buildings; and developing programs to education the public about historic buildings, such as plaques, a booklet, a walking tour, or a historical museum located Downtown. Additionally, policies

addressing new development call for integration into the existing historic character and small-town feel of the Downtown, through building materials, scale, and architectural details.

City Downtown Dixon Business Association Design Guidelines

In 2007, the City Council adopted the Downtown Dixon Association Design Guidelines, a set of recommendations for the preservation and visual improvement of the Downtown. One of the main priorities of the Guidelines is to ensure that new development Downtown is “visually compatible with the existing traditional building, i.e. late 19th century to early 20th century California commercial style.” The Design Guidelines are organized into six chapters: architectural guidelines, site planning, storefront design guidelines, parking and circulation design guidelines, sign design guidelines, and streetscape design guidelines.

The Design Guidelines’ objectives are centered on eight themes:

- Architectural style;
- Rhythm of façade widths;
- Perceived scale of structures;
- Distinction between upper and lower floors;
- Building heights;
- Pedestrian-oriented activity at the sidewalk and amenity areas;
- Predominantly transparent ground floor facades in commercial and retail areas; and
- Existing façade renewal.

Dixon Municipal Code

Chapter 16.10 Historical Building Code

Chapter 16.10 of the Dixon Municipal Code adopts the 2016 California Historical Building Code (CHBC), Title 24, California Code of Regulations, Part 8. The intent of the CHBC is to provide means for the preservation of the historical value of qualified historical buildings or structures and, concurrently, to provide reasonable safety from fire, seismic forces or other hazards for occupants of these buildings or structures, and to provide reasonable availability to and usability by, the disabled. The CHBC supplants the Uniform Building Code (UBC) and allows greater flexibility in the enforcement of code requirements.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- Criterion 2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
- Criterion 3: Disturb any human remains, including those interred outside of formal cemeteries; or
- Criterion 4: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native Tribe and that is:
 - i) Listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
 - ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

METHODOLOGY AND ASSUMPTIONS

The analysis of potential cultural resources impacts is based upon a comprehensive records search conducted at the NWIC, located at Sonoma State University. The records search included a review of all recorded historic and prehistoric cultural resources within the Planning Area. In addition, the California State Historic Property Data File (HRI), which includes the NRHP, California Historical Landmarks, and California Points of Historical Interest was examined. The analysis also included a search of the NAHC Sacred Lands File, Tribal outreach, review of City of Dixon documents, the University of California Museum of Paleontology Specimen Search, State regulations, and Proposed Plan goals, policies, and actions.

RELEVANT POLICIES AND ACTIONS

The following policies and implementing actions of the Proposed Plan are relevant to historic, cultural, and tribal cultural resource impacts as defined by the significance criteria above:

Economic Development

- E-6.1 Recognize that protecting local historic character and providing a vital mix of daytime and evening uses is integral to the economic success of Downtown Dixon.

Land Use and Community Character

- LCC-2.2 **Encourage compatible new development that respects and complements Dixon's** historic context and natural environment.
- LCC-3.1 Foster the preservation, restoration, and compatible reuse of historically significant structures and sites.
- LCC-3.2 Maintain a dialogue with local Native American groups regarding cultural resources in Dixon.
- LCC-3.3 Require cultural resource assessments prior to the approval of development proposals on properties located in archaeologically sensitive areas. Assessments shall include a records search of the California Historical Resources Information System database at the Northwest Information Center and a pedestrian survey of the site to determine the potential for archaeological, paleontological, and historic resources as well as Native American remains.
- LCC-3.4 Require developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation.
- LCC-3.A Maintain and periodically update an historic resources inventory.
- LCC-3.B Develop an historic preservation plan, guidelines and supporting ordinances. The plan should consider incentives for the restoration and preservation of qualified historic buildings, such as granting tax abatements through a Mills Act Program or establishing an annual historic preservation award.
- LCC-3.C Provide information on incentives for the restoration for designated historic properties, landmarks or districts to property owners and the public.
- LCC-3.D Maintain a map sensitive archaeological sites in Dixon and use it to inform project applicants of the need for cultural resource assessments.
- LCC-3.E Partner with the Dixon Historical Society, the Dixon Library and other community groups to develop a historic buildings walking tour, with signage identifying historical attractions.

LCC-4.3 Encourage infill development, adaptive reuse, and the restoration of historic buildings to revitalize Downtown Dixon as a center of community activity.

IMPACTS

Impact 3.5-1 Implementation of the Proposed Plan could cause a substantial adverse change in the significance of a historical resource, as defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historic resource would be materially impaired (Guidelines Section 15064.5). (*Less than Significant*)

Implementation of the Proposed Plan would not directly result in the destruction of or damage to historical resources; however, future development and redevelopment permitted under the Proposed Plan could result in changes that affect historic resources. Changes could include demolition, alterations, and accidents caused by construction. The impact of such activities would be considered significant if they were to cause a substantial adverse change to the historical resources as defined by CEQA Guidelines Section 15064.5.

Three major change areas are identified in the Proposed Plan: the Northeast Quadrant Specific Plan Area, the Southwest Dixon Specific Plan Area, and Downtown Dixon. The Northeast Quadrant and Southwest Dixon specific plan areas are currently vacant. Therefore, development of these areas would have no impact on historic resources. However, as most historic resources in the Planning Area are located within the Downtown area, potential exists for development under the Proposed Plan to impact those resources. The Proposed Plan encourages infill development and most vacant parcels are located close to the Historic Downtown, which is likely to attract foot traffic and increase the desirability of redeveloping those parcels. The renovation or rehabilitation of underutilized historic buildings may also occur under implementation of the Proposed Plan. At the time development or redevelopment projects are proposed, the project-level CEQA document would need to identify potential impacts on known or potential historic sites and structures. The CEQA Guidelines require a project that will have potentially adverse impacts on historical resources to conform to the Secretary of the Interior's **Standards for the Treatment of Historic Properties**.

The Proposed Plan includes policies and actions that would minimize or avoid impacts on historical resources by requiring the preservation and maintenance of such resources (policies E-6.1 and LCC-3.1), including incentives for adaptive reuse and façade preservation (Action LCC-3.C). LCC-3.B calls for the development of a historic preservation plan, guidelines and supporting ordinances, which would further protect historic resources. Action LCC-3.A protects historic resources by ensuring records of existing resources are accurate and easily accessible.

Therefore, the impact of implementation of the Proposed Plan on historical resources would be less than significant with implementation of existing State regulations and the proposed policies and actions referenced above.

Mitigation Measures

None required.

Impact 3.5-2 Implementation of the Proposed Plan could cause an adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. (*Less than Significant*)

Prehistoric and historic archaeological resources have been found in the Planning Area, and there are sites in the Planning Area that may be sensitive for unrecorded resources, most notably anywhere there has been under occupation or use for at least 45 years. Since the Planning Area does not contain any natural waterbodies, such as lakes, rivers, or creeks, the likelihood of discovering archaeological resources commonly found along waterways is low.

Future development projects or public works activities allowed under the Proposed Plan may involve grading, excavation, overland vehicle travel, or other ground-disturbing activities, or could facilitate public access to archaeological sites, which could disturb or damage unknown archaeological resources. The impact of such activities would be considered significant if they were to cause a substantial adverse change to the archaeological resources as defined by CEQA Guidelines Section 15064.5.

Although implementation of the Proposed Plan may result in actions that could adversely affect archaeological resources, Proposed Plan policies and actions would minimize or avoid impacts by requiring the protection and preservation of such resources. In accordance with Public Resources Code Section 21083.2 and CEQA Guidelines Section 15064.5(f), which recognize that historical or unique archaeological resources may be accidentally discovered during project construction, Policy LCC-3.3 would require the City to conduct a search of the California Historical Resources Information System database at the NWIC and a pedestrian survey of the site to determine the potential for archaeological resources before approving any project that may adversely affect archaeological sites. Policy LCC-3.4 requires developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation. Proposed Action LCC-3.D calls for the City to maintain a map sensitive archaeological sites in Dixon and use it to inform project applicants of the need for cultural resource assessments.

The impact of implementation of the Proposed Plan on archaeological resources would be less than significant, with implementation of existing State regulations and the proposed policies referenced above.

Mitigation Measures

None required.

Impact 3.5-3 Development allowed by the Proposed Plan would have the potential to disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant*)

Human remains, particularly those interred outside of formal cemeteries, could be disturbed during grading, excavation, or other ground-disturbing activities associated with future development or redevelopment projects allowed under the Proposed Plan. While no Native American resources were identified in the NWIC records search conducted in March 2015, when conducting outreach to the Native American tribes on the NAHC contact list, the Yocha Dehe Wintun Nation was aware

of known tribal cultural resources within the Planning Area. However, the Yocha Dehe Winton Nation has not specifically identified the presence of burial sites within the Planning Area.

The treatment of Native American human remains is regulated by Public Resources Code Section 5097.98, as amended by Assembly Bill 2641, which addresses the disposition of Native American burials, protects remains, and appoints the NAHC to resolve disputes. In addition, California Health and Safety Code Section 7050.5 includes specific provisions for the protection of human remains in the event of discovery, and Section 7052 makes the willful mutilation, disinterment, or removal of human remains a felony. The Health and Safety Code is applicable to any project where ground disturbance would occur.

Policies and actions within the Proposed Plan would further reduce the potential impact on archaeological and tribal cultural resources, including human remains. The exact location of human remains, if any exist within the Planning Area, is confidential information. However, Proposed Plan Policy LCC-3.2 aims to maintain a dialogue with local Native American groups regarding cultural resources in Dixon. Tribes may be able to provide more information if burial sites are threatened. Additionally, proposed Policy LCC-3.3 requires cultural resource assessments prior to the approval of development proposals on properties located in archaeologically sensitive areas. Assessments shall include a records search of the California Historical Resources Information System database at the Northwest Information Center and a pedestrian survey of the site to determine the potential for Native American remains. Subsequently, proposed Policy LCC03.4 require developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation, which would have to be consistent with State laws regarding the discovery and treatment of Native American human remains. Proposed Action LCC-3.D calls for the City to maintain a map of sensitive archaeological sites in Dixon and use it to inform project applicants of the need for cultural resource assessments.

The impact of implementation of the Proposed Plan on human remains would therefore be less than significant with implementation of existing State regulations as well as policies and actions within the Proposed Plan.

Mitigation Measures

None required.

- Impact 3.5-4 Implementation of the Proposed Plan could cause an adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:
- (a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
 - (b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (*Less than Significant*)

Implementation of the Proposed Plan would not directly result in physical construction that could impact tribal cultural resources. Future development allowed under the Proposed Plan could result in indirect impacts through grading, overland vehicle travel, or other ground-disturbing activities, or through facilitation of public access to culturally significant sites. The impact of such activities would be considered significant if they were to cause a substantial adverse change to the resources as defined by CEQA Guidelines Section 15064.5.

The 2015 NWIC records request did not identify any tribal cultural resources within the Planning Area. However, through the tribal consultation process, one tribe from the NAHC contact list, the Yocha Dehe Wintun Nation, was aware of known cultural resources within the Planning Area. While the exact location of these resources is not public information, consultation with the tribes per SB 18 and AB 52 provides the opportunity for Native American tribes to identify if known resources could be compromised by implementation of the Proposed Plan, as well as requirements to agree to mitigation measures or avoid a significant effect on tribal cultural resources. The Lone Band of Miwok Indians also responded to the NAHC outreach to request consultation but did not identify known tribal cultural resources within the Planning Area. Ground disturbing activities could result in the discovery of additional, unrecorded tribal cultural resources.

In addition to consultation with tribes required by State law, policies in the Proposed Plan would minimize or avoid potential impacts on currently known or unknown tribal cultural resources that may be encountered in the future and would promote coordination with Native American tribes (Policy LCC-3.2). Policy LCC-3.3 requires cultural resource assessments prior to the approval of development proposals on properties located in archaeologically sensitive areas. Assessments shall include a records search of the California Historical Resources Information System database at the Northwest Information Center and a pedestrian survey of the site to determine the potential for archaeological resources as well as Native American remains. Policy LCC-3.4 requires developers to halt all work if cultural resources are encountered during excavation or construction of a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and

mitigation. Proposed Action LCC-3.D states that the City will maintain a map of sensitive archaeological sites in Dixon and use it to inform project applicants of the need for cultural resource assessments.

The impact of implementation of the Proposed Plan on Native American tribal cultural resources would therefore be less than significant due to State laws and with implementation of the proposed policies and actions referenced above.

Mitigation Measures

None required.

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3.6 Energy, Climate Change, and Greenhouse Gas Emissions

This section assesses potential environmental impacts related to energy, greenhouse gases (GHGs), and climate change from future development under the proposed Dixon General Plan Update. This section describes existing energy usage, GHG emissions, and sources of GHGs in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There was one response to the NOP regarding topics addressed in this section of the EIR. Yolo-Solano Air Quality Management District stated that the EIR should include a climate change discussion that examines whether growth in Dixon would cause GHG emissions that would conflict with GHG reduction goals identified by the State. As part of this discussion, Yolo-Solano Air Quality Management District requests that the EIR identify any measures or proposed policies that will be put in place to limit overall GHG emissions.

Environmental Setting

PHYSICAL SETTING

Energy

California is the second largest consumer of energy in the United States. However, California's per capita energy consumption is relatively low, due in part to mild weather that reduces energy **demand for heating and cooling and in part to the State's energy efficiency programs and standards**. As of 2016, petroleum and natural gas supply the majority of the energy consumed in California (U.S. Energy Information Administration, 2017).

The concept of sustainable energy generally refers to renewable energy sources, such as solar power, wind power, wave power, geothermal power, tidal power, and biomass, as well as technologies that improve energy efficiency. Energy conservation refers to efforts made to reduce energy consumption in order to preserve future resource capacities and reduce pollutants. Energy conservation can be achieved through increased energy efficiency, decreased energy consumption, and/or reduced consumption from conventional, nonrenewable energy sources.

State Energy Conditions

Electricity

In 2017, California used over 292,000 gigawatt-hours of electricity (California Energy Commission, 2018). Electricity use in California for differing land uses varies substantially by the type of uses in a building, type of construction materials, and the efficiency of electricity-consuming devices.

Because of the State's energy efficiency standards, as well as efficiency and conservation programs, California's per-capita electricity use has remained stable for more than 30 years while the national average steadily increased. The California Energy Commission's (CEC's) 2017 Integrated Energy Policy Report Update estimates that electricity consumption will grow by up to 1.59 percent per year between 2017 and 2030, with peak demand growing at an average of 1.52 percent annually over the same period. Projections for energy consumptions have increased since 2016, largely due to the increasing use of electric vehicles and the growing industrial sector (California Energy Commission, 2018).

Of electricity generated in California in 2017, 43.4 percent is from natural gas, 17.9 percent from hydroelectric, 8.7 percent is from nuclear power plants, and 11.8 percent is from solar production. Other sources include coal-fired power plants and other renewable energy sources, such as wind turbines. California also imports electricity from out of state (California Energy Commission, 2018).

Natural Gas

In 2016, California used approximately 13 billion therms of natural gas (Chris, et al., 2018). California is the second largest natural gas consumer in the United States, representing more than 10 percent of the total national natural gas consumption. In 2016, residential uses accounted for **the greatest amount of the state's natural gas demand (33.5 percent)**, followed by industrial uses (27.7 percent), mining (20.7 percent), and commercial uses (15.4 percent) (Leon, Orta, Puglia, Dixon, & Gulliksen, 2017). California remains heavily dependent on natural gas to generate electricity, which comprise roughly 43 percent of **the state's natural gas demand** (California Energy Commission, 2018).

The CEC's 2017 Integrated Energy Policy Report forecasts that natural gas consumption by end users (excluding electricity generation) is expected to grow by up to 0.77 percent annually through 2030 (Chris, et al., 2018).

Petroleum

In 2016, California used approximately 672 million barrels of petroleum, predominantly as transport fuels in products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel (U.S. Energy Information Administration, 2017). However, due to the rising costs of these fuels and the enforcement of federal Renewable Fuel Standard (RFS) and the California Low Carbon Fuel Standard (LCFS), California is diversifying its transportation energy sources, increasing fuel efficiency, and adapting land use and development to reduce energy use for transportation.

Local Energy Conditions

Pacific Gas & Electric (PG&E), the provider for electricity and natural gas in the Planning Area, has a diverse power production portfolio, which consists of a variety of renewable and non-renewable sources. Energy production typically varies by season and by year depending on hydrologic conditions. Regional electricity loads also tend to be higher in the summer because the higher summer temperatures drive increased demand for air-conditioning. In contrast, natural gas loads are higher in the winter because the colder temperatures drive increased demand for natural gas heating. In 2018, approximately 80 percent of PG&E's electric power mix came from GHG-free resources including nuclear, large hydroelectric, and renewable sources. An average of 39 percent of PG&E's electricity in 2018 came from renewable sources including solar, wind, geothermal, biomass, and hydroelectric sources (Pacific Gas & Electric, 2019).

Solano County consumes a small amount of energy relative to the state. Electricity and natural gas usage are individually about 1 and 2 percent of the statewide total, respectively (California Energy Commission, 2019). Gasoline and diesel fuel usage are both about 2 percent of the statewide total usage (California Air Resources Board, 2015). For reference, Solano County is home to about 1 percent of California residents (U.S. Census Bureau, 2018). As a whole, Solano County consumed 3,226 gigawatt-hour (GWh) of electricity and 243 million therms of natural gas in 2018. Table 3.6-1 provides a summary of total and per capita Solano County energy consumption in 2018. Data provided by CARB also identifies gasoline and diesel fuel consumption for the Solano County sub-area within the Sacramento Valley, giving a clearer picture of energy consumption and potential GHG emission in the Planning Area. The Solano County Sacramento Valley sub-area consumed 246 million gallons of gasoline and 76 million gallons of diesel fuel in 2018, both less than 1 percent of the statewide total usage.

Table 3.6-1: Solano County Total and Per Capita Energy Consumption (2018)^a

	Mass	Million BTUs	Per Capita BTUs
Electricity	3,226 GWh	11,013,564	24,660,361
Natural Gas	243 million therm	24,294,168	54,396,829
Gasoline	656 million gallons	80,270,784	179,733,512
Diesel	153 million gallons	21,188,970	47,444,012

Notes:

BTU = British thermal unit

kWh = Kilowatt-hours

GWh = Gigawatt-hours

3,414 BTU per 1kWh

99,976 BTU per Therm

122,364 BTU per 1 gallon gasoline (average of 120,388–124,340)

138,490 BTU per 1 gallon diesel

Solano County 2018 Population = 446,610

a. As data provided by the CEC for electricity and natural gas consumption and data provided by CARB for gasoline and diesel fuel consumption are currently only available at the county level, energy consumption data for the City of Dixon and the Planning Area have not been provided

Sources: CEC, 2019; California Air Resources Board, 2019; U.S. Census Bureau, 2018; U.S. Department of Energy, 2014.

Greenhouse Gas Emissions

The Greenhouse Effect and Greenhouse Gases

Greenhouse gases (GHGs) are gases that trap heat in the atmosphere and regulate the earth's temperature. This effect, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide and water vapor, followed by methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). **These are released into the earth's atmosphere** through a variety of natural processes and human activities. Key points about GHGs include the following:

- Carbon dioxide and nitrous oxide are byproducts of fossil fuel combustion;
- Nitrous oxide is also associated with agricultural operations such as fertilization of crops;
- Methane is commonly created by off-gassing from agricultural practices (e.g. keeping livestock), composting and landfill operation;
- Chlorofluorocarbons were widely used as refrigerants, propellants, and cleaning solvents, but their production has been mostly eliminated by international treaty;
- Hydrofluorocarbons are now used as a substitute for chlorofluorocarbons in refrigeration and cooling; and
- Perfluorocarbons and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth’s energy balance. This is expressed in terms of a global warming potential (GWP), with carbon dioxide being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger with a GWP of 23,900. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of carbon dioxide equivalents (CO₂e).

California Contributions to Greenhouse Gas Emissions

In 2017, the United States produced 6,457 million metric tons of CO₂e (MMTCO₂e) (U.S. Environmental Protection Agency, 2019). The primary GHG emitted by human activities in the United States was CO₂, representing approximately 82 percent of total GHG emissions. The largest source of CO₂, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93 percent of the CO₂ emissions and 86 percent of overall GHG emissions.

According to the 2017 GHG inventory compiled by the California Air Resources Board (CARB) California emitted 424 MMTCO₂e of GHGs, including emissions resulting from out-of-state electrical generation. While transportation is the primary contributor to GHG emissions in California, other sources include industrial uses, electric power production from both in-state and out-of-state sources, agriculture and forestry, and commercial and residential activities (California Air Resources Board, 2019). Sources of GHG emissions in California and their respective contributions in 2017 are presented in Table 3.6-2: GHG Sources in California.

Table 3.6-2: GHG Sources in California (2017)

Source Category	Annual GHG Emissions (MMTCO ₂ e)	Percent of Total
Transportation	169.9	40%
Electric Power	62.4	15%
Industrial	89.4	21%
Commercial & Residential	41.1	10%
Agriculture	32.4	8%
High GWP	19.9	5%
Recycling & Waste	8.9	2%
Total	424.0	100.0

Source: CARB, 2019.

Local GHG Emissions

For the General Plan update, an updated GHG emissions inventory was conducted for the Planning Area using best available data (see Appendix B for more detailed inventory methodology) and modeled for a baseline year of 2018. The inventory found that the Planning Area’s emissions totaled 216,056 MTCO₂e. As shown in Table 3.6-3: 2018 GHG Emissions Summary (MTCO₂e), energy was the largest source of emissions, generating 96,203 MTCO₂e or 45 percent of total emissions. Mobile sources were the second largest source of emissions, generating approximately 71,383 MTCO₂e, or 33 percent of total emissions. Waste was the third largest source of emissions, generating 32,412 MTCO₂e, or 15 percent of the total.

Table 3.6-3: 2018 GHG Emissions Summary, Planning Area (MTCO_{2e})

Category	Annual GHG Emissions (MTCO _{2e})	Percent of Total
Area	3,058	1.4%
Energy	96,203	44.5%
Mobile	71,383	33.0%
Waste	32,412	15.0%
Water	13,001	6.0%
Total	216,056	100.0%

Note: Values may not add due to rounding.

Source: Dyett & Bhatia, 2019.

Climate Change

Climate change refers to a change in the average global climate that may be measured by wind patterns, storms, precipitation, and temperature. The term climate change is often used interchangeably with the term global warming. Global warming refers to an average increase in the **temperature of the atmosphere near the Earth's surface, which can contribute to changes in global climate patterns.** However, rising temperatures are just one aspect of climate change.

The U.S. Environmental Protection Agency's (EPA's) indicators of climate change include:

- Greenhouse Gases. The amount of GHGs emitted into the atmosphere through human activities, the concentrations of these gases in the atmosphere, and how emissions and concentrations have changed over time.
- Weather and Climate. Frequency of heat waves, increased drought conditions, increased average precipitation and shifting weather patterns, and the intensity of tropical storms.
- Oceans. Increased ocean heat affecting water temperature, sea level, and currents; changes in sea level; increased ocean acidity affecting marine organisms.
- Snow and Ice. Reduced Arctic sea ice, diminished glaciers, decreased time that lakes stay frozen, decreased snow cover and snowpack.
- Health and Society. Heat-related illnesses, increased length of growing season reflecting earlier spring warming and later fall/winter frosts, prolonged allergy seasons.
- Society and Ecosystems. Shifts in plant hardiness zones reflecting higher winter temperatures, changes in bird migration patterns as a result of temperature variability (U.S. Environmental Protection Agency, 2016).

Potential Effects of Human Activity on Climate Change

Among scientists, global climate change is now a widely accepted phenomenon. Scientific societies and organizations worldwide have endorsed the Intergovernmental Panel on Climate Change (IPCC) position of January 2001, which states: “An increasing body of observations gives a collective picture of a warming world and other changes in the climate system. There is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human

activities.” Since 1976, every year has been warmer than the 20th-century average temperature. In 2015, the average temperature across global land and ocean surfaces was 1.62°F (0.90°C) above the twentieth-century average (National Oceanic and Atmospheric Administration (NOAA), 2017). The years 2015, 2016, 2017, 2018 are the four warmest years on record in all major global temperature datasets. To date, no scientific body of national or international standing has maintained a dissenting opinion; the last was the American Association of Petroleum Geologists, which in 2007 updated its 1999 statement rejecting the likelihood of human influence on recent climate with its current non-committal position (American Association of Petroleum Geologists (AAPG), 2007).

Some of the potential impacts in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, higher O₃ days, larger forest fires, and more drought years. Several recent studies have attempted to explore the possible negative consequences that climate change, if left unchecked, could have in California. These reports acknowledge that climate scientists’ understanding of the complex global climate system and the interplay of the various internal and external factors that affect climate change remains too limited to yield scientifically valid conclusions on such a localized scale. Substantial work has been done at the international and national levels to evaluate climatic impacts, but far less information is available on regional and local impacts.

REGULATORY SETTING

Global climate change resulting from GHG emissions is an emerging environmental concern being raised and discussed at the international, national, and state levels. At each level, agencies are considering strategies to control emissions of gases that contribute to global warming.

Federal Regulations

Energy Policy and Conservation Act

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the EPA and National Highway Traffic Safety Administration (NHTSA) are responsible for establishing additional vehicle standards. In 2012, new Corporate Average Fuel Economy (CAFE) standards were approved to increase the fuel economy to 54.5 miles per gallon average for cars and light trucks by Model Year 2025 (U.S. Environmental Protection Agency, 2012). Fuel economy is determined based on each **manufacturer’s average fuel economy for the fleet of vehicles available for sale in the United States.**

The regulations also include targeted incentives to encourage early adoption and introduction into the marketplace of advanced technologies to dramatically improve vehicle performance, including:

- Incentives for electric vehicles, plug-in hybrid electric vehicles, and fuel cell vehicles;
- Incentives for hybrid technologies for large pickups and for other technologies that achieve high fuel economy levels on large pickups;
- Incentives for natural gas vehicles; and

- Credits for technologies with potential to achieve real-world GHG reductions and fuel economy improvements that are not captured by the standards test procedures.

Energy Star Program

Energy Star is a joint program of the EPA and the U.S. Department of Energy (DOE). The program establishes criteria for energy efficiency for household products and labels energy efficient products with the Energy Star seal. For example, homes can earn the Energy Star certification if they are verified to meet **the EPA’s guidelines for energy efficiency**. To earn the Energy Star certification in California, site-built or modular homes must meet energy efficiency the performance target as determined by energy modeling through a CEC-approved software program, construct the home using the preferred set of efficiency measures, and verify that the home meets every item on the National Rater Checklist through a Rater. Energy Star certified homes typically feature more efficient walls, windows, air ducts, HVAC system, and lighting and appliances that allow homeowners to operate their homes using less power and resources.

Massachusetts vs. EPA

On April 2, 2007, in *Massachusetts v. EPA*, the U.S. Supreme Court directed the EPA Administrator to determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the EPA Administrator is required to follow the language of Section 202(a) of the Clean Air Act (CAA). On December 7, 2009, the Administrator signed a final rule with two distinct findings regarding GHGs under Section 202(a) of the CAA:

- The Administrator found that elevated concentrations of GHGs—CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆—in the atmosphere threaten the public health and welfare of current and **future generations. This is referred to as the “endangerment finding.”**
- The Administrator further found the combined emissions of GHGs—CO₂, CH₄, N₂O, and HFCs—from new motor vehicles and new motor vehicle engines contribute to the GHG **air pollution that endangers public health and welfare. This is referred to as the “cause or contribute finding.”**

These two findings were necessary to establish the foundation for regulation of GHGs from new motor vehicles as air pollutants under the CAA.

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) set increased CAFE standards for motor vehicles and established other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (EISA Section 202);
- Appliance and Lighting Efficiency Standards (EISA Sections 301–325); and
- Building Energy Efficiency (EISA Sections 411–441).

This federal legislation requires ever-increasing levels of renewable fuels to replace petroleum. The EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that lay the foundation for achieving significant reductions of GHG emissions from the use of renewable fuels, for reducing imported petroleum, and encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- EISA expanded the RFS program to include diesel, in addition to gasoline.
- EISA increased the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- EISA established new categories of renewable fuel and set separate volume requirements for each one.
- EISA required the EPA to apply life-cycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

Carbon Pollution Standards and Clean Power Plan

On August 3, 2015, the EPA finalized the Carbon Pollution Standards, which established national limits on the amount of carbon pollution that new, modified, and reconstructed power plants would be allowed to emit. On the same date, the EPA also finalized the Clean Power Plan, setting national limits on carbon pollution from existing power plants.

State Regulations

Building Energy Efficiency Standards (Title 24) and CALGreen

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24 California Code of Regulations [CCR], Part 6) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption.

In 2007, Governor Schwarzenegger directed the California Building Standards Commission (CBSC) to work with State agencies on the adoption of green building standards for residential, commercial, and public building construction for the 2010 code adoption process. A voluntary version of the California Green Building Standards Code, referred to as CalGreen, was added to Title 24 as Part 11 in 2009. The 2010 version of CalGreen took effect January 1, 2011 and instituted

mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals.

The most recent CalGreen code was adopted in 2019 and became effective January 1, 2020. Under the 2019 CalGreen code, all new multifamily projects which provide residential parking to the occupants must prewire 10 percent of these spaces for future EV charging station infrastructure. Additionally, all residential developments will be required to adhere to the Model Water Efficient Landscape Ordinance (MWELO) and all new residential projects within 200 feet of a municipally supplied reclaimed water system must connect to that supply unit. The 2019 edition of CalGreen also requires new residential and non-residential projects to exceed Title 24 by 15 percent or 30 percent for Tier 1 and Tier 2, respectively.

The 2016 edition of CalGreen has been amended and adopted as Chapter 16.17 of the City of Dixon Municipal Code. The 2016 edition of CalGreen contains voluntary Tier 1 and Tier 2 levels, which are designed to exceed energy efficiency and other standards by 15 percent or 30 percent, respectively. Notably, CalGreen sets VOC content limits for architectural coatings, sealants, adhesives, and formaldehyde for residential and non-residential buildings and construction projects.

The California Building Code (CBC) has been amended and adopted as Section 16.03.020 of the City of Dixon Municipal Code and regulates all building and construction projects within the city.

Pavley Fuel Economy Standards (Assembly Bill 1493)

In a response to the transportation sector accounting for more than half of California's CO₂ emissions, Assembly Bill (AB) 1493 was enacted in 2002. AB 1493 required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the State board to be vehicles whose primary use is noncommercial personal transportation in the state. The bill required that CARB set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. CARB adopted the standards in September 2004.

Before these regulations could go into effect, the EPA had to grant California a waiver under the federal CAA, which ordinarily preempts State regulation of motor vehicle emission standards. The EPA Administrator granted the waiver on June 30, 2009. On March 29, 2010, the CARB Executive Officer approved revisions to the motor vehicle GHG standards to harmonize the State program with the national program for 2012–2016 model years (see *Energy Policy and Conservation Act* above). The revised regulations became effective on April 1, 2010.

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars (ACC) program, developed in coordination with the EPA. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of battery electric and fuel cell electric vehicles, with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years.

Executive Order S-3-05

In 2005, Executive Order S-3-05 established California's GHG emissions reduction targets: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050. The California Environmental Protection Agency (CalEPA) Secretary is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. The California Climate Action Team (CAT) is responsible for implementing global warming emissions reduction programs. Representatives from several State agencies comprise the CAT.

Assembly Bill 32

In furtherance of the goals established in Executive Order S-3-05, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006, signed by Governor Schwarzenegger on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

CARB has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report (June 21, 2007) listing early action GHG emission reduction measures. The early actions include three specific GHG control rules that meet the narrow legal definition of "discrete early action GHG reduction measures":

- A low-carbon fuel standard to reduce the "carbon intensity" of California fuels;
- Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of "do-it-yourself" automotive refrigerants; and
- Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

On October 25, 2007, CARB approved an additional six early action GHG reduction measures under AB 32, which were also considered "discrete early action GHG reduction measures:"

- Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology;
- Reduction of auxiliary engine emissions of docked ships by requiring port electrification;
- Reduction of PFCs from the semiconductor industry;

- Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products);
- Requirements that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency; and
- Restriction on the use of SF₆ from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 MMTCO₂e. In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94 percent of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules and include electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit CO₂ in excess of specified thresholds.

On December 11, 2008, CARB approved the Climate Change Proposed Scoping Plan: A Framework for Change to achieve the goals of AB 32. The scoping plan establishes an overall framework for the measures that will be adopted to **reduce California's GHG emissions. The scoping plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.**

The key elements of the scoping plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources **contributing 85 percent of California's GHG emissions;**
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, **including California's clean car standards, goods movement measures, and the LCFS;** and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, **and a fee to fund the administrative costs of California's long-term commitment to AB 32 implementation.**

Senate Bill 32 (Executive Order B-30-15) and 2017 CARB Scoping Plan

Executive Order B-30-15 issued in 2015 established an interim target to reduce GHG emissions to 40 percent below 1990 levels by 2030. In 2016, the Legislature passed Senate Bill (SB) 32, which codified the 2030 GHG emissions reduction target. Pursuant to SB 32, CARB updated the prior AB

32 Scoping Plan to address implementation of GHG reduction strategies to meet the 2030 reduction target. The final plan was approved in December 2017. The 2017 plan continues the discussion from the original scoping plan and 2014 update of identifying scientifically-backed policies within **six of the state's economic sectors to reduce GHGs. The updated Scoping Plan includes various** elements, including doubling energy efficiency savings, increasing the low carbon fuel standard from 10 to 18 percent, adding 4.2 million zero-emission vehicles on the road, implementing the Sustainable Freight Strategy, implementing a post-2020 Cap-and-Trade Program, creating walkable communities with expanded mass transit and other alternatives to traveling by car, and developing an Integrated Natural and Working Lands Action Plan to protect land-based carbon sinks.

CARB's 2017 Climate Change Scoping Plan recommends that local governments target 6 MTCO_{2e} per capita per year in 2030 and 2 MTCO_{2e} per capita per year in 2050. Since the statewide per capita targets are based on the statewide GHG emissions inventory that includes all emissions sectors in the State, the Scoping Plan states that it is appropriate for local jurisdictions to derive evidence-based local per capita, or another metric that the local jurisdiction deems appropriate (e.g., mass emissions, per service population), goals based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets.

Senate Bill 1368

In September 2006, Governor Schwarzenegger signed SB 1368, which requires the CEC to develop and adopt regulations for GHG emissions performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission (CPUC). This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants whose GHG emissions are as low or lower than new combined-cycle natural gas plants, by requiring imported electricity to meet GHG performance standards in California and by requiring that the standards be developed and adopted in a public process.

Executive Order S-1-07

Issued on January 18, 2007, Executive Order S-1-07 sets a declining LCFS for GHG emissions measured in CO_{2e} gram per unit of fuel energy sold in California. The target of the LCFS is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. CARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources such as algae, wood, and agricultural waste. In addition, the LCFS would drive the availability of plug-in hybrid, battery electric, and fuel-cell power motor vehicles.

Senate Bill 97

In August 2007, **the legislature enacted SB 97, which directs the Governor's Office of Planning and Research (OPR) to develop guidelines under the California Environmental Quality Act (CEQA) for**

the mitigation of GHG emissions. OPR was to develop proposed guidelines by July 1, 2009, and the Natural Resources Agency was directed to adopt the guidelines by January 1, 2010. On April 13, 2009, OPR submitted to the Secretary for Natural Resources its proposed amendments to the CEQA Guidelines.

The Natural Resources Agency adopted the CEQA Guidelines amendments on December 30, 2009 and transmitted them to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law completed its review and filed the amendments with the Secretary of State. The amendments became effective on March 18, 2010. The amended guidelines establish several new CEQA requirements concerning the analysis of GHGs, including the following:

- **Requiring a lead agency to “make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of GHG emissions resulting from a project” (CEQA Section 15064.4(a)).**
- Providing a lead agency with the discretion to determine whether to use quantitative or qualitative analysis or performance standards to determine the GHG emissions resulting from a particular project (CEQA Section 15064.4(a)).
- Requiring a lead agency to consider the following factors when assessing the significance of impacts from GHG emissions on the environment (CEQA Section 15064.4(b)):
 - The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting;
 - Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
 - The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.
- Allowing lead agencies to consider feasible means of mitigating the significant effects of GHG emissions, including, among others (CEQA Section 15126.4(c)):
 - **Measures in an existing plan or program for reduction of emissions that are required as part of the lead agency’s decision;**
 - Reductions in emissions through the implementation of project features or off-site measures, including offsets that are not otherwise required; and
 - In the case of the adoption of a general plan, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

The amended CEQA guidelines also establish two new guidance questions in the Environmental Checklist regarding GHG emissions (CEQA Guidelines Appendix G):

- Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The adopted amendments do not establish a GHG emission threshold, and instead allow a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The Natural Resources Agency also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the **significance of a project's GHG emissions.**

Senate Bill 375

In August 2008, the legislature passed and on September 30, 2008, Governor Schwarzenegger signed SB 375, which addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. Regional GHG reduction targets for the automobile and light-duty truck sector for 2020 and 2035, as determined by CARB, are required to consider the emission reductions associated with vehicle emission standards (see AB 1493), the composition of fuels (see Executive Order S-1-07), and other CARB-approved measures to reduce GHG emissions. Under SB 375, CARB has established new emissions reductions targets. Beginning October 1, 2018, MTC/ABAG is subject to reduction targets of 10 percent and 19 percent per capita passenger vehicle GHG emissions relative to 2005 by 2020 and 2035, respectively.

Regional metropolitan planning organizations (MPOs) will be responsible for preparing a Sustainable Communities Strategy (SCS) within their regional transportation plans (RTPs). The goal of an SCS is to establish a development plan for the region, which, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an alternative planning strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies. SB 375 provides incentives for streamlining CEQA requirements by substantially reducing the **requirements for "transit priority projects," as specified in SB 375, and eliminating the analysis of the impacts of certain residential projects on global warming and the growth-inducing impacts of those projects when the projects are consistent with the SCS or alternative planning strategy.** On September 23, 2010, CARB adopted the SB 375 targets for regional MPOs. Achieving these goals through adoption of an SCS will be the responsibility of the MPOs.

The Metropolitan Transportation Commission (MTC) is the MPO for the nine counties that comprise the San Francisco Bay Area, which includes the City of Dixon. MTC adopted an SCS as part of their regional transportation plan (RTP) in 2013 known as Plan Bay Area. The plan targets reductions of 10 percent and 16 percent in per capita GHG emissions by 2020 and 2035, respectively. On July 26, 2017, the strategic update to this plan, known as Plan Bay Area 2040, was adopted by the Association of Bay Area Governments (ABAG) and the MTC. See "**Plan Bay Area**" under the Local Regulations section for more information.

Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger issued Executive Order S-14-08. This executive order focuses on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. **The governor's order** requires that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the order directs State agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency, through collaboration with the CEC and California Department of Fish and Wildlife (CDFW), is directed to lead this effort. Pursuant to a Memorandum of Understanding between the CEC and the CDFW creating the Renewable Energy Action Team, these agencies will create a “one-stop” process for permitting renewable energy power plants.

Executive Order S-21-09

On September 15, 2009, Governor Schwarzenegger issued Executive Order S-21-09. This Executive Order directed CARB to adopt a regulation consistent with the goal of Executive Order S-14-08 by July 31, 2010. CARB is further directed to work with the CPUC and CEC to ensure that the regulation builds upon the Renewable Portfolio Standard (RPS) program and is applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB is to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB adopted regulations to implement a “Renewable Electricity Standard,” which would achieve the goal of the executive order (contribution of renewable energy to meet the state's electrical needs) with the following intermediate and final goals: 20 percent for 2012 to 2014, 24 percent for 2015 to 2017, 28 percent for 2018 to 2019, and 33 percent for 2020 and beyond. Under the regulation, wind; solar; geothermal; small hydroelectric; biomass; ocean wave, thermal, and tidal; landfill and digester gas; and biodiesel would be considered sources of renewable energy. The regulation would apply to investor-owned utilities and public (municipal) utilities.

SB X1-2

On April 12, 2011, Governor Jerry Brown signed SB X1-2 in the first extraordinary session, which would expand the RPS by establishing a goal that renewable energy shall constitute 20 percent of the total electricity sold to retail customers in California per year, by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic (PV), wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and that meets other specified requirements with respect to its location. In addition to the retail sellers covered previously, SB X1-2 adds local publicly owned electric utilities to the RPS. By January 1, 2012, the CPUC is required to establish the quantity of electricity products from eligible renewable energy resources to be procured by retail sellers in order to achieve targets of 20 percent by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. The statute also requires that the governing boards for local publicly owned electric utilities establish

the same targets, and the governing boards would be responsible for ensuring compliance with these targets. The CPUC will be responsible for enforcement of the RPS for retail sellers, while the CEC and CARB will enforce the requirements for local publicly owned electric utilities.

Senate Bill 350

SB 350 was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) a renewables portfolio standard of 50 percent, and (2) a doubling of energy efficiency (electrical and natural gas) by 2030, including improvements to the efficiency of existing buildings. These mandates will be implemented by future actions of the CPUC and CEC.

Assembly Bill 341

In 2011, AB 341 set the goal of 75 percent recycling, composting, or source reduction of solid waste by 2020 calling for the California Department of Resources Recycling and Recovery (CalRecycle) **to take a statewide approach to decreasing California's reliance on landfills**. This goal was an update to the former goal of 50 percent waste diversion set by AB 939. Reductions in solid waste disposal has the potential to reduce GHG emissions from landfills.

California Air Pollution Control Officers Association

The California Air Pollution Control Officers Association (CAPCOA) is the association of air pollution control officers representing all 35 air quality agencies throughout California. CAPCOA is not a regulatory body but has been an active organization in providing guidance in addressing the CEQA significance of GHG emissions and climate change as well as other air quality issues.

Local Regulations

Plan Bay Area

While Dixon is not traditionally included in the San Francisco Bay Area and is not subject to BAAQMD regulations, the Association of Bay Area Governments (ABAG) does include the six cities in Solano County. Plan Bay Area is the Sustainable Communities Strategy adopted by ABAG **and the Metropolitan Transportation Committee (MTC) in 2013. This was the Bay Area's first Sustainable Communities Strategy adopted under SB 375.** The Plan assists jurisdictions seeking to implement the Plan at the local level by providing funding for PDA planning and transportation projects. Plan Bay Area also provides jurisdictions with the option of increasing the efficiency of the development process for projects consistent with the plan and other criteria included in SB 375. An updated Plan Bay Area 2040 was adopted in 2017. As a limited and focused update, Plan Bay Area 2040 builds upon the growth pattern and strategies developed in the original Plan Bay Area with updated planning assumptions that incorporate key economic, demographic, and financial trends since 2013.

Plan Bay Area is one element of a broader statewide effort to reduce GHG emissions (as detailed in the discussion above). The plan targets reductions of 10 percent and 16 percent in per capita GHG

emissions by 2020 and 2035, respectively. Plan Bay Area focuses on where the region is expected to grow and what transportation investments will support that growth.

Plan Bay Area structures an infrastructure investment plan in a systematic way to support the **region's long-term land use strategy**, relying on a performance assessment of scenarios and individual projects. **The plan makes investments in the region's transportation network that support job growth and new homes in existing communities by focusing the lion's share of investment on maintaining and boosting the efficiency of the existing transit and road system.** Plan Bay Area also identifies strategic investments that provide support for focused growth in Priority Development Areas, including the new One Bay Area Grant program.

Plan Bay Area transportation revenue forecasts total \$292 billion over the 28-year period. Over two-thirds (68 percent) of these funds are from regional and local sources, primarily dedicated sales tax programs and bridge tolls. Making up the remainder of the pie are state and federal revenues (mainly derived from fuel taxes). Of the total revenues, **\$60 billion are "discretionary," or available** for assignment to projects and programs through Plan Bay Area. The plan invests those discretionary funds via six key investment strategies including maintaining the current transportation system; boosting the efficiency of the existing transportation system; supporting focused growth; increasing climate protection efforts; and investing in the next generation of public transit.

Solano County Climate Action Plan

Solano County's Climate Action Plan (CAP), released in 2011, recommends 31 measures and 94 implementing actions communities can take to reduce community-wide GHG emissions and reduce the likelihood of negative climate change effects on the county. The CAP takes inventory of GHG emissions for the base year 2005, forecasts emissions in 2020 under a business as usual scenario, and **describes reductions necessary to achieve the County's adopted target.** The County has established a community-wide GHG emissions reduction goal of 20 percent below 2005 levels by 2020 within the CAP, which exceeds guidance provided in the Scoping Plan and Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) guidelines. The Yolo-Solano AQMD has not provided targets for GHG emissions. To achieve this goal, the CAP presents recommended GHG reduction measures within targeted sectors and puts forth a plan for implementation. The CAP addresses both municipal and community-wide emissions for the unincorporated County, but does not apply to incorporated land within the City of Dixon.

Solano County General Plan

The Solano County General Plan was adopted by the Solano County Board of Supervisors on August 5, 2008 and by the Solano County Voters on November 4, 2008. The most recent update to **the General Plan's Public Health and Safety Element, which includes a section on air quality** and discussions regarding the impacts of climate change on various elements of public health and safety, was adopted on August 11, 2015. The General Plan, Public Health and Safety Element contains a broad spectrum of policies and implementation programs addressing climate change. General Plan policies support land use, transportation management, infrastructure and environmental planning programs that reduce vehicle emission; carbon-efficient farming methods; employee trip reduction;

best management practices to reduce construction-related air pollution; and environmentally responsible government purchasing. General Plan policies are carried forward and referenced within recommended Solano County Climate Action Plan measures, discussed above. As with the Solano County CAP, the General Plan applies to the unincorporated County.

Yolo-Solano Air Quality Management District

The northeastern portion of Solano County, including the City of Dixon and the Planning Area, lies within the Sacramento Valley Air Basin (SVAB) and is managed by the Yolo-Solano Air Quality Management District (AQMD). The Yolo-Solano AQMD is responsible for compliance with air quality requirements established by the United States Environmental Protection Agency (EPA) and California Air Resources Board (ARB). Primary activities of the District include adoption of rules and regulations, compliance, issuance of permits, provision of incentives, plan preparation and review, public awareness activities, and air quality monitoring.

Yolo-Solano AQMD regulates, permits, and inspects stationary sources of air pollution. Among these sources are factories, power plants, gasoline stations, auto body shops and dry cleaners. While the State is responsible for controlling actual tailpipe emissions from vehicular sources, Yolo-Solano AQMD is required to implement transportation control measures. These measures are designed to reduce the number of cars on the road and promote the use of cleaner fuels and vehicles. YSAQMD also funds a number of important public and private agency projects that provide innovative approaches to reducing pollution.

YSAQMD's climate protection program includes the integration of climate protection activities into existing programs. YSAQMD is continually seeking ways to integrate climate protection into current functions, including grant programs, CEQA review, regulations, inventory development, and outreach. In addition, YSAQMD's climate protection program emphasizes collaboration with ongoing climate protection efforts at the local and State level, as well as public education and outreach and technical assistance to cities and counties.

To assist lead agencies and project applicants as they prepare air quality analyses, the Yolo-Solano AQMD has produced a "Handbook for Assessing and Mitigating Air Quality Impacts." This document provides guidance on how to assess and mitigate project-related impacts to air quality and **contains "thresholds of significance" for air quality impacts** but does not establish thresholds of significance for GHG emissions. However, the Yolo-Solano AQMD recommends that at least a qualitative discussion of GHG is included in air quality analyses for sizeable projects given that projects that generate new vehicle trips can result in emissions exceeding AB 32 goals of capping GHG emissions at 1990 levels.

Dixon General Plan

The current City of Dixon General Plan was updated in 2010 to include an Air Quality and Energy Element. Policies and implementation programs within this element support changes in land use patterns, transportation systems, building technology, landscape design, agricultural practices, and human behavior in order to increase energy efficiency and resource conservation and reduce impacts on air quality and GHG emissions. The Air Quality and Energy Element contains 30 policies and 47 implementation programs aimed at reducing emissions of GHG and criteria air

pollutants, reducing energy consumption, and encouraging the use of renewable energy. One implementation program that prior to or as part of the next update of the Land Use Element or any annexation exceeding 10 acres, and no later than July 1, 2012, the City should adopt a Climate Action Plan. The Climate Action Plan would include a GHG emissions inventory to establish baseline emissions levels from all sources, emission reduction targets and deadlines, enforceable GHG emissions reductions measures, and regular progress review. As of December 2018, the City of Dixon has not completed or adopted a CAP. The Solano Transit Authority is working with Solano County cities that do not presently have a CAP, including Dixon, to help with CAP development.

Impact Analysis

SIGNIFICANCE CRITERIA

The State of California has developed guidelines to address the significance of climate change impacts based on Appendix G of the CEQA Guidelines, which provides guidance that implementation of the Proposed Plan would have a significant environmental impact if it would:

- Criterion 1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Criterion 2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CEQA Guidelines Appendix G does not contain specific thresholds that identify when a significant energy-use impact would occur. CEQA Guidelines Appendix F, Energy Conservation, provides direction as to the type of information, analysis, and mitigation that should be considered in evaluating a proposed project, but does not provide specific energy conservation thresholds.

Other guidance on the content and standards for EIR energy evaluations has come from case law. On August 27, 2009, the California Court of Appeal, Third Appellate District, issued the first ever CEQA decision on the requirements of an energy conservation impacts analysis in the case of *Tracy First v. City of Tracy* 177 Cal.App. 4th 912 (2009). The court ruled it was appropriate for the EIR to **rely upon the CBC Energy Efficiency Standards, which are part of the State's Title 24 Building Code, to determine that the project's energy impacts would be less than significant. The court also held that CEQA does not require that an EIR discuss "every possible energy impact or conservation measure" listed in Appendix F of the CEQA Guidelines.**

In accordance with Appendix F of the CEQA Guidelines and case law, and for the purposes of this EIR, the Proposed Plan would result in a significant impact on energy conservation if it would:

- Criterion 3: Cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance; or

Criterion 4: Conflict with the CBC Energy Efficiency Standards, the CARB passenger vehicle GHG emission reduction targets for 2020 and 2035, or any other applicable energy conservation regulations.

METHODOLOGY AND ASSUMPTIONS

Greenhouse Gas Emissions

GHG emissions associated with the Proposed Plan would result from operation of future land uses that would be developed in the Planning Area and from traffic volumes generated by these new developments. These emissions would not occur at once but over the course of the Proposed Plan's buildout period. Construction activities would also generate GHG emissions within the Planning Area and on roadways resulting from construction-related traffic.

For this analysis, impacts of the Proposed Plan related to GHG emissions and energy resources from construction were assessed qualitatively, while impacts related to operations were assessed quantitatively using standard and accepted software tools, techniques, and emission factors. The Yolo-Solano Air Quality District CEQA Handbook for Assessing and Mitigating Air Quality Impacts, originally adopted in 2007, recommends calculating GHG emissions using the tool URBEMIS. However, emissions calculated using URBEMIS are now outdated and CalEEMod is the preferred alternative (Yolo-Solano Air Quality Management District, 2019). The primary assumptions and key methods used to quantify emissions and estimate potential impacts are described below. Model inputs and calculation files are provided in Appendix B: Air Quality and Greenhouse Gas Data.

This analysis provides a program-level overview of construction and operational emissions that could occur with buildout of the Proposed Plan. Subsequent project-level environmental review, including quantification of construction GHG emissions, would be conducted during the processing of individual applications for subsequent future projects under the Proposed Plan.

Construction GHG Emissions

Land uses that could be developed under the Proposed Plan would generate construction-related GHG emissions from mobile and stationary construction equipment exhaust and employee and haul truck vehicle exhaust. With an anticipated buildout year of 2040, development of the various land uses associated with the Proposed Plan would occur over an extended period of time and would depend on factors such as local economic conditions, market demand, and other financing considerations. As such, the specific size, location, and construction techniques and scheduling that would be utilized for each individual development project occurring within the Planning Area under the Proposed Plan is not currently known. Without specific project-level details it is not possible to develop a refined construction inventory,¹ and the determination of construction emission impacts associated with GHGs for each individual development project, or a combination of these projects, would require the City to speculate regarding such potential future project-level environmental impacts. Thus, in the absence of the necessary construction information required to

¹ Project-level information includes details such as the size and scale of the project to be constructed, construction schedule, equipment fleet, construction worker crew estimates, and demolition and grading quantities.

provide an informative and meaningful analysis, the evaluation of potential construction-related impacts resulting from implementation of the Proposed Plan is conducted qualitatively in this EIR and assessed against applicable Solano County, Yolo-Solano AQMD, and City of Dixon criteria.

Operational GHG Emissions

Operation of the land uses introduced by the Proposed Plan would generate long-term emissions of CO₂, CH₄, and N₂O. Five types of GHG sources are expected during operation of the land uses associated with the Proposed Plan: area, energy, mobile, waste, and water. Area sources include landscaping activities and consumer products (e.g., personal care products). Energy sources include electricity consumption and natural gas combustion for lighting and heating requirements. Mobile sources are vehicle trips that are generated by the service population associated with the Proposed Plan. The waste category refers to CH₄ from the decomposition of waste generated by the new land use developments in the Planning Area. Finally, the water source includes electricity consumption for the supply, treatment, and distribution of water for the new land uses.

Operational emissions of GHGs under the Proposed Plan were quantified using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. Mobile-source emissions of GHGs were modeled based on the daily vehicle trips and VMT data provided by DKS. Daily VMT data for existing (2018) conditions along with future buildout (2040) year conditions with the Proposed Plan were provided. VMT data for the Proposed Plan account for trip reductions achieved by proposed policies that increase proximity to transit and mixed-use design.

Area, energy, water, and waste emissions were modeled according to the size and type of land uses proposed. Emissions were quantified for existing (2018) conditions along with future (2040) buildout conditions with and without the Proposed Plan based on current and anticipated land uses. CalEEMod defaults were assumed. The Proposed Plan's **operational emissions estimates** also assume implementation of applicable State and County regulations designed to reduce GHG emissions, primarily passenger vehicle emission standards (Pavley) and the RPS. Please refer to Appendix B for the land use assumptions and CalEEMod output files.

Emissions Target

AB 32 mandates that GHG emissions must be capped at 1990 levels by 2020 (H&SC, section 38530). While the City of Dixon and Yolo-Solano AQMD do not propose any specific thresholds associated with GHG, Yolo-Solano AQMD recommends the inclusion of at least a qualitative discussion of GHG emissions in air quality analyses of EIRs for sizable projects. Yolo-Solano AQMD states that in order to pro-actively address this issue, Lead Agencies should consider preparing such an analysis for larger projects as part of their full analysis.

Solano County Climate Action Plan guidelines establish a community-wide GHG emissions reduction goal of 20 percent below 2005 levels by 2020 within the CAP, which exceeds guidance provided in the Scoping Plan and Bay Area Air Quality Management District (BAAQMD) California Environmental Quality Act (CEQA) guidelines. However, given that the Proposed Plan's buildout year would occur beyond 2020, threshold criteria that are tied to the State's post-2020 reduction goals should be used to evaluate the Proposed Plan's **GHG emissions**. As discussed previously, long-term goals for 2030 have been statutorily established in SB 32 and long-term goals

for 2050 have been articulated in EO S-3-05.² SB 32 extends the 2020 statewide target and requires a 40 percent reduction below 1990 levels by 2030. The 2017 Scoping Plan includes per capita reduction targets consistent with SB 32, which are 6 metric tons CO₂e per capita by 2030 and 2 metric tons CO₂e per capita by 2050. Although not legislatively adopted, EO S-3-05 outlines a long-range target of 80 percent below 1990 emissions levels by 2050. For projects that have buildout years that fall outside of milestone years 2020, 2030, and 2050, GHG reduction goals can be estimated for those years by interpolating the percentage reduction goals between the appropriate milestone years. As such, for the Proposed Plan, the percent reduction target for 2040 can be calculated by interpolating a 60 percent reduction below 1990 emission levels between milestone years 2030 and 2050.

A 1990 emissions inventory for the Planning Area is not available at this time. However, the City of Dixon developed a baseline emissions inventory for the 2005 operational year as part of a Countywide climate action planning effort in 2011 (City of Dixon, 2019).³ The baseline emissions inventory identified a communitywide emissions total of 104,899 MTCO₂e in 2005. In the 2008 Climate Change Scoping Plan, CARB recommends that local governments adopt a GHG reduction target consistent with the State's commitment to reach 1990 levels by 2020, identified as equivalent to 15 percent below "current" levels at the time of writing (2008). Based on this assumption, 1990 emissions levels are considered to be equivalent to 15 percent below 2005 emissions levels for the City of Dixon, or 89,164 MTCO₂e. Therefore, the emissions reduction target for 2040 can be calculated by applying the 60 percent reduction calculated above to assumed 1990 emissions. Mass emissions thresholds for the Planning Area based on percentage reduction targets are shown in Table 3.6-4. As this percentage reduction target is based on GHG reduction goals, attainment of this target would be considered "substantial progress" towards the 2050 statewide milestone. Therefore, failure to meet this target could indicate an inability to feasibly reach this milestone and would result in a significant impact regarding statewide GHG emissions.

² Executive orders are binding only on State agencies.

³ In July 2011, the Solano Transit Authority authorized the use of funds for the development of a multi-agency Climate Action Plan and CAP implementation strategy, subject to endorsement from the Solano City County Coordinating Council (4Cs). The Administrative Draft Energy Chapter and Climate Action Plan (ECCAP) was prepared for the City of Dixon by AECOM in November 2012. The Administrative Draft ECCAP includes a 2005 baseline emissions inventory prepared by AECOM in 2012 using energy consumption data from PG&E, solid waste data from city staff and local landfills, vehicle travel data from MTC's activity-based travel model, and emissions factors. As of December 2019, the City of Dixon Planning Commission and City Council have not adopted the ECCAP. Therefore, this EIR does not assume implementation of any emissions reduction measures or emissions targets included in the ECCAP.

Table 3.6-4. Emissions Targets

Year	GHG Emissions (Metric Tons CO ₂ e) ¹	Threshold Basis
2020	89,164	GHG emissions reduced to 1990 levels by 2020 per AB 32
2025	71,331	GHG emissions reduced to 20 percent below 1990 levels (interpolated between 2020 and 2030)
2030	53,498	GHG emissions reduced to 40 percent below 1990 levels per SB 32
2035	44,582	GHG emissions reduced to 50 percent below 1990 levels (interpolated between 2030 and 2040)
2040	35,666	GHG emissions reduced to 60 percent below 1990 levels (interpolated between 2030 and 2050)
2050	17,833	GHG emissions reduced to 80 percent below 1990 levels per Executive Order S-3-05

Note:

1. 1990 emissions levels are calculated by applying a 15 percent reduction below 2005 emissions levels provided by the City of Dixon. Mass emissions reduction goals (in MTCO₂e) are calculated by applying percentage reduction goals established in AB 32, SB 32, and EO S-3-05 and interpolated reduction goals to 1990 emissions.

Source: Dyett & Bhatia, 2019.

Energy Consumption

The energy analysis for the Proposed Plan evaluates the following sources of energy consumption associated with existing conditions and implementation of the Proposed Plan:

- Short-term construction – gasoline and diesel consumed by vehicles and off-road construction equipment associated with new land uses in the Planning Area.
- Operational building energy – electricity and natural gas consumed by the existing and new land uses in the Planning Area.
- Operational on-road vehicles – gasoline consumed by the existing and future service populations.

With an anticipated buildout year of 2040, construction of new land use developments allowable under the Proposed Plan would occur incrementally in the Planning Area over a 20 year period. As the timing and intensity of future development projects is not known at this time, the energy consumption resulting from construction activities associated with buildout of the Planning Area cannot be accurately quantified at this time. Thus, the evaluation of potential construction-related

impacts related to energy consumption from implementation of the Proposed Plan is conducted qualitatively in this EIR.

Energy use associated with fuel consumption during operations (vehicle trips) by existing uses and future land uses under the Proposed Plan was calculated by converting GHG emissions predicted by the GHG analysis using the rate of CO₂ emissions emitted per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (Climate Registry, 2017). The estimated fuel consumption was converted to BTUs, assuming an energy intensity of 122,364 BTUs per gallon of gasoline and 138,490 per gallon of diesel (U.S. Department of Energy, 2014).

Operational electricity and natural gas consumption for the existing uses and future land uses under the Proposed Plan was drawn from the modeling performed to support the GHG analysis. CalEEMod outputs for natural gas consumption are provided in BTU; outputs for electricity consumption, which are provided in kWh, were converted to BTU assuming an energy intensity of 3,414 BTU per kWh (U.S. Department of Energy, 2014).

The Proposed Plan's **incremental (net) increase in energy consumption is determined** by comparing existing conditions to the projected 2040 conditions with the Proposed Plan. To determine whether the Proposed Plan would result in wasteful and inefficient energy usage, a per capita energy consumption value is determined by dividing the 2040 energy use by its service population. This value is then compared to the per capita energy consumption under existing (2018) conditions to ascertain whether energy use would increase or decrease under the Proposed Plan.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Natural Environment

- | | |
|---------|--|
| NE-1.3 | Encourage open space preservation through easements, open space designation, or dedication of lands for the purpose of connecting conservation areas, protecting biodiversity, accommodating wildlife movement, and sustaining ecosystems. |
| NE-1.8 | Facilitate groundwater recharge in Dixon by encouraging development projects to use Low-Impact Development (LID) practices such as bioretention, porous paving, and green roofs, and by encouraging private property owners to design or retrofit landscaped or impervious areas to better capture storm water runoff. |
| NE-1.14 | Recognize the importance of the urban forest to the natural environment in Dixon and expand the tree canopy on public and private property throughout the community. |
| NE-1.15 | Enhance tree health and the appearance of streets and other public spaces through regular maintenance as well as tree and landscape planting and care of the existing canopy. |
| NE-1.17 | Require new development to provide and maintain street trees suitable to local climatic conditions. |

- NE-2.1 Promote energy conservation throughout the community and encourage the use of renewable energy systems to supplement or replace traditional building energy systems.
- NE-2.2 Implement energy and water conservation measures in City facilities and operations.
- NE-2.3 Participate in regional energy efficiency financing programs such as low-interest revolving loan funds, the California Comprehensive Residential Building Retrofit Program, California First, and the Property Assessed Clean Energy (PACE) program that enable property owners to obtain low-interest financing for energy improvements.
- NE-2.4 Encourage the retention and reuse of rainwater onsite and promote the use of rain barrels or other rainwater reuse systems throughout the community.
- NE-2.5 Encourage new development to incorporate as many water-wise practices as possible in their design and construction.
- NE-2.6 Conserve water through the provision of water-efficient infrastructure, drought tolerant plantings, greywater usage to support public parks and landscaped areas.
- NE-2.7 Conserve water through the planting and maintenance of trees, which will provide for the capture of precipitation and runoff to recharge groundwater, in addition to providing shading for other landscaping to reduce irrigation requirements. Ensure **that any 'community greening' projects utilize water-efficient landscape.**
- NE-2.A Connect businesses and residents with voluntary programs that provide free or low-cost energy efficiency audits, retrofit installations, rebates, financing and contractors by publishing information on the City's website.
- NE-2.B Explore establishing a rebate program to promote the installation of renewable energy production systems including photovoltaics and other appropriate technologies.
- NE-2.D Update the Municipal Code to allow the use of greywater and rainwater catchment systems for all structures.
- NE-3.1 Promote reduction of solid waste production throughout Dixon and expand the range of programs and information available to local residents and businesses.
- NE-3.2 Ensure that 75 percent of solid waste generated be reduced at source, recycled, or composted by the year 2020 and beyond, per AB 341.
- NE-3.11 Reduce, through redevelopment and retrofitting, the amount of uncovered industrial and commercial areas where the work activity may contribute pollutants.

- NE-3.A Provide recycling receptacles in parks and public spaces, in addition to trash receptacles.
- NE-3.B Consider expanding compost collection services to residential customers in Dixon or implementing a backyard composting program for local residents.
- NE-3.C Work with commercial and industrial generators to develop and implement a source reduction and recycling plan tailored to their individual waste streams.
- NE-3.D Adopt a construction and demolition diversion ordinance based on the CalRecycle model ordinance to require diversion of construction and demolition debris as needed to meet State mandates.
- NE-4.1 Protect life, the natural environment, and property from natural and manmade hazards due to seismic activity, hazardous material exposure, flooding, wildfire, or extreme heat events.
- NE-4.B Assess the feasibility of implementing urban heat island mitigation technologies, including UV-reflective materials and coatings, porous pavement, or other technologies that can reduce surface and air temperature and mitigate for the effects of extreme heat.
- NE-5.1 Coordinate with the Yolo-Solano Air Quality Management District and other local, regional, and State agencies to protect and enhance air quality in Dixon.
- NE-5.2 Continue to use the **Yolo-Solano Air Quality Management District’s Handbook for Assessing and Mitigating Air Quality Impacts** for environmental review of proposed development projects.
- NE-5.3 Require dust abatement actions for all new construction and redevelopment projects, consistent with the **Yolo-Solano Air Quality Management District’s Best Available Control Measures**.
- NE-5.E Explore the feasibility of converting the City fleet of street sweepers, Read-Ride vans and other large-scale equipment from fossil fuel to alternative fuel types using funding and incentives offered by the Yolo-Solano Air Quality Management District.
- NE-5.G Consider developing a green infrastructure plan that employs tools such as bioswales, permeable pavement, rain gardens, rain barrels and cisterns, and green roofs to treat stormwater, attenuate floods, increase groundwater recharge, and reduce urban heat islands.

Land Use and Community Character

- LCC-1.2 Maintain designated urban-agricultural buffers within City jurisdiction to minimize conflicts with adjoining agricultural uses.
- LCC-1.3 **Promote a compact development pattern and limit “leap frog” development** in order to support efficient delivery of public services and infrastructure, conserve agricultural and open space lands, reduce vehicle trips, and improve air quality.
- LCC-4.3 Encourage infill development, adaptive reuse, and the restoration of historic buildings to revitalize Downtown Dixon as a center of community activity.
- LCC-4.6 Foster transit-oriented development within one-half mile of the train station in anticipation of future passenger rail service.
- LCC-4.B Update the Zoning Code with a pedestrian overlay applicable in the Downtown Commercial District to promote active, pedestrian-oriented street life by regulating building orientation, accessory parking facilities and the design of buildings and public spaces.
- LCC-4.C Identify and actively promote development of key vacant or underutilized sites for residential mixed use development in and adjacent to the downtown area.
- LCC-4.F Amend the Zoning Code to:
- Require parking for non-residential uses to locate at the rear or interior of the lot;
 - Reduce the required front yard setback for residential uses in downtown zones; and
 - Revise allowable uses, as needed, to reduce auto-oriented development.
- LCC-4.G Prepare for passenger rail service in Dixon by developing a land value capture program to generate funding for streetscape improvements, affordable housing, or other public benefits in the downtown area. Consider value capture strategies such as special assessment districts, impact fees, land value tax, and tax-increment financing.
- LCC-6.1 Promote the development of compact, complete residential neighborhoods by encouraging the location of services and amenities within walking and biking distance of residences so as to foster opportunities for social interaction and reduce the need to travel by car.
- LCC-6.3 Provide and maintain livable residential neighborhoods by reducing noise and air pollution, discouraging pass-through traffic, minimizing traffic accidents, and promoting lower speeds.

LCC-7.4 Enhance links between the neighborhood centers and surrounding residential neighborhoods by providing walkable and bikeable connections.

Mobility and Transportation

MT-1.3 **Design, construct, operate, and maintain city streets based on a “complete streets”** concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.

MT-1.4 Make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle and automobile safety over motor vehicle level of service and motor vehicle parking.

MT-1.5 Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders through appropriate roadway modifications and improvements.

MT-1.6 Ensure that improvements to the transportation network support a land use pattern that connects the community, integrates neighborhoods, provides multi-modal access and facilitates travel among Dixon’s neighborhoods.

MT-1.8 **To the extent allowed by law, continue to utilize the City’s Traffic Impact Fee** to fund bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.

MT-1.D Provide new connections for vehicles, bicycles, and pedestrians across the railroad.

MT-1.E Consider adopting the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide to direct future improvement projects.

MT-2.7 Decrease dependence on single-occupant vehicles by increasing the attractiveness of other modes of transportation.

MT-3.3 Foster an integrated multi-use trail system that provides universally accessible, safe, pleasant and convenient links within the city and to destinations beyond.

MT-3.4 Expand the regional bicycle and pedestrian trail network, in collaboration with the Solano Transportation Authority, surrounding communities, and other partners.

MT-3.5 Increase regional transit ridership to and from Dixon and expand shuttle service to Amtrak.

MT-3.6 Participate in and contribute to regional programs to improve commute alternatives and efficiency.

MT-3.7 Prioritize the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.

- MT-3.8 Encourage provision of a variety of transportation services for seniors and community members with limited mobility.
- MT-3.A Work with the Solano Transportation Authority to study the feasibility of expanding express bus routes and frequency to Davis and UC Davis, and Amtrak stations from a central location in Dixon.
- MT-3.B Conduct a mobility needs assessment and identify solutions to improve transit service for Dixon residents and employees. The study should assess park and ride facilities, shuttle service to Fairfield and Davis Amtrak stations, multi-modal connectivity, and safety among other issues and opportunities.
- MT-3.C Collaborate with the Rails to Trails Conservancy, UC Davis, Solano County Transportation Authority and other partners to explore the possibility of creating a "rail with trail," a multiuse path adjacent to the railroad in Dixon, or other protected bike trail with regional connections.
- MT-3.D Work with Caltrans, Solano County, Fairfield and Suisun Transit, and the Solano Transportation Authority to identify and seek funding for improvements that make intra-city travel easier, including for transit, bicycles, and pedestrians.
- MT-3.E In partnership with transit providers, explore the expansion of Redit-Ride services as funding allows, to offer greater connectivity within Dixon.
- MT-3.F Consider assessing through a study or survey the need for local bicycle and walking trail improvements that complement those included in the Countywide Bicycle Master Plan.
- MT-4.1 Promote cycling and walking as healthy, affordable and viable transportation options in Dixon for all residents through education, incentives, citywide events such as Sunday Streets events, and programs such as Safe Routes to School and Safe Routes for Seniors programs.
- MT-4.4 Regularly maintain bicycle and pedestrian paths and trails, including sweeping, weed abatement and surface maintenance.
- MT-4.5 Encourage pedestrian-friendly design features in new development such as sidewalks, street trees, on-street parking, gathering spaces, gardens, outdoor furniture, art and interesting architectural details.
- MT-4.6 Enhance the existing bicycle/pedestrian network by adding planting pockets with street trees to provide shade, calm traffic and enhance the pedestrian realm, prioritizing routes that link destinations such as employment centers, commercial centers, schools and downtown Dixon.

- MT-4.7 Continue to implement traffic calming measures to slow traffic on local and collector residential streets and contribute to the safety of non-motorized road users.
- MT-4.8 Require new or redesigned parking lots to optimize pedestrian and bicycle safety and provide green infrastructure for aesthetic and stormwater management purposes.
- MT-4.A Work with bicycle advocacy groups, Solano Transportation Authority and other partners to identify obstacles and impediments to cycling and develop strategies to address them. The assessment could involve a survey and should consider safety, infrastructure availability, network maintenance, and ease of getting around.
- MT-4.B Collaborate with senior advocacy **organizations to develop a “safe routes for seniors” program that provides pedestrian** improvements tailored to residents with limited mobility throughout Dixon, especially near senior living centers and destinations such as the Dixon Senior Center.
- MT-5.1 Plan for a multi-modal downtown where the transportation network accommodates and balances the needs of pedestrians, cyclists, drivers, and rail, shuttle, and transit passengers.
- MT-5.2 Promote a walkable downtown and enhance the pedestrian environment with improvements for safety and amenities such as planters, street furniture, and public art.
- MT-5.3 Increase bicycle accessibility downtown by providing bike paths and bicycle parking infrastructure.
- MT-5.4 Support efforts to bring passenger rail to Downtown Dixon.
- MT-5.5 Improve connections to the Dixon Train Station and provide safe, easy, attractive access across the railway tracks for all roadway users.
- MT-5.A Seek funding for mobility improvements downtown, including pedestrian and bicycle improvements and a grade-separated rail crossing at A Street.
- MT-5.C Install buffered bicycle lanes along First Street to the High School and along A Street to the Civic Center, or a bicycle boulevard on residential streets parallel to current bicycle routes such as on Hall Park Drive to the High School and Mayes Street to the Civic Center.
- MT-5.D Provide secure bicycle racks along First Street and in key locations throughout the downtown, such as the train station and Dixon Public Library.

IMPACTS

Impact 3.6-1 Development under the Proposed Plan would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (*Significant and Unavoidable*)

Construction

Construction activities associated with future individual development projects under the Proposed Plan would result in the generation of GHG emissions during the construction period only. Yolo-Solano Air Quality Management District has not established a threshold for assessing construction-related GHG emissions. The air district recommends evaluating greenhouse gas emissions using CAPCOA's CEQA and Climate Change guidance, which states that the full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level (California Air Pollution Control Officers Association, 2008).

The Proposed Plan includes multiple policies that would limit construction-related emissions under the Proposed Plan (policies NE-5.1, NE-5.2, NE-5.3), consistent with Yolo-Solano AQMD established guidance for environmental review of proposed development projects and existing control measures. Additionally, under implementing action NE-3.D, the City of Dixon would adopt a construction and demolition diversion ordinance based on the CalRecycle model ordinance to require diversion of construction and demolition debris as needed to meet State mandates.

Overall, as Yolo-Solano AQMD does not have thresholds of significance for construction-related GHG emissions and GHG emissions from future construction activities within the planning area are one-time, short-term emissions, construction-related emissions from buildout of the Proposed Plan are not assumed to significantly contribute to long-term cumulative GHG emissions impacts of the proposed Plan. Therefore, construction emissions associated with the Proposed Plan are less than significant.

Operation

The operation of the land uses introduced by the Proposed Plan would generate direct and indirect GHG emissions. Sources of direct emissions would include mobile vehicle trips, natural gas combustion, and landscaping activities. Indirect emissions would be generated by electricity consumption, waste and wastewater generation, and water use. The Proposed Plan's net GHG emissions at buildout are determined by taking the difference in operational emissions between the "future with Proposed Plan" conditions (2040) and existing (2018) emissions. The Proposed Plan's net GHG emissions in 2040 are then evaluated against the emissions reduction target for 2040 identified in the Methodology section above as 60 percent below 1990 emissions levels, equivalent to 35,666 MTCO₂e (see Table 3.6-4). Achievement of this emissions reduction would indicate towards the EO S-3-05 target of 80 percent below 1990 emissions levels by 2050.

Table 3.6-5 presents the estimated operational emissions under the Proposed Plan's buildout (2040) conditions and under existing (2018) conditions.

Table 3.6-5: Estimated Operational GHG Emissions

Condition/Source	CO ₂	CH ₄	N ₂ O	CO ₂ e
Existing (2018)				
Area Sources	2,991	<1	<1	3,058
Energy Sources	95,342	8	2	96,203
Mobile Sources	71,302	3	0	71,383
Waste Generation	13,083	773	0	32,412
Water Consumption	6,110	214	5	13,001
<i>Total Existing</i>	<i>188,828</i>	<i>998</i>	<i>8</i>	<i>216,056</i>
Proposed Plan (2040)				
Area Sources	4,618	1	<1	4,743
Energy Sources	94,912	10	3	95,967
Mobile Sources	57,740	2	0	57,782
Waste Generation	4,410	261	0	10,927
Water Consumption	5,675	240	6	13,394
<i>Total 2040 With Proposed Plan</i>	<i>167,355</i>	<i>513</i>	<i>9</i>	<i>182,813</i>
Existing (2018) Emissions				
Mass Emissions				216,056
Population				20,130
<i>Emissions per Capita</i>				<i>10.7</i>
Proposed Plan (2040) Emissions				
Mass Emissions				182,813
Population				28,893
<i>Emissions per Capita</i>				<i>6.3</i>

Note: Values may not add due to rounding.

Source: Dyett & Bhatia, 2019.

Estimated operational emissions under the Proposed Plan in 2040 account for emissions benefits achieved under State actions. **California’s RPS, discussed under the State Regulations section above,** is one of the most ambitious renewable energy standards in the country. The RPS requires that investor-owned utilities, like PG&E, supply 33 percent of their electricity from renewable resources by 2020 and 50 percent of their electricity from renewable sources by 2030. A portion of **Dixon’s** electricity emissions would be reduced by the RPS. Title 24, discussed under the State Regulations section above, is **California’s Building Energy Code. The most recent Title 24 code became effective January 1, 2020. The Title 24 building efficiency improvements’ effects on emissions through the 2017 update were automatically incorporated into the baseline inventory since this code update was already in effect by the time of analysis.** A portion of **Dixon’s** area emissions would be reduced by compliance with Title 24.

Operational emissions for 2040 also account for emissions benefits achieved through the implementation of the following Proposed Plan policies relating to compact and diverse development, vehicle trip reductions, energy conservation, water conservation, and waste reduction.

The Proposed Plan includes multiple policies that would promote infill development throughout the Planning Area, particularly in downtown Dixon, including LCC-1.2, LCC-1.3, and LCC-3.3. Additionally, the Proposed Plan introduces three new mixed use designations located along major corridors (Commercial Mixed Use, Downtown Mixed Use, and Campus Mixed Use). Development within Commercial Mixed Use and Downtown Mixed Use areas would locate residents in close proximity to jobs, retail, and public services. The Campus Mixed Use area is designed to create synergies with the UC Davis campus and provide job opportunities as well as new housing in the Northeast Quadrant. Implementation of these policies and land use designations would serve to increase diversity of housing units, increase density within the City of Dixon, and increase accessibility to goods and services, therefore reducing mobile and area GHG emissions.

The Proposed Plan also includes a significant number of policies that encourage walking, biking, public transit, and other alternatives to single-occupancy automobile use. The Proposed Plan would expand the bicycle and pedestrian network and increase accessibility to local and regional transit services. Additional policies propose reducing minimum parking requirements and converting the City fleet of street sweepers, Redit-Ride vans, and large-scale equipment to alternative fuels. Proposed policies that would reduce mobile GHG emissions include NE-5.E, LCC-4.6, LCC-4.B, LCC-4.G, LCC-6.1, LCC-6.3, LCC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6, MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D. Implementation of these policies would reduce mobile GHG emissions.

The Natural Environment element of the Proposed Plan includes multiple policies that promote energy conservation throughout the community, in new development, and in City facilities and operation (policies NE-2.1, NE-2.2, NE-2.3, NE-2.A, NE-2.B). Policy NE-2.1 and implementing action NE-2.B would promote the installation of renewable energy production systems throughout the community. Policies NE-2.1 and NE-2.3 and implementing actions NE-2.A and NE-2.B are aimed at connecting businesses and residents with programs that would reduce the cost of energy efficient upgrades. Implementation of these policies would reduce GHG emissions associated with energy consumption.

The Natural Environment element also includes multiple policies that promote water conservation throughout the community, in new development, and in City facilities and operation (policies NE-2.2, NE-2.4, NE-2.5, NE-2.6, NE-2.7 and implementing actions NE-2.C and NE-2.D). Policies NE-2.4 and NE-2.6 promote the use of greywater and rainwater retention and reuse; under implementing action NE-2.D, the Dixon Municipal Code would be updated to allow the use of greywater and rainwater catchment systems for all structures. Policy NE-2.5 encourages new development to incorporate water efficient practices in their design and construction. Implementation of these policies would reduce water consumption emissions of GHGs.

Finally, the Natural Environment element includes multiple policies promoting waste reduction in Dixon, particularly through the establishment of programs that encourage residents to reuse, recycle, and compost (policies NE-3.1, NE-3.4, NE-3.A, NE-3.B, NE-3.E). Policy NE-3.2 would ensure that 75 percent of solid waste generated be reduced at source, recycled, or composted by the year 2020 and beyond, per AB 341. Implementing action NE-3.C would ensure that the City would work with commercial and industrial generators to develop and implement a source reduction and recycling plan tailored to their individual waste streams. Implementation of these policies would reduce waste generation emissions of GHGs.

Operational emissions under the Proposed Plan as shown in Table 3.6-5 account for the emissions benefits achieved through existing State actions and proposed policies and implementing actions. When compared to a Business as Usual scenario (outputs provided in Appendix B), implementation of existing and proposed policies would reduce potential GHG emissions at buildout by 22 percent, or approximately 51,800 MTCO_{2e}. While the Proposed Plan includes multiple policies and implementing actions that could further reduce GHG emissions, many do not set specific goals or targets for reductions, and therefore cannot be quantified at this time.

As shown in Table 3.6-5, development under the Proposed Plan could generate operational emissions of 182,813 MTCO_{2e} per year in 2040. Emissions under the Proposed Plan would decrease compared to existing conditions (2018) due to the implementation of the policies described above, compact development patterns, and mixed use development. However, emissions under the Proposed Plan represent an increase of 205 percent above 1990 emissions levels. As discussed in the Methodology section above, this EIR establishes a significance threshold of 60 percent below 1990 emissions levels by 2040, equivalent to 35,666 MTCO_{2e} per year. As this percentage reduction target is based on Statewide GHG reduction goals established in SB 32 and EO S-3-05, attainment of this target would be considered “substantial progress” towards the 2050 statewide milestone. **The Proposed Plan’s failure to meet this target indicates an inability to feasibly reach this milestone.** Furthermore, per capita emissions under the Proposed Plan in 2040 (6.3 MTCO_{2e} per capita) would not be consistent with CARB Scoping Plan per capita reduction targets designed to be consistent with SB 32, which are 6 metric tons CO_{2e} per capita by 2030 and 2 metric tons CO_{2e} per capita by 2050. As such, operational GHG emissions from full buildout of the Proposed Plan in 2040 could conflict with the GHG emissions reduction trajectory for 2050 under SB 32 and EO S-3-05.

As discussed below under Impact 3.6-2, in the analysis of consistency with the goals of SB 32 and S-03-05, the achievement of long-term GHG reduction targets will require substantial change in terms of how energy is produced and consumed, as well as other substantial economy-wide changes, many of which can only be implemented by the State and federal government. At the State level, the long-term policy and regulatory changes needed to meet the statewide 2050 emissions reduction target are unknown at this time. **The extent to which the Proposed Plan’s emissions and resulting impacts would be mitigated through implementation of statewide (and nationwide) changes is speculative, and any calculation of post-2030 emissions cannot take into account future State or federal actions that may be taken to achieve long-term reductions.** As such, placing the entire burden of meeting long-term reduction targets on local government or new development would be disproportionate and likely ineffective. **Nevertheless, given that the Proposed Plan’s emission levels would exceed the percentage reduction target for 2040, as calculated in the Methodology section, the Proposed Plan would result in a potentially significant impact with respect to GHG emissions.**

To reduce the Proposed Plan's GHG emissions in 2040, Mitigation Measure GHG-1 is recommended, which includes strategies derived to reduce GHG emissions in line with the emissions reduction trajectory anticipated by the State. Currently, the City of Dixon does not have a Climate Action Plan that addresses community GHG emissions reductions, although an Administrative Draft Climate Action Plan was drafted in 2012. Additionally, many of the policies and implementing actions within the Proposed Plan discuss improvements that would generally decrease emissions but do not set specific and quantifiable goals (i.e. setting a goal for 100 percent renewable energy by 2040 or installing 20 miles of bike lanes). The adoption and implementation of a Climate Action Plan with specific and quantifiable goals to reduce emissions, as well as indicators to track progress, will help the City reduce the impacts associated with implementation of the Proposed Plan.

As shown in the analysis above, the Proposed Plan would result in a decrease in GHG emissions from baseline conditions by 2040 but would not make substantial progress towards meeting the State's 2050 goal of an 80 percent reduction from 1990 levels pursuant to Executive Order S-03-05. Additionally, since the significance thresholds identified by CARB are a reflection of emissions reductions needed to meet the 80 percent GHG reduction target as a State, Dixon's failure to meet the thresholds may have a cumulative impact on whether or not the State will meet its target.

Mitigation Measure GHG-1 would require the adoption of a Dixon Climate Action Plan that lays out a series of goals, policies, and actions to reduce GHG emissions to a level that is consistent with State GHG reduction goals. Policies within the Climate Action Plan must set specific targets for GHG reductions where possible (i.e. source a specific percentage of the City's power through renewable sources, install a specific length of bicycle lanes, or install greywater systems in a specific percentage of homes in Dixon). However, given that additional State and federal actions are necessary to ensure that State and federally regulated emissions sources (i.e., sources outside the City's jurisdictional control) are needed to achieve the 2050 target, and that, at this time, there are no post-2030 State or federal measures in place that would assist the City in achieving the 2040 efficiency target, even with implementation of Mitigation Measure GHG-1, GHG impacts as a result of the Proposed Plan are considered significant and unavoidable.

Significance before mitigation: Significant and unavoidable.

Mitigation Measures

MM-GHG-1 The City of Dixon shall adopt and begin to implement a Climate Action Plan within a goal of 18 months, but no later than 36 months, of adopting the Proposed Plan update to address the GHG reduction goals of Executive Order B-30-15, Senate Bill 32, and Executive Order S-03-05 for GHG sectors that the City has direct or indirect jurisdictional control over. The Climate Action Plan shall include a community inventory of GHG emission sources, and quantifiable GHG emissions reduction targets for 2030 and 2050, and an interim target for the General Plan buildout year 2040, that are consistent with the statewide GHG reduction targets and SB 375 Regional Plan Climate Targets. The City shall monitor progress toward its GHG emissions reduction goals and prepare reports every five years detailing that progress.

Significance After Mitigation: Significant and unavoidable. While the Proposed Plan includes **measures to align the City with the State’s long-term GHG reductions**, many of these policies and implementing actions are general and non-quantifiable. As such, the projected emissions at buildout in 2040 are expected to exceed the significance threshold. While Mitigation Measure GHG-1 would require the City to develop a Climate Action Plan that specifies a GHG reduction goal in line with the **State’s targets, as well as quantifiable and implementable policies**, additional federal and State measures would be necessary to reduce GHG emissions to meet the long-term GHG reduction goals under Executive Order B-30-15, which identified a goal to reduce GHG emissions to 40 percent of 1990 levels by 2030, and Executive Order S-03-05, which identified a goal to reduce GHG emissions to 80 percent of 1990 levels by 2050.

Impact 3.6-2 Development under the Proposed Plan would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*Significant and Unavoidable*)

Solano County Climate Action Plan

The Solano County Climate Action Plan includes a set of policy measures and implementing actions that communities can take to reduce GHG emissions and climate change effects on the County. The CAP establishes a community-wide GHG emissions reduction goal of 20 percent below 2005 levels by 2020. The CAP addresses municipal and community-wide emissions for the **unincorporated County, including Dixon’s SOI, but does not apply** to incorporated land within the City of Dixon. This EIR does not include a 2020 GHG inventory, as the Proposed Plan would not be adopted and implemented until the year 2020. However, implementation of the Proposed Plan would increase VMT within the SOI compared to existing conditions and would designate existing agricultural land in the SOI as rural residential and regional commercial. Additionally, Proposed Plan policies aimed at reducing VMT and GHG emissions would apply only to incorporated land within the City of Dixon. Therefore, development under the Proposed Plan within the SOI would have the potential to conflict with reduction goals established under the Solano County CAP, resulting in a significant and unavoidable impact.

SB 375 and Plan Bay Area

The ABAG RTP/SCS, Plan Bay Area, includes a set of policy objectives related to mobility, system preservation and safety, social equity, healthy environment, and economic growth. The RTP will **assist in ABAG’s implementation of SB 375, the California Global Warming Solutions Act of 2006, and regional GHG targets. With implementation of the Proposed Plan’s policies related to sustainability and multi-modal transportation objectives**, the Proposed Plan would complement the goals and policies of the RTP/SCS and would continue to carry out the goals of AB 32 and SB 375. For example, Plan Bay Area focuses growth in existing developed areas and the Proposed Plan encourages infill development and **would limit “leap frog” development to conserve agricultural areas and reduce vehicle trips**. Plan Bay Area aims to expand public transit service, as well as increase bicycling and walking. The Proposed Plan includes extensive policies and implementing actions relating to improving **Dixon’s access to local and regional transit and to expand the city’s bicycle and pedestrian network** (policies LCC-4.6, LCC-4.B, LCC-4.G, LCC-6.1, LCC-6.3, LCC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6,

MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D).

However, buildout of the Proposed Plan would not be consistent with the overarching goals of Plan Bay Area and SB 375 to reduce GHG emissions. Plan Bay Area 2040 targets GHG reductions of 10 percent and 16 percent in per capita GHG emissions by 2020 and 2035, respectively, relative to 2005. Implementation of the Proposed Plan, including all relevant proposed policies and State and local actions, would result in 6.3 MTCO_{2e} per capita in 2040, which is a 3 percent increase compared to per capita GHG emissions in 2005 (6.1 MTCO_{2e} per capita). Beginning October 1, 2018, SB 375 GHG reduction targets for MTC/ABAG increased to 10 percent and 19 percent in per capita passenger vehicle emissions by 2020 and 2035, respectively, relative to 2005. Implementation of the Proposed Plan would result in 2.0 MTCO_{2e} per capita mobile emissions in 2040, which is an 11 percent increase compared to per capita passenger vehicle emissions in 2005 (1.8 MTCO_{2e} per capita). Therefore, development under the Proposed Plan would have the potential to conflict with Plan Bay Area and SB 375, resulting in a significant and unavoidable impact.

CARB Scoping Plan, AB 32, and EO S-3-05

AB32 and EO S-3-05 set targets for State GHG reductions of 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The 2017 CARB Scoping Plan creates a pathway to achieving those goals by reducing GHG emissions to 4.0 MTCO_{2e} per capita by 2030 and 2.0 MTCO_{2e} per capita by 2050. A reduction target for 2040 can be interpolated between the existing Statewide goals for 2030 and 2050, resulting in a percentage reduction target of 60 percent below 1990 levels or an efficiency metric of 3.0 MTCO_{2e} per capita by 2040. Policies in the Proposed Plan aim to reduce water use, promote energy conservation, provide walkable communities, decrease reliance on automobile transportation, and more. GHG-reducing policies and implementing actions can be found in the Land Use and Growth Management, Natural Environment, and Circulation elements. While these policies and implementing actions could reduce GHG emissions, many do not set specific goals or targets for reductions, and therefore cannot be quantified at this time.

Accounting for State and federal standards and for policies within the Proposed Plan that can be reasonably quantified, the resulting 2040 per capita emissions exceed both the percentage reduction and per capita targets that would demonstrate reasonable progress towards Statewide goals for GHG emissions reduction. Implementation of the Proposed Plan would result in 182,813 MTCO_{2e}, approximately twice the level of emissions approximated in 1990 (89,164, per 2008 CARB Scoping Plan Guidance). Therefore, development under the Proposed Plan would have the potential to conflict with AB 32 and EO S-3-05. The Proposed Plan would also result in emissions of 6.3 MTCO_{2e} per capita in 2040, more than twice the efficiency metric that would align with the CARB Scoping Plan pathway to achieving these Statewide goals. Therefore, development under the Proposed Plan would also have the potential to conflict with goals established under the 2017 CARB Scoping Plan.

Absent additional measures at the State level, development under the Proposed Plan would conflict with CARB's 2017 Scoping Plan, AB 32, EO S-03-05, Plan Bay Area, and SB 375, as the City does not have direct control over certain aspects of transportation emissions, such as vehicle fuel

efficiency standards or regional traffic. Meeting the aggressive State GHG reduction goals will require a substantial change in terms of how energy is produced and consumed, as well as other economy-wide changes, many of which can only be implemented by the State and federal government.

Implementation of Mitigation Measure GHG-1 described above, would help to reduce conflict with the GHG emissions reduction trajectory articulated in these plans and regulations to the extent practicable; however, as described above, further action is necessary at the State and federal levels **to achieve the deep cuts to emissions sources outside the City's jurisdictional control** needed to meet the GHG emissions reductions targets laid out by the State. Given that, at this time, there are **no post-2030 State or federal measures that would assist the City in achieving the efficiency target** in 2040, even with implementation of feasible mitigation, the potential exists for the Proposed Plan to conflict with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. Therefore, the impact remains significant and unavoidable.

Significance before mitigation: Significant and unavoidable.

Mitigation Measures

See Mitigation Measure GHG-1 under Impact 3.6-1.

Significance after mitigation: Significant and unavoidable. While Mitigation Measure GHG-1 would require the City to develop a Climate Action Plan that specifies a GHG reduction goal in line **with the State's targets, as well as** quantifiable and implementable policies, additional federal and State measures would be necessary to reduce GHG emissions to meet the long-term GHG reduction goals under Executive Order B-30-15, which identified a goal to reduce GHG emissions to 40 percent of 1990 levels by 2030, and Executive Order S-03-05, which identified a goal to reduce GHG emissions to 80 percent of 1990 levels by 2050.

Impact 3.6-3 Development under the Proposed Plan would not cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance. (*Less than Significant*)

CEQA requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. As noted in Appendix F of the CEQA Guidelines, the means of achieving the goal of conserving energy include the following:

1. Decreasing overall per capita energy consumption.
2. Decreasing reliance on fossil fuels such as coal, natural gas, and oil.
3. Increasing reliance on renewable energy sources.

Construction associated with future developments under the Proposed Plan would consume gasoline and diesel fuel through operation of heavy-duty, off-road construction equipment, and on-road vehicles. The amount of fuel consumed by these activities would vary substantially depending on the level of activity, length of the construction period, specific construction

operations, types of equipment, and number of personnel. Because the Proposed Plan does not propose any specific development projects, the precise level and intensity of construction activities that would occur in the planning area is currently unknown.

For the purposes of this analysis, it is assumed that the types of land uses envisioned under the Proposed Plan, which includes residential, commercial, office, and mixed uses, would involve construction activities typical of most land use developments within the planning area and in the SFBAAB. None of the proposed land uses are expected to require an extraordinary amount of energy consumption during construction, as may occur with large, industrial facilities, like new power plants or dams, because no such land uses are proposed or permitted by the Proposed Plan. Additionally, because construction emissions are considered to be relatively short-term emissions that would cease once construction of a project is complete, they would represent a relatively short demand on local and regional fuel supplies that would be easily accommodated. Off-road diesel construction equipment and heavy-duty diesel trucks (e.g., concrete trucks, building materials delivery trucks), which are sources of diesel exhaust particulate matter, are regulated under three airborne toxic control measures (ATCMs) adopted by CARB. The ATCM for diesel construction equipment specifies particulate matter emission standards for equipment fleets, which become increasingly stringent over time. Furthermore, most newly-purchased construction equipment introduced into construction fleets after 2013–2015, depending on the engine horsepower rating, are equipped with high-efficiency diesel particulate filters. One of ATCMs for heavy-duty diesel trucks specifies that commercial trucks with a gross vehicle weight rating over 10,000 pounds are prohibited from idling for more than five minutes unless the engines are idling while queuing or involved in operational activities. In addition, starting in model year 2008, new heavy-duty trucks must be equipped with an automatic shutoff device to prevent excessive idling or meet stringent NO_x requirements. Lastly, fleets of diesel trucks with a gross vehicle weight rating greater than 14,000 pounds are subject to another ATCM. This ATCM requires truck fleet operators to replace older vehicles and/or equip them with diesel particulate filters, depending on the age of the truck. Therefore, construction activities associated with the Proposed Plan would not result in a wasteful, inefficient, and unnecessary usage of direct or indirect energy.

Once operational, future development under the Proposed Plan would generate vehicle trips, which would consume gasoline and diesel. Developments would also result in the consumption of electricity and natural gas for power, heating, and cooking. Operational energy consumption (expressed in terms of million BTU or MMBTU) under existing (2018) and future with Proposed Plan buildout (2040) conditions is summarized in Table 3.6-6. The future with Proposed Plan buildout condition in 2040 includes implementation of Proposed Plan policies, as discussed under Impact 3.6-1, but does not include mitigation and represents a conservative analysis. Table 3.6-Y shows the estimated energy consumption per capita under the existing (2018) and future with the Proposed Plan (2040) conditions.

Table 3.6-6: Estimated Operational Energy Consumption

<i>Analysis Year/Source</i>	<i>Million BTU/Year</i>
2018	
Electricity	1,748,344
Natural Gas	872,028
Mobile (gasoline and diesel)	981,547
Total	3,601,916
2040	
Electricity	2,373,751
Natural Gas	907,389
Mobile (gasoline and diesel)	794,528
Total	4,075,669
Net Increase with Proposed Plan	473,752

Source: Dyett & Bhatia, 2019.

Table 3.6-7: Estimated Operational Energy Consumption Efficiency

	<i>2018</i>	<i>2040</i>	<i>Net Proposed Plan</i>
Energy consumption (million BTUs)	3,601,916	4,075,669	473,752
Population	20,130	28,893	8,763
Million BTUs per capita	179	141	54
<i>Percent Change from Existing</i>	--	-21%	-70%

Source: Dyett & Bhatia, 2018.

As shown in Table 3.6-6, implementation of the Proposed Plan would result in a net energy consumption increase of 473,752 million BTUs at buildout in 2040. This increase in energy consumption is largely due to new development under the Proposed Plan, including the conversion of agricultural land to residential and commercial uses, and the resulting increase population and jobs at buildout. Additionally, existing VMT would increase under the Proposed Plan.

However, as shown in Table 3.6-7, implementation of the Proposed Plan would result in a decrease in per capita energy consumption when compared against existing (2018) conditions. Whereas the per capita energy consumption is currently 179 million BTUs per year under existing (2018) conditions, the per capita energy consumption associated with the net new development introduced by the Proposed Plan at buildout in 2040 would be 141 million BTUs per year. This represents a 21 percent decrease in energy consumption levels compared to existing conditions.

While many of the policies and implementing actions within the Proposed Plan do not set specific and quantifiable goals, they do address general concepts that would support sustainable land use patterns, including mixed-use design and increased density (LCC-1.1, LCC-4.3, and LCC-4.C), reduce vehicular travel, and promote energy conservation and consequently would all help decrease energy consumption. The Proposed Plan contains multiple policies aimed at reducing vehicular emissions of GHG by increasing walkability, promoting the use of transit, and discouraging single-

occupant vehicle trips (NE-5.E, LCC-4.6, LCC-4.B, LCC-4.G, LCC-6.1, LCC-6.3, LCC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6, MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D). The Proposed Plan contains multiple policies that would promote energy conservation throughout the community, in new development, and in City facilities and operation (policies NE-2.1, NE-2.2, NE-2.3, NE-2.A, NE-2.B). Policy NE-2.1 and implementing action NE-2.B would promote the installation of renewable energy production systems throughout the community. Policies NE-2.1 and NE-2.3 and implementing actions NE-2.A and NE-2.B are aimed at connecting businesses and residents with programs that would reduce the cost of energy efficient upgrades. When implemented, these actions would further decrease energy consumption from natural gas, electricity, and gasoline and diesel fuels.

By decreasing demand for energy- and fuel-related energy resources on a per service population basis and increasing reliance on renewable energy sources, operation of future land uses associated with the Proposed Plan would not result in a wasteful, inefficient, and unnecessary usage of direct or indirect energy. Therefore, this impact is considered less than significant.

Mitigation Measures

None required.

Impact 3.6-4 The Proposed Plan would conflict with the CBC Energy Efficiency Standards, the CARB passenger vehicle GHG emission reduction targets for 2020 and 2040, or any other applicable energy conservation regulations. *(Less than Significant with Mitigation)*

All future development under the Proposed Plan would be required to comply with the latest CBC requirements, including CBC Energy Efficiency Standards, as well as all federal, State, and local rules and regulations pertaining to energy consumption and conservation. The City of Dixon has adopted the 2016 California Building Code and the 2016 California Green Building Code as Chapter 16.03 and Chapter 16.17, respectively, of its Municipal Code. While the City of Dixon has not yet adopted the 2019 updates to the California Building Code and California Green Building Code, the Proposed Plan includes multiple policies that would support the updated CBC Energy Efficiency Standards. Proposed Plan policies NE-2.1 and NE-2.2 encourage energy conservation in new and existing development and in City facilities and operations. Additionally, through proposed policy NE-2.3 and implementing actions NE-2.A and NE-2.B, the City of Dixon would connect residents, businesses, and developers to programs that would reduce the cost of energy efficient upgrades and installation of renewable energy systems.

As discussed under Impact 3.6-2, implementation of the Proposed Plan would increase VMT and mobile emissions of GHGs compared to existing conditions. The Proposed Plan would reduce in per capita VMT and includes multiple policies aimed at reducing vehicular emissions of GHG by increasing walkability, promoting the use of transit, and discouraging single-occupant vehicle trips (NE-5.E, LCC-4.6, LCC-4.B, LCC-4.G, LCC-6.1, LCC-6.3, LCC-7.4, MT-1.3, MT-1.4, MT-1.5, MT-1.6, MT-1.8, MT-1.D, MT-1.E, MT-2.7, MT-3.4, MT-3.5, MT-3.6, MT-3.7, MT-3.8, MT-3.A, MT-3.B, MT-3.C, MT-3.D, MT-3.E, MT-3.F, MT-4.1, MT-4.4, MT-4.5, MT-4.6, MT-4.7, MT-4.8, MT-

4.A, MT-4.B, MT-5.1, MT-5.2, MT-5.3, MT-5.4, MT-5.5, MT-5.A, MT-5.C, and MT-5.D). However, implementation of the Proposed Plan would conflict with the CARB passenger vehicle GHG emission reduction target for 2035, implemented under SB 375. Beginning October 1, 2018, the 2035 target for MTC/ABAG is a reduction of 19 percent per capita passenger vehicle GHG emissions relative to 2005. The 2005 emissions inventory estimates passenger vehicle emissions at 31,088 MTCO₂e, or 1.8 MTCO₂e per capita. As discussed under Impact 3.6-2, implementation of the Proposed Plan would increase overall mobile emissions and per capita mobile emissions relative to 2005, resulting in 2.0 MTCO₂e per capita. Therefore, the Proposed Plan would have the potential to conflict with CARB passenger vehicle GHG emission reduction targets.

The Proposed Plan includes policies that emphasize vehicle trip reduction strategies, as described in Impact 3.5-1, and does not contain policies that would conflict with existing energy conservation regulations (policies LD-P.30, LD-P.40, LD-P.41, LD-P.42, LD-P.44, LD-P.45, LD-P.59, MP-P.20, MP-P.22, MP-P.23, MP-P.24, MP-P.25, MP-P.30). As discussed in the Methodology and Assumptions section, the Proposed Plan's operational emissions estimates calculated using CalEEMod also assume implementation of applicable State regulations designed to reduce GHG emissions, primarily passenger vehicle emission standards (Pavley) and the RPS.

Despite implementation of proposed policies aimed at reducing VMT and GHG, implementation of the Proposed Plan would conflict with CARB passenger vehicle GHG emissions reduction targets. While the Proposed Plan would not introduce any conflicts with CBC Energy Efficiency Standards or other applicable energy conservation standards, as it includes multiple policies aimed at energy conservation, the impact with regards to CARB reduction targets would be significant and unavoidable.

Significance before mitigation: Significant and unavoidable

Mitigation Measures

See Mitigation Measure GHG-1 under Impact 3.6-1.

Significance after mitigation: Less than Significant. Mitigation Measure GHG-1 would require the City to develop a Climate Action Plan that specifies a goal in line with Statewide GHG reduction targets and SB 375 Regional Plan Climate Targets, which establish CARB passenger vehicle GHG emission reduction targets. **By explicitly requiring that this target be included within the City's Climate Action Plan**, implementation of the Proposed Plan would be consistent with the CARB passenger vehicle GHG emission reduction targets. Therefore, this impact would be less than significant with mitigation.

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3.7 Geology, Soils, and Seismicity

This section assesses potential environmental impacts from future development under the Proposed Plan as related to geology, soils, and seismicity, including those related to geologic and seismic hazards and soil stability. The section describes the Planning Area's **geologic and seismic** setting, as well as relevant federal, State, and local regulations and programs. No comments on the Notice of Preparation (NOP) were received regarding geologic or soils issues.

Environmental Setting

PHYSICAL SETTING

Geology and Soils

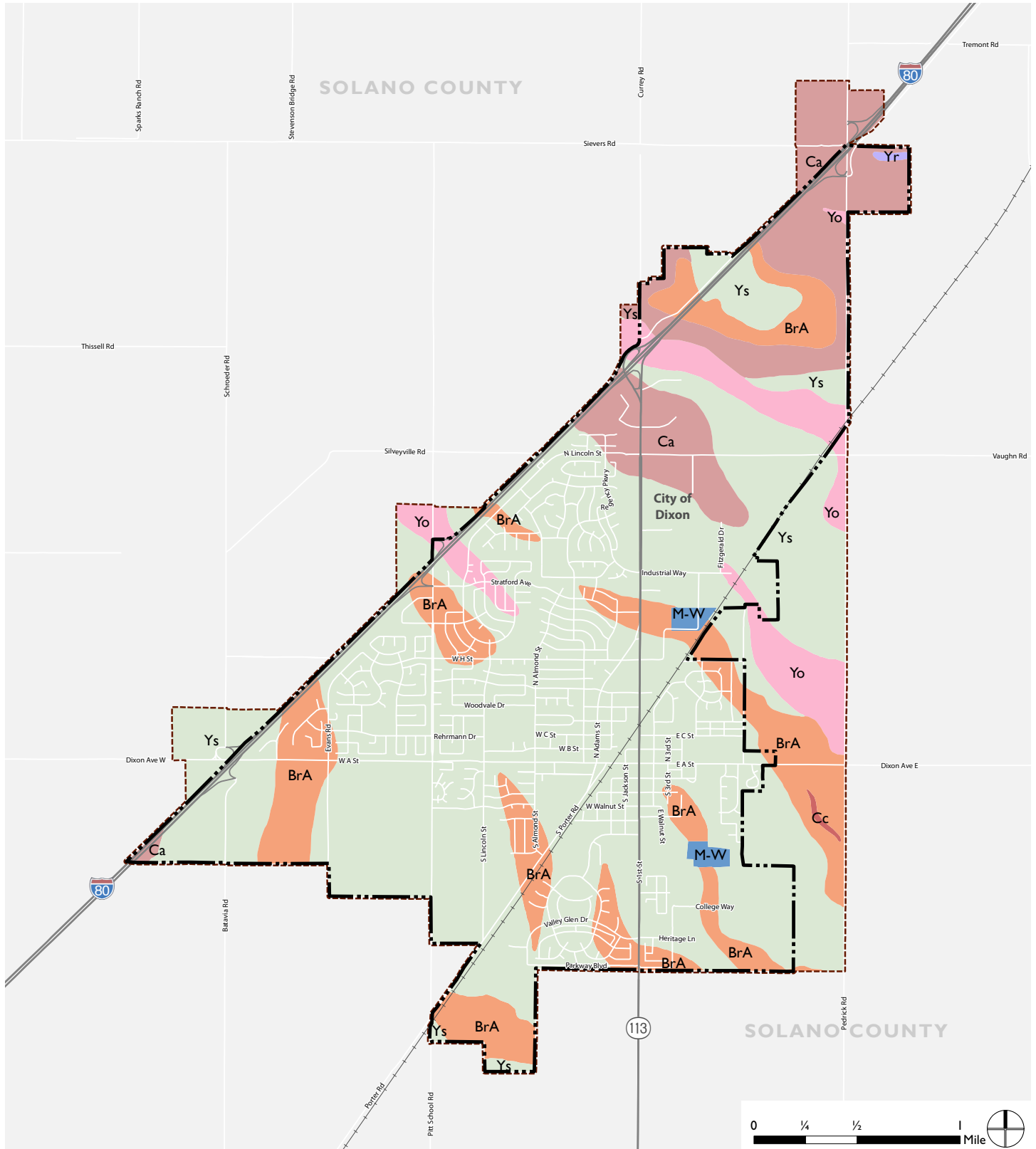
Regional Geology

The City of Dixon is located in the Sacramento Valley, which forms part of the northern portion of the Great Valley Geomorphic Province of California. The Province, a sedimentary basin, is bounded by the Coastal Ranges to the west and the foothills of the Sierra Nevada to the east. The Sacramento Valley is mainly composed of alluvial sediments. The topography of the Planning Area and its surroundings is relatively flat, with an average elevation of 62 feet above sea level, and slopes of less than 2 percent. The Planning Area is underlain with Quaternary-age alluvium, consisting of an unstratified mix of sand, silt, clay, and gravel (Wagner, 1981).











Soil Properties

Soil is generally defined as the unconsolidated mixture of mineral grains and organic material that mantles the land surfaces of the earth. The characteristics of soil reflect the five major influences on their development: topography, climate, biological activity, parent (source) material, and time. As shown in Figure 3.7-1, six soil types are located within Dixon. Yolo silty clay loam is the predominant soil, making up 61 percent of the Planning Area. Other soil types include Capay clay, present in the northern part of the Planning Area; Capay silty clay loam, present in a small area in the southeast part of the SOI; Brentwood Clay loam dispersed mainly throughout the southern part of the City; Yolo loam dispersed throughout the northern part of the Planning Area; and Yolo loam clay substratum, present in a small area in the northeast part of the City. Many of these soils are moderately expansive and may cause shrink-swell damage to structures (United States Department of Agriculture, 2018). Implications of soil characteristics from a geologic hazard perspective (e.g., expansive soils) are discussed below in the Seismic and Geologic Hazards section.

Figure 3.7-1: Soil Types



Data Source: USDA Soils Data, 2018; City of Dixon, 2019; Dyett & Bhatia, 2019

- | | | | |
|--|---|--|---|
|  Brentwood Clay Loam (BrA) |  Yolo Loam, Clay Substratum (Yr) |  Railroad |  Dixon City Limit |
|  Capay Clay (Ca) |  Yolo Silty Clay Loam (Ys) | |  Sphere of Influence |
|  Capay Silty Clay Loam (Cc) |  Misc Water (M-W) | | |
|  Yolo Loam (Yo) | | | |

Seismicity

Regional Faults

Generally, earthquakes occur when **tectonic plates of the Earth's crust collide or slide past one another** along their boundaries or faults, and accumulated stress is released, resulting in seismic slippage. California is particularly susceptible to such plate movements, notably, the largely **horizontal or "strike-slip" movement of the Pacific Plate as it impinges on and slides past the west margin of the North American Plate**. The performance of man-made structures during a major seismic event varies widely due to a number of factors: location with respect to active fault traces or areas prone to liquefaction or seismic-induced landslides; the type of building construction (i.e., wood frame, unreinforced masonry, non-ductile concrete frame); the proximity and magnitude of the seismic event; and many other factors. In general, evidence from past earthquakes shows that wood frame structures tend to perform well, especially when their foundations are properly designed and anchored. Older, unreinforced masonry structures, on the other hand, do not perform as well, especially if they have not undergone appropriate seismic retrofitting. Applicable building code requirements include seismic requirements that are designed to ensure the satisfactory performance of building materials under seismic conditions.

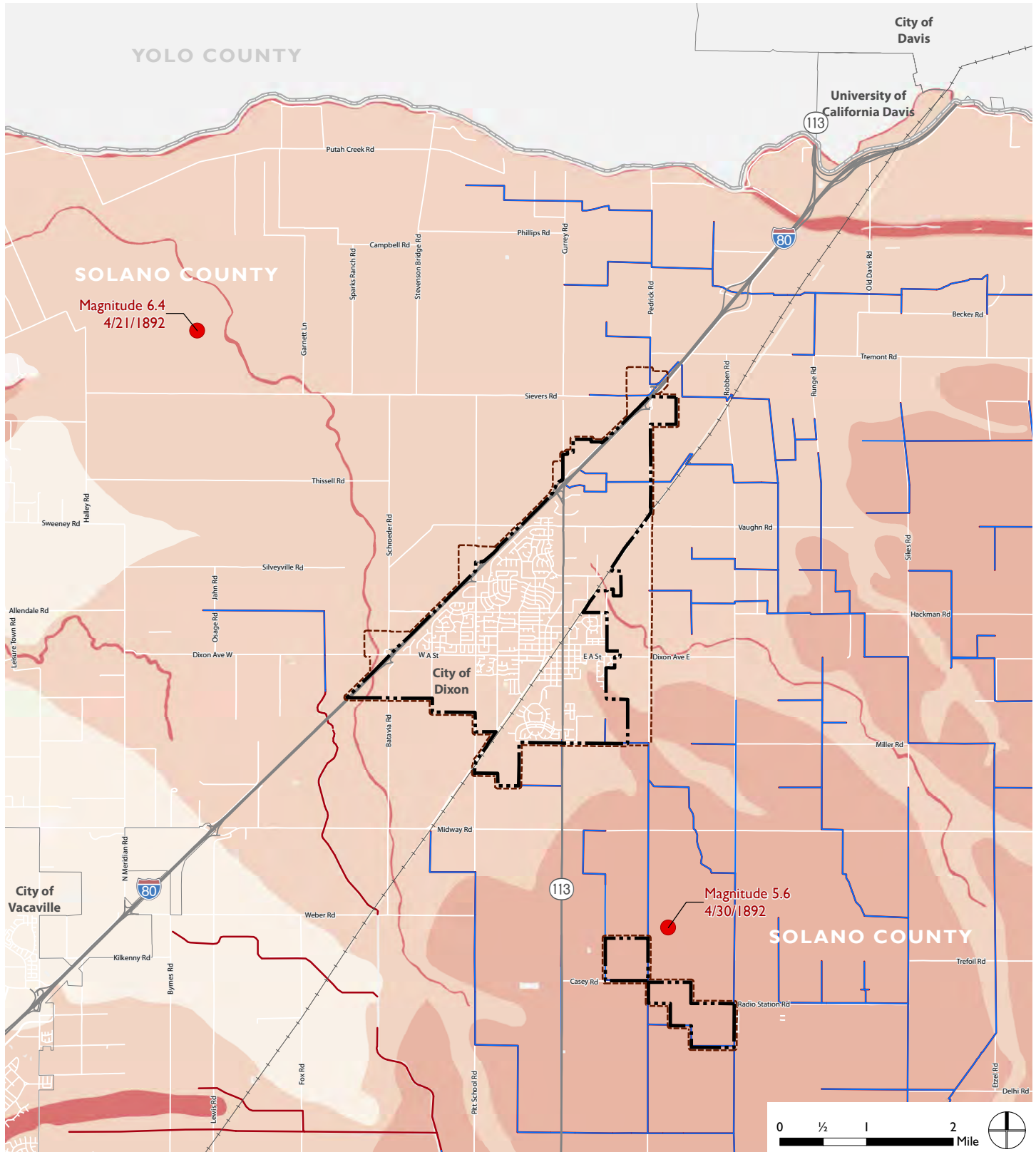
The Planning Area is located in the seismically active San Francisco Bay Area, located within the San Andreas Fault System (SAFS), a complex of active faults forming the boundary between the North American and Pacific plates (Hart, 1997). The California Geological Survey (CGS) has determined that numerous faults are active under the Alquist-Priolo Earthquake Fault Zoning Act. Active faults are those that have shown evidence of fault rupture in the past 11,000 years. A potentially active fault is defined as one that has shown evidence of surface displacement during the last 1.6 million years.

Planning Area-Specific Seismicity

Seismic activity in the Planning Area is considered minimal. No Alquist-Priolo Fault zones, nor active or potentially active faults, underlie the City, based on published geologic maps (See Figure 3.7-2). However, there are active faults in the broader region that could subject Dixon land and structures to ground shaking. The nearest fault lines active in the last 200 years are the Cordelia Fault and the Green Valley Fault system, about 20 miles southwest of Dixon. An unnamed fault that has been active within the last 10,000 years is located approximately 11 miles north of Dixon. In addition, the Vaca-Kirby Hills Fault system lies west of Vacaville but has not been active within the last 10,000 years. The Midland Fault zone is considered inactive and traverses the Planning Area between I-80 and the intersection of West A Street and Pitt School Road.

In April 1892, the Vacaville-Winters earthquakes caused considerable damage in the Dixon area. While a causative fault has not been recognized, some experts believe the earthquakes were the result of interaction between the coast Ranges and the Sierran Block, in a seismic source zone called the Coast-Ranges Sierran Block Boundary Zone (CRSB) (Mualchin, 1996). The CRSB forms the western geomorphic boundary of the Central Valley with the Coast Ranges to the west.

Figure 3.7-2: Seismic Hazards



Data Source: ABAG, 2010; CA Department of Conservation, CGS, 2019; Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Liquefaction Susceptibility

- Very High
- High
- Moderate
- Low
- Very Low

● Historic Earthquakes, 1769-2015

~ Water_In

—+— Railroad

 Dixon City Limit

 Sphere of Influence

 County Boundary



Seismic and Geological Hazards

Seismic Shaking

In the Planning Area, the primary seismic hazard is seismic shaking (or ground shaking). The extent of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter or fault rupture, and local geologic conditions. Intensity is a subjective measure of the perceptible effects of seismic energy at a given point and varies with distance from the epicenter and local geologic conditions. The Modified Mercalli Intensity Scale (MMI) is the most commonly used scale for measurement of the subjective effects of earthquake intensity (see Table 3.7-1). The MMI values for intensity of an earthquake event range from I (earthquake not felt) to XII (damage nearly total), and intensities ranging from IV to X could cause moderate to significant structural damage. The Association of Bay Area Governments (ABAG), in cooperation with CGS and the US Geological Survey (USGS), has prepared maps showing expected MMI ground shaking intensities in Bay Area cities for specific anticipated earthquakes along known active faults in the region. According to these maps, the Planning Area has the potential to experience VI (light) to VII (moderate) shaking depending on the size of the earthquake and fault of origin. The nearest active faults capable of producing seismic shaking in the Planning Area include the Cordelia Fault and the Green Valley Fault system, about 20 miles southwest of Dixon; the unnamed fault 11 miles to the north, and the CRSB area.

Surface Rupture

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active major fault trace. There is little risk of surface rupture due to the absence of active faults in the Planning Area.

Liquefaction

Liquefaction is the rapid transformation of saturated, loose, fine-grained sediment (such as silt and sand) into a fluid state as a result of severe vibratory motion. The potential for liquefaction depends on soil conditions and groundwater levels, which may fluctuate. Susceptibility to this hazard is greatest when groundwater tables are high. A majority of the Planning Area is potentially subject to moderate liquefaction risk, with the southwest portion at high liquefaction risk, as shown in Figure 3.7-2. Structures supported by alluvium may experience some movement due to foundation heaving and uneven foundation settlement if liquefaction occurs.

Lateral Spreading

Lateral spreading refers to a type of landslide that forms on gentle slopes and has rapid fluid-like movement. Factors determining the potential for liquefaction and lateral spreading are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Locations within the Planning Area that have high liquefaction susceptibility, as shown on Figure 3.7-2, have the highest risk of lateral spreading.

Table 3.7-1: Modified Mercalli Scale

<i>M</i> ¹	Category	Definition
	I	Not felt except by a very few under especially favorable circumstances.
3	II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
	III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
4	IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
	V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
5	VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
6	VII	Everybody runs outdoors. Damage negligible in building of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
	VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
7	IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
8	X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
	XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
	XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted.

Notes:

1. Richter Magnitude correlation.

Source: CGS, 2002.

Landslides

The strong ground motions that occur during earthquakes are capable of inducing landslides, generally where unstable slope conditions already exist. A landslide is the downhill movement of masses of earth material under the force of gravity. The primary factors influencing the stability of a slope include the nature of the underlying soil or bedrock, the geometry of the slope (height and steepness), rainfall, and the presence of previous landslide deposits. Landslides are commonly triggered by unusually high rainfall and the resulting soil saturation, by earthquakes, or by a combination of these conditions. As the Planning Area is relatively flat, it has almost no potential for landslides.

Soil Erosion

Soil erosion is the process by which soil materials are worn away and transported to another area, either by wind or water. Not accounting for slope and groundcover factors, soils high in clay have low susceptibility to erosion because they are resistant to detachment. Coarse textured soils, such as sandy soils, also have low erosion potential despite their easy detachment, because of low runoff. Medium textured soils, such as the silt loam soils, are moderately susceptible to erosion, while soils with a high silt content are the most susceptible (Institute of Water Research, 2002).

Most of the Planning Area—3,223 acres, or 95 percent—is underlain by soils that are moderately to highly susceptible to erosion (see Table 3.7-2). However, since the Planning Area is primarily flat and has no natural waterways, the risk of soil erosion due to water runoff is relatively low. Stormwater drainage can be a significant cause of soil erosion, if stormwater is not managed well, especially during construction. Excessive soil erosion can eventually damage building foundations and roadways.

Expansive Soils

Expansive soils have shrink-swell capacity, meaning they may swell when wetted and shrink when dried. Expansive soils can be hazardous to built structures, and may cause cracks in building foundations, distortion of structural elements, and warping of doors and windows. The higher the clay content of a soil, the higher its shrink-swell potential.

The United States Department of Agriculture National Resource Conservation Service (NRCS) analyzes the shrink-swell potential of each soil type based on its linear extensibility and clay content **and categorizes it as “low,” “moderate,” “high,” or “very high”** (Rogers, Olshansky, & Rogers, 2001). Where the shrink-swell classification is moderate to very high, shrinking and swelling can cause damage to buildings, utilities, roads, and other structures and the gradual cracking, settling, and weakening of older buildings could create potential safety concerns and financial loss. The soils of the Planning Area range from low to high shrink-swell potential. Moderate to high shrink-swell potential soils are classified as expansive soils and construction will require appropriate engineering. The majority of soils in the Planning Area are **classified as “moderate” shrink-swell potential** (see Table 3.7-2). Areas of high expansiveness occur in limited areas identified as Brentwood Clay Loam (BrA), Capay Clay (Ca), and Capay Silty Clay Loam (Cc) in Figure 3.7-1 (United States Department of Agriculture, 2018).

Table 3.7-2: Soil Types in the Planning Area

Soil Type	Slopes	Susceptible to Erosion	Susceptible to Expansion/Contraction ¹	Corrosive to Steel	Corrosive to Concrete	Acres	% of Planning Area
Brentwood Clay Loam (BrA)	0-2%	Moderate	High	High	Low	799	14
Capay Clay (Ca)	0%	Low	High	High	Moderate	300	5
Capay Silty Clay Loam (Cc)	0%	Moderate	High	High	Moderate	586	11
Yolo Loam (Yo)	0-6%	Moderate to High	Moderate	Low	Low	309	6
Yolo Loam, Clay Substratum (Yr)	0%	Moderate to High	Moderate	Moderate	Low	4	0
Yolo Silty Clay Loam (Ys)	0-2%	Moderate to High	Moderate	Moderate	Low	3,372	61
Total						5,523	100%

Notes:

1. Related to shrink-swell potential

Sources: Web Soil Survey, Natural Resources Conservation Services, United States Department of Agriculture, 2017 (accessed November 2018); California State Water Resources Control Board, n.d.; Dyett & Bhatia, 2018.

Subsidence

Subsidence occurs when a large portion of land is displaced vertically. This typically is due to the withdrawal of groundwater, oil, or natural gas. Although the Sacramento Valley possesses substantial supplies of surface water, land subsidence has occurred when groundwater-levels declined in response to pumping for irrigation and public water supplies during droughts or in areas undersupplied by surface water, especially in the San Joaquin Valley (Borchers & Carpenter, 2014). From locations of damaged wells during a drought in 1976-1977, subsistence appears to have occurred historically in an area stretching from central Colusa County to Dixon in Solano County (Borchers & Carpenter, 2014). The USGS California Water Science Center maps of historical and current recorded subsidence does not identify Dixon as an area that has experienced subsidence; however, substantial areas of land subsidence have occurred in Davis, about eight miles northeast of Dixon, due to groundwater pumping. In 2018, Dixon became part of Solano County's Joint Groundwater Sustainability Agency, which monitors groundwater conditions, including potential for subsidence.

Paleontological Resources

Paleontological resources are the fossil remains or traces of past life forms, including both vertebrate and invertebrate species, as well as plants. The City of Dixon is located in the Sacramento Valley, which forms part of the northern portion of the Great Valley Geomorphic Province of California. The province, a sedimentary basin, is bounded by the Coastal Ranges to the west and the foothills of the Sierra Nevada to the east. The Sacramento Valley is mainly composed of alluvial sediments. The Planning Area is underlain with Quaternary-age alluvium, consisting of an unstratified mix of sand, silt, clay, and gravel. According to a records search of the University of California Museum of Paleontology Specimen Search, no paleontological resources have been found within Dixon. However, multiple resources have been discovered throughout Solano County and in neighboring cities with similar geological features as the Planning Area (University of California Museum of Paleontology, n.d.). Therefore, there is a possibility for paleontological resources to be discovered in the Planning Area.

REGULATORY SETTING

Federal Regulations

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was last amended in 2004 by NEHRP.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the National Institute of Standards and Technology (NIST) as the lead agency of the program. As lead agency, it develops, evaluates, and tests earthquake resistant design and construction practices for implementation in the building codes and engineering practice. Under NEHRP, the Federal Emergency Management Agency (FEMA) is responsible for developing earthquake risk reduction tools and promoting their implementation, as well as supporting the development of disaster-resistant building codes and standards. USGS monitors seismic activity, provides earthquake hazard assessments, and conducts and supports targeted research on earthquake causes and effects. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

U.S. Geological Survey Landslide Hazard Program

The USGS created the Landslide Hazard Program in the mid-1970s; the primary objective of the program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies. The federal government takes the lead role in funding and conducting this research, whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility. In Solano County, plans and programs designed for the protection of life and property are coordinated by the Solano County Office of Emergency Services.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan that incorporates specific program elements of the DMA2K law. Dixon participated in the multi-jurisdictional Solano County Multi-Hazard Mitigation Plan, as described under Local Regulations, below.

State Regulations

California Multi-Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Plan (SHMP), was approved by FEMA in 2013. The SHMP outlines present and planned activities to address natural hazards. The adoption of the SHMP qualifies the State of California for federal funds in the event of a disaster. The State is required under the Disaster Mitigation Act of 2000, described above, to review and update its SHMP and resubmit for FEMA approval at least once every 5 years to ensure the continued eligibility for federal funding. The SHMP provides goals and strategies which address minimization of risks associated with natural hazards and response to disaster situations. The SHMP notes that the primary sources of losses in the state of California are fire and flooding.

California Building Standards Code

The California Building Code (CBC) is Part 2 of Title 24 of the California Code of Regulations. The CBC incorporates the International Building Code, a model building code adopted across the United States. The CBC is updated every three years, and the current 2013 version took effect January 1, 2014. With the exception of certain additions, deletions, and amendments, the City adopted the CBC by reference pursuant to Title 12, Chapter 12.04 of the Vallejo Municipal Code. Through the CBC, the State provides a minimum standard for building design and construction.

Of particular relevance, Chapter 16 of the CBC contains specific requirements for structural (building) design, including seismic loads. Chapter 18 of the CBC includes requirements for soil testing, excavation and grading, and foundation design.

The 2010 CBC has been amended and adopted as Chapter 16.03 of the Dixon Municipal Code, which regulates all building and construction projects within the city.

California Alquist–Priolo Earthquake Fault Zoning Act

The Alquist–Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on top of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as groundshaking or landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist–Priolo Zones) around the surface traces of active faults, and to issue appropriate maps. The maps are then distributed to all affected cities, counties and state agencies for their use in planning and controlling new or renewed construction. Generally, construction within 50 feet of an active fault zone is prohibited. As discussed in the Physical Setting section, there are no active faults in the Planning Area, and therefore no designated Alquist-Priolo fault zones.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong groundshaking, liquefaction, landslides, or other ground failure, and from other hazards caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties, and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a Seismic Hazard Zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design. Geotechnical investigations conducted within Seismic Hazard Zones must incorporate standards specified by the CGS Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards (California Geological Survey, 1997). There are no Seismic Hazard Zones within the Planning Area.

California Department of Transportation (Caltrans)

Jurisdiction of the California Department of Transportation (Caltrans) includes State and interstate routes within California. Any work within the right-of-way of a federal or State transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans standards incorporate the CBC, and contain numerous rules and regulations to protect the public from seismic hazards such as surface fault rupture and ground shaking. In addition, Caltrans standards require that projects be constructed to minimize potential hazards associated with cut and fill operations, grading, slope instability, and expansive or corrosive soils, as described in the Caltrans Highway Design Manual (HDM).

Caltrans and local project sponsors, as part of the project development and delivery process, are obligated to conduct paleontological studies in response to federal, state, and local laws, regulations, and ordinances. For example, Section 305 of the Federal Aid Highway Act of 1956 (20 USC 78, 78a) gives authority to use federal funds to salvage archaeological and paleontological sites affected by highway projects.

National Pollution Discharge Elimination System Permits

In California, the State Water Resources Control Board (SWRCB) and its Regional Water Quality Control Board (RWQCB) administer the National Pollution Discharge Elimination System (NPDES) program. The NPDES permit system was established as part of the Federal Clean Water Act to regulate both point source discharges and non-point source discharges to surface water of the United States, including the discharge of soils eroded from construction sites.

The NPDES program consists of characterizing receiving water quality, identifying harmful constituents (including siltation), targeting potential sources of pollutants (including excavation and grading operations), and implementing a comprehensive stormwater management program. Construction and industrial activities typically are regulated under statewide general permits that are issued by the SWRCB. Additionally, the SWRCB issues Water Discharge Requirements that also serve as NPDES permits under the authority delegated to the RWQCBs, under the Clean Water Act. See Section 3.8: Hydrology, Drainage, and Water Quality, for more information about the NPDES.

California Public Resources Code

Sections 5097–5097.6 of the California Public Resources Code outline the requirements for cultural resource analysis prior to the commencement of any construction project on state lands. The state agency proposing the project may conduct the cultural resource analysis or they may contract with the State Department of Parks and Recreation. In addition, this section stipulates that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands and provides for criminal sanctions. As used in this section, "public lands" means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.

Local Regulations

Solano County Local Multi-Hazard Mitigation Plan

Dixon participated in the preparation of the Solano County Multi-Hazard Mitigation Plan (MHMP), an effort undertaken by the County to mitigate the effects of natural hazards and plan for resiliency for all residents of the county. The Solano County MHMP identifies wildfire, severe weather and storms as highly likely occurrences in the county (between 10 and 100 percent probability in the next year); and flooding, earthquakes/seismic shaking, and dam failure as an occasional occurrence (between one and ten percent probability in the next year), though wildfire is at its lowest risk in areas around Dixon.

Solano County Code

Chapter 6.4 Sewer Standards

Chapter 6.4 of the Solano County Code establishes a comprehensive, uniform set of standards for the review and approval of on-site sewage disposal systems for individual lots and subdivisions in Solano County (which includes some areas within the Sphere of Influence). The standards contained in this Chapter apply to the siting, design and construction of on-site sewage treatment, storage and disposal systems, or their components. The Chapter requires a connection to a public sewer system for all proposed lots, new development, additions, or remodels that propose to generate wastewater, and for existing structures requiring repairs to the septic system if sewer is available, and no permit for installation, repair, replacement or expansion of a septic system shall be issued if sewer is available. The Code requires that site evaluation and permits shall require a determination of the soil conditions in the area proposed for on-site sewage disposal systems and replacement areas.

City of Dixon Municipal Code

Chapter 16: Building and Construction

Chapter 16 of the Dixon Municipal Code adopts the 2016 CBC in its entirety excepting additions, revisions, and omissions listed in 6.03.030. As discussed above, the CBC regulates seismic design, the excavation of foundations and retaining walls, analysis of slope instability, requirements for drainage and grading, and other aspects of building design and construction that relate to geology, soils, and seismicity. Chapter 16 also authorizes the City to adopt and impose best management practices that include operating and maintenance procedures; erosion and sediment control practices; and the prohibition of specific activities, practices, and procedures and such other provisions.

Chapters 16.04 through 16.06: Grading, Control and Stormwater Control Ordinances

Chapters 16.04 through 16.06 establish administrative procedures, minimum standards of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff.

Chapter 17: Subdivision Regulations

The Subdivision Ordinance requires that soils reports, seismic analysis, bank stabilization, and other factors pertinent to the particular site location be provided as part of the application for a tentative subdivision map, unless the city engineer determines that no preliminary analysis is necessary.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact related to geology, soils, or seismic hazards would occur if the Proposed Plan would:

- Criterion 1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map or based on other substantial evidence of a known fault,
 - ii. Strong seismic ground shaking,
 - iii. Seismic-related ground failure, including liquefaction, or
 - iv. Landslides;
- Criterion 2: Result in substantial soil erosion or the loss of topsoil;
- Criterion 3: Be located on expansive soils (as defined in Table 18.1 B of the Uniform Building Code [1994]), creating substantial risks to life or property; or on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Criterion 4: Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or
- Criterion 5: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

METHODOLOGY AND ASSUMPTIONS

This evaluation of geologic, soils, and seismic hazard conditions was completed using published geologic, soils, and seismic maps and studies from USGS, CGS, and ABAG. In order to reduce or mitigate potential hazards from earthquakes or other local geologic hazards, implementation of the Proposed Plan would be governed by existing regulations at the federal, state, and local levels, including existing General Plan policies and provisions. These regulations require that a proposed project design reduce potential adverse soils, geological, and seismicity effects to the extent feasible. Compliance with these regulations is required, not optional. These provisions ensure that development will continue to be completed in compliance with local and State regulations.

RELEVANT POLICIES AND ACTIONS

Natural Environment

- NE-1.7 Ensure that structures intended for human occupancy are designed and constructed to retain their structural integrity when subjected to seismic activity, in accordance with the California Building Code.
- NE-1.11 Ensure that the siting of critical emergency response facilities and communications facilities, such as hospitals and health care facilities, emergency shelters, fire stations, police stations, emergency command centers, and other emergency service facilities and utilities have minimal exposure to flooding, seismic and geologic effects, fire, and explosions.
- NE-3.D Update the City's Storm Water Quality Management Plan as needed to comply with the NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems, Order No. 2003-0005-DWQ, or as amended.

Public Facilities and Services

- PF-2.7 Operate, maintain and update the City-owned storm sewer system as needed to serve existing and future development.
- PF-2.E Increase wastewater treatment facility, trunk sewer and pump station capacities in order to accommodate future growth within the City's service area.
- PF-2.F Prepare a Sewer Master Plan and computer model of the sanitary sewer system to estimate the sizing and costs of needed improvements; to identify and mitigate sources of infiltration and inflow; and to determine how best to accommodate existing needs and future growth.

IMPACTS

- Impact 3.7-1 Implementation of the Proposed Plan would not expose residents, visitors and employees, as well as public and private structures, to substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. *(Less than significant)*

Fault Rupture

For the Proposed Plan, a significant impact due to fault rupture could occur if new structures were constructed within a designated Alquist-Priolo Earthquake Fault Zone, or within an active or potentially active known fault. There are no designated Alquist-Priolo Fault Zones in the Planning Area (CGS, 2010). The Alquist-Priolo Earthquake Fault Zone nearest to the Planning Area is the Green Valley Fault System, part of the Concord-Green Valley Fault zone, approximately 20 miles

southwest of Dixon. The Midland Fault zone traverses the Planning Area between I-80 and the intersection of West A Street and Pitt School Road. However, this fault line is considered inactive. Due to the lack of any Alquist-Priolo Fault Zones, active faults, or potentially active faults within the Planning Area, there are no impacts due to fault rupture.

Ground Shaking

A significant impact due to ground shaking could occur if implementation of the Proposed Plan led to construction in an area that would experience ground shaking, potentially causing damage or harm to buildings or people. Generally speaking, fault activity has the potential to result in ground shaking, which can be of varying intensity depending the magnitude of the event, the epicenter distance, the response of geologic materials, and the design and construction quality of structures. Ground shaking tends to be more severe in softer sediments such as alluvial deposits than in bedrock materials, because in alluvial deposits surface waves can be amplified causing a longer duration of ground shaking. Areas where bedrock is exposed or located at relatively shallow depth tend to experience surface waves from an earthquake as more of a sharp jolt, compared to other areas. **Dixon's underlying alluvial deposits and proximity to active local faults like the Cordelia fault; the unnamed fault 11 miles north; and the Coast-Ranges Sierran Block Boundary Zone (CRSB) to the northeast place the city at risk for strong ground shaking.**

As discussed above, the Seismic Hazards Mapping Act regulates structures intended for human habitation in order to minimize damage due to seismic ground shaking. Additionally, development occurring under the Proposed Plan would be required to conform to the current seismic design provisions of the most current version of the CBC. The CBC contains the latest seismic safety requirements to resist ground shaking through modern construction techniques, which are periodically updated to reflect the most recent seismic research. The Proposed Plan includes policies and implementing actions that reduce impacts due to fault rupture. Policy NE-1.7 ensures that structures intended for human occupancy are designed and constructed to retain their structural integrity when subjected to seismic activity, in accordance with the California Building Code.

Compliance with existing requirements, as well as policies and implementing actions included in the Proposed Plan, would reduce potential impacts from ground shaking to the maximum extent practicable. Thus, the impact is less than significant.

Liquefaction

A significant impact due to liquefaction could occur if implementation of the Proposed Plan would result in construction in areas of elevated liquefaction risk. As shown in Figure 3.7-2, the majority of the Planning Area is prone to a moderate level of liquefaction hazard, with small high-risk portions of the Planning Area at the southeast corner, and the wastewater treatment facility site to the southeast. Within the Planning Area, there are small channels with very high liquefaction risk intersecting regional commercial land uses in the western portion in the Planning Area; **the low density residential area in Dixon's sphere of influence to the east; and in small portions of the city limit's land designated as general industrial and governmental/institutional use.** The Proposed Plan locates regional commercial land designations in the southwest portion and the sphere of influence

and low density residential in the western portion, where small areas of very high liquefaction risk are present.

Risks due to seismic induced liquefaction are legislated for structures intended for human habitation by the Seismic Hazards Mapping Act. Similarly, Caltrans standards govern risk management for roadways in California. Damage from earthquake-induced ground failure associated with liquefaction could be high in buildings or roadways constructed on improperly engineered fills or saturated alluvial sediments that have not received adequate compaction or treatment in accordance with current building code or Caltrans standards. In areas of liquefaction risk where buildings or roadways would be constructed, impacts from ground failure resulting from liquefaction would be addressed through site-specific geotechnical studies prepared in accordance with CBC requirements as adopted in Chapter 16 of the Municipal Code, or Caltrans standards and standard industry practices. Chapter 18 of the CBC regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 Seismic Design Category C requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. Categories D, E, and F require additional analyses as well as mitigation measures to be considered in structural design. Proposed Plan policy NE-1.7 also supports this design and construction for structural integrity when subjected to seismic activity, and NE-1.11 ensures that critical emergency response and communications facilities be sited so that they are minimally exposed to seismic and geologic effects.

While seismic hazards cannot be eliminated completely, adherence to the state and local regulatory requirements and policies and implementing actions within the Proposed Plan would minimize potential exposure of people and new structures to seismic hazard by requiring incorporation of hazard mitigation measures into project design. Therefore, impacts due to liquefaction are less than significant.

Landslides

Implementation of the Proposed Plan could have a significant impact due to landslides if new development were to be located in areas with high landslide risk. Landslides may occur on slopes of 15 percent or less; however, the probability is greater on steeper slopes that exhibit old landslide features such as steep slopes or banks, slanted vegetation, and transverse ridges. Landslide-susceptible areas are characterized by steep slopes and downslope creep of surface materials. The Planning Area has slopes of less than two percent; thus, there is no risk of impact on people and property from seismically-induced landslides.

Mitigation Measures

None required.

Impact 3.7-2 Implementation of the Proposed Plan would not result in substantial soil erosion or the loss of topsoil. (*Less than Significant*)

Topsoil refers to the uppermost 6 to 8 inches of soil, which have the highest concentration of organic matter, and where most biological soil activity occurs. Implementation of the Proposed Plan could have a significant impact due to soil erosion or loss of topsoil if associated construction and development activities could expose soils to the effects of erosion, which could hinder proper drainage and stormwater management. Erosion control, particularly during grading, is necessary to avoid downstream sedimentation and flooding. Once disturbed, through the removal of vegetation, asphalt, or an entire structure, exposed and stockpiled soils could be affected by wind and water. At particular risk for wind erosion are exposed, barren fields. Sixty seven percent of the Planning Area is located on soils with a moderate to high risk of erosion, though a majority of this area is on previously developed land.

Generally, according to Dixon Municipal Code Chapter 16.04, no grading shall be performed within the city without first having obtained a permit from the Building Official with approval from the City Engineer, except for minor grading activities or special project types outlined in the Code, which do not require a grading permit. Compliance with the Dixon Municipal Code would minimize impacts from erosion.

In addition, construction that disturbs more than one acre would be subject to compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The NPDES permit requires an erosion and sediment control plan (ESC plan), which includes sufficient engineering analysis to show that the proposed erosion and sediment control measures during the period when preconstruction and construction related grading activities are to occur are capable of controlling surface runoff and erosion and retaining sediment on the project site. Construction activity subject to NPDES permitting requirements also must include a post-construction erosion and sediment control plan (PC plan). Once construction is complete and exposed areas are re-vegetated or covered by buildings, asphalt, or concrete, the erosion hazard is substantially eliminated or reduced. Proposed Plan implementing action NE-3.D strengthens this policy, calling for an update of the City's Storm Water Quality Management Plan as needed to comply with the NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems to minimize erosion resulting from construction or from new impervious surfaces.

Compliance with applicable codes and regulations would reduce the risk of substantial soil erosion or topsoil loss resulting from implementation of the Proposed Plan to a less than significant level.

Mitigation Measures

None required.

Impact 3.7-3 Implementation of the Proposed Plan would not locate structures on expansive soils or on a geologic unit or soil that is unstable, or that would become unstable as a result of new development under the Plan, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, or create substantial risks to life or property. (*Less than Significant*)

The Proposed Plan would have a significant impact if Plan-related development were located on an unstable geologic unit or soil, or a geologic unit or soil that would become unstable as a result of such development, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. Liquefaction and landslide hazards associated with proposed project implementation are examined under Impact 3.7-1 and are not revisited in detail.

Development associated with implementation of the Proposed Plan could be located on geologic units or soils that are unstable, including expansive soils. As described above, the Planning Area consists of several soil types, including Brentwood clay loam, Capay clay, Capay silty clay loam, Yolo Loam, and Yolo loam, clay substratum, all of which exhibit expansive properties when exposed to varying moisture content. Over time, this could result in damage to foundations, walls, or other improvements. The Planning Area consists mostly of soils which are low to moderately corrosive to concrete, and moderately to highly corrosive to steel. Corrosive soils can constrain foundation and utility construction design.

The City has adopted policies which require a soils engineer's report for development in areas of moderate to highly expansive soils. All buildings in these areas must be constructed according to **the engineer's recommendations** established in the soils report. The engineer must also inspect piers and foundations for compliance with the recommendations. Where specific geotechnical reports identify expansive soils, they must address how those soils may impact development. Where potential impacts are identified, these reports must include mitigation, such as over-excavating expansive soils and replacing them with suitable materials. Therefore, potential impacts related to expansive soils are less than significant.

Development in areas with expansive soils would require compliance with State and local building codes. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction. Chapter 16.04 of the City Municipal Code states that in the case of a development application involving significant grade differentials or areas greater than 50 acres, the Building Official may require a technical peer review of the grading plans and related reports. The review must be conducted by a professional engineer with a technical specialty in civil engineering, soils engineering, or geotechnical engineering, as determined by the Building Official. Chapters 16.04 through 16.06, the City's Grading Control and Stormwater Control Ordinances, also establish administrative procedures, minimum standards of review, and implementation and enforcement procedures for ensuring stable soil conditions.

In addition to CBC and Municipal Code requirements, proposed implementing action PS-3.A specifies that the City of Dixon “**require a soils and geologic report to be submitted for new construction prior to the issuance of grading and building permits and the submission of final maps.**” Implementing action PS3.B would prohibit or limit development in areas of slope instability unless adequate measures are taken to limit potential damage to levels of acceptable risk. The Proposed Plan policy NESH.1.11 ensures that the siting of critical emergency response and communications facilities are sited in areas minimally exposed to hazardous geologic effects.

Compliance with existing regulations and implementation of Proposed Plan policies and implementing actions would ensure that any impact is reduced to a less than significant level.

Mitigation Measures

None required.

Impact 3.7-4 Implementation of the Proposed Plan would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. *(Less than Significant)*

A significant impact could occur if new development under the Proposed Plan would locate structures in areas without connection to Dixon’s sanitary sewer system and on soils incapable of adequately supporting the use of septic tanks. The City of Dixon provides domestic wastewater collection and treatment for land within the jurisdictional boundary as well as some unincorporated areas in the Northeast Quadrant. Most other areas of unincorporated Solano County utilize individual septic systems. While the Proposed Plan does not anticipate additional growth within the SOI, all soils in the Planning Area have a very limited or somewhat limited ability to accommodate the use of septic tanks. Thus, there is a potentially significant risk of impact.

The City of Dixon owns and operates the Dixon Wastewater Treatment Facility to the southeast of the city and the associated wastewater collection system. Areas in Dixon’s sphere of influence are under the jurisdiction of the Solano County Code. The Solano County code specifies that a site evaluation is required prior to construction of any on-site sewage disposal system or expansion, alteration, or replacement of an existing system which includes one or more soil evaluations within the boundaries of the absorption area of the on-site sewage disposal system proposed for construction, expansion, alteration, replacement, or repair. Under the Proposed Plan, the City would maintain adequate wastewater collection and treatment services to serve existing and new development as directed under proposed policy PF-2.7. Implementing actions PF-2.E would direct the City to increase wastewater treatment facility, trunk sewer and pump station capacities in order to accommodate future growth within the City’s service area; and PF-2.E. would require the City to prepare a Sewer Master Plan to estimate the sizing and costs of needed improvements; to identify and mitigate sources of infiltration and inflow; and to determine how best to accommodate existing needs and future growth.

Thus, existing County and local regulations, and policies and implementing actions included in the Proposed Plan would reduce impacts related to septic systems to a less than significant level.

Mitigation Measures

None required.

Impact 3.7-5 Implementation of the Proposed Plan would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (*Less than Significant*)

Future development and redevelopment allowed under the Proposed Plan could result in direct or indirect impacts on paleontological resources. Construction activities such as grading, excavation, and ground-disturbing activities may result in the accidental destruction or disturbance of paleontological sites. As discussed in the Physical Settings section, numerous paleontological resources have been discovered throughout the Sacramento Valley and Solano County regions, including Vacaville and Putah Creek. While no paleontological resources have been discovered within the Planning Area to-date there is potential that resources could be found in the future.

Development on public lands, including lands owned by or under the jurisdiction of the City of Dixon, Solano County (including the SOI), and public agencies, would be subject to the provisions of California Resources Code Sections 5097-5097.6, which prohibit the unauthorized disturbance or removal of paleontological resources. Any highway projects associated with implementation of the Proposed Plan would be subject to paleontological studies conducted by Caltrans and local project sponsors, and Section 305 of the Federal Highway Act of 1956 gives Caltrans authority to use federal funds to salvage paleontological sites affected by highway projects. However, there are no existing or proposed policies that would protect paleontological resources that may be destroyed through the development of privately-owned land. Given that there is potential for paleontological resources to occur in the Planning Area, this impact would be significant and unavoidable and would require implementation of mitigation.

Mitigation Measures

MM-GEO-1 Establish a procedure for the management of paleontological materials found on-site during a development, including the following provisions:

- If materials are found on-site during grading, require that work be halted until a qualified professional evaluates the find to determine if it represents a significant paleontological resource.
- If the resource is determined to be significant, the paleontologist shall supervise removal of the material and determine the most appropriate archival storage of the material.

Appropriate materials shall be prepared, catalogued, and archived at the applicant's expense and shall be retained within Solano County if feasible.

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3.8 Hazards, Hazardous Materials, and Wildfire

This section assesses potential impacts from future development under the Proposed Project as related to hazards and hazardous materials, including those associated with the transport, use, or disposal of hazardous materials; hazardous materials use in the vicinity of a school; hazardous materials sites; airport hazards; emergency planning; and wildland fire hazards. This section provides context regarding hazardous materials, airport hazards, emergency management, and fire hazards in the Planning Area, as well as relevant federal, State, and local regulations and programs. For discussion of geologic and seismic hazards, see Section 3.7: Geology, Soils, and Seismicity. For discussion of hydrologic and flood hazards, see Section 3.9: Hydrology and Water Quality.

One comment was provided in response to the Notice of Preparation (NOP) specific to Hazards, Hazardous Materials, and Wildfire. The California Department of Conservation Division of Oil, Gas, and Geothermal Resources stated that the Planning Area encompasses 33 plugged and abandoned gas wells and has required that newly found or existing wells impacted by the development of a proposed project be reported and properly permitted per California Code of Regulations and Public Resources Code requirements.

Environmental Setting

PHYSICAL SETTING

Hazardous Materials

Hazardous materials are substances or a combination of substances which, because of quantity, concentration or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported or disposed of. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11, Article 3 groups hazardous materials into the following four categories based on their properties: toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), and reactive (causes explosions or generates toxic gases). Hazardous materials are commonly used in commercial, agricultural and industrial applications, as well as in residential areas to a limited extent. Hazardous materials are commonly found throughout the Planning Area in households, businesses, and agricultural operations. Typical residential and commercial substances include

motor oil, paint, cleaners and solvents, gasoline, refrigerants, and lawn and gardening chemicals. Pesticides and herbicides are often used in conjunction with agricultural operations.

The Certified Unified Program Agency (CUPA) that oversees Dixon is the Solano County Department of Resource Management, Environmental Health Services Division and has regulatory oversight over the implementation of hazardous materials and hazardous wastes regulations in the County through six programs: Hazardous Materials Business Plans (HMBP), Hazardous Waste Generator (HW), On-site Hazardous Waste Treatment (Tiered Permitting), Underground Storage Tank (UST), Aboveground Petroleum Storage Act (APSA), and California Accidental Release Prevention (CalARP).

The Solano County CUPA Operational Area Plan for Emergency Response to Hazardous Materials Incidents establishes specific emergency management policies and procedures for coordinating **Solano County's integrated response to hazardous materials incidents and pertains** to the management of any hazardous materials incident occurring within any incorporated city or unincorporated community within the designated Solano County Operational Area. The framework for response to hazardous materials is based on the agreement for the formation and maintenance of the Solano County Hazardous Materials Response Team (Solano County HMRT), a multi-agency team made up of 25-28 members from local fire departments, Vallejo, Fairfield, Vacaville, Benicia, Dixon, Travis Air Force Base, and four law enforcements (two sheriff officers and two Fairfield Police). Solano County HMRT is currently a Type 2 team but is rapidly approaching a Type 1 rating, once the hazmat team role is provided an entry team, to perform the following functions: Identify unknown materials; Contain/control any releases; Perform air monitoring; and Collect samples from evidentiary reasons under direction of the Solano County CUPA or law enforcement. (Solano County Department of Resource Management Environmental Health Services Division, 2017)

Hazardous Waste

A hazardous waste is any waste that may (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio-accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed (California Health and Safety Code, Section 25141).

As the CUPA for cities and unincorporated areas within Solano County, the Department of Resource Management, Division of Environmental Health Services oversees regulation and inspection of use and disposal of hazardous wastes through the implementation of programs such as Hazardous Waste Generator (HW) and On-site Hazardous Waste Treatment (Tiered Permitting). (Solano County, 2019)

There are currently two active landfills operating in Solano County that accept hazardous wastes, Recology Vacaville Solano Recycling Center and Republic Services, Solano Garbage. In addition to the Napa-Vallejo Hazardous Waste Facility, these sites participate in the Hazardous Waste Disposal for Businesses program which provides a less expensive way for Conditionally Exempt Small Quantity Generator (CESQG) businesses to comply with State laws and regulations for disposal of

hazardous wastes than hiring an independent waste hauler. As defined in the Solano County Recycle Guide, a business that generates less than 220 pounds or 27 gallons of hazardous waste a month is considered a CESQG. The Household Hazardous Waste (HHW) facility for Dixon and unincorporated areas is Recology Vacaville Solano Recycling Center, located at 855 ½ Davis Street in Vacaville. (Solano County Department of Resource Management, 2016)

Hazardous Materials Transport

Within the Planning Area, hazardous materials may be transported by vehicle along roadways or through transmission lines such as pipelines. Major transportation routes include Interstate 80 (I-80), State Route 113 (SR-113) and surface streets, particularly arterials and expressways that accommodate truck traffic, such as Pitt School Road and South Porter Road. As seen on Figure 3.8-1, SR-113 is designated as a truck route, which could be used to transport hazardous materials. Union Pacific Railroad mainline, which bisects the city in a southwest-northeast direction, carrying freight and passengers, could be used to transport hazardous materials. At-grade railroad crossings are located at North First Street, West A Street, Pitt School Road, Vaughn Road and Pedrick Road. Finally, natural gas pipelines are located throughout the Planning Area, including Pacific Gas & Electric (PG&E) distribution lines along portions of Robben Road, Pedrick Road, East A Street, West Cherry Street, South First Street, and Porter Road (PG&E, 2019).

Hazardous Materials Sites

Sites where hazardous chemical compounds have been released into the environment can pose threats to **human and ecologic systems'** health. Both historic and current activities, most often associated with industrial or commercial uses (including gas stations, car washes, etc.), may result in the release, leak, or disposal of toxic substances on or below the ground surface, where they can then contaminate soil and ground water. Disturbance of the ground through grading or excavation can result in exposure of these chemicals to the public. Improper handling of contaminated sites may result in further exposure via airborne dust, surface water runoff, or vapors.

The California Department of Toxic Substances Control (DTSC) and State of California Water Resources Control Board (SWRCB) track and identify sites with known or potential contamination and sites that may impact groundwater in accordance with Section 65962.5 of the California Public Resources Code. The list produced in accordance with this code is also known as the Cortese List.

- EnviroStor. The DTSC EnviroStor hazardous waste facility and cleanup sites database identifies sites that have known contamination or potentially contaminated sites requiring further investigation, and facilities permitted to treat, store, or dispose of hazardous waste. The EnviroStor database includes lists of the following site types: federal Superfund sites; State Response, including military facilities and State Superfund; voluntary cleanup; and school sites. (Department of Toxic Substances Control, 2019)
- GeoTracker. The SWRCB GeoTracker database tracks sites that impact groundwater or have the potential to impact groundwater. It includes sites that require groundwater cleanup such as Leaking Underground Storage Tanks (LUSTs), Department of Defense, and Site Cleanup Program sites; as well as permitted facilities that could impact groundwater such as operating Underground Storage Tanks (USTs), irrigated lands, oil

and gas production sites, and land disposal sites. (California State Water Resources Board, 2019)

SWRCB records identify 50 hazardous materials release sites in the Planning Area, of which five are undergoing remediation and 13 are permitted sites. As shown in Table 3.8-1, the majority of hazardous materials release sites in the Planning Area are related to LUSTs. Although current regulations requiring double-wall construction and leak monitoring equipment for USTs should reduce the number of releases in the future, many USTs installed in previous decades have failed, causing petroleum contamination in soils and groundwater. These releases are often discovered during tank removal or upgrade activities.

Typically, the most significant hazardous materials sites affecting public health are overseen by the DTSC. DTSC reports one on-going cleanup site in the Planning Area: A voluntary cleanup at 630 South Lincoln Street, a twelve-parcel site planned for residential development as part of the Southwest Dixon Specific Plan. The Site has been historically utilized for irrigated agriculture (row crops and orchards), rural residences, barns, and agricultural support structures (barns and sheds). Due to past uses that caused contamination and as a requirement prior to planned development, a preliminary site assessment must be conducted to check for potential contaminants of concern, namely lead, organochlorine pesticides, TPH-gas, and volatile organics that may have affected groundwater and soil. (**Department of Toxic Substances Control, 2019**).

As shown on Table 3.8-1 and Figure 3.8-1, of the 55 total hazardous materials sites in the Planning Area, 30 are now listed as closed cases by their regulatory agency. The remaining sites include a trucking company, a laundromat, a fertilizer supplier, two gas stations, a private residence, a farm, and two commercial properties.

Table 3.8-1: DTSC and SWRCB Hazardous Sites

<i>Site Name</i>	<i>Location</i>	<i>Site Type</i>	<i>Status</i>
SWRCB Open Sites (Geotracker)			
Alliance Tank Lines	6888 Tremont Rd	Cleanup Program Site	Open - Active
Dixon Business Park	Business Park Dr	Cleanup Program Site	Open - Remediation
Dixon Laundry	310 Jackson St S	LUST Cleanup Site	Open - Assessment & Interim Remedial Action
Galindo Farms	7699 Batavia Rd	LUST Cleanup Site	Open - Site Assessment
John Taylor Fertilizers - Dixon	1850 North 1st St	Cleanup Program Site	Open - Verification Monitoring
Shell – Ramos Oil - Dixon	1900 1st St N	LUST Cleanup Site	Open - Remediation
Taylor Builders Inc. Property	SE Corner of West A St and Gateway Dr	Cleanup Program Site	Open - Assessment & Interim Remedial Action
Unocal Bulk Plant #0161	129 East F Street (AKA: A St E)	LUST Cleanup Site	Open - Verification Monitoring
Willis Property	110 Porter St	LUST Cleanup Site	Open - Remediation
SWRCB Closed Sites (Geotracker)			
7-11 Store #23584	1075 1st St N	LUST Cleanup Site	Completed – Case Closed
Beacon # 3682 (Former)	1105 1st St N	LUST Cleanup Site	Completed – Case Closed
BP #11245	8665 Pedrick Rd	LUST Cleanup Site	Completed – Case Closed
CA Dept of Transportation	8638 Sparling Ln	LUST Cleanup Site	Completed – Case Closed

Table 3.8-1: DTSC and SWRCB Hazardous Sites

<i>Site Name</i>	<i>Location</i>	<i>Site Type</i>	<i>Status</i>
Campbells Soup	8680 Pedrick Rd	Cleanup Program Site	Completed – Case Closed
Chevron #9-1605	2705 1st St N	LUST Cleanup Site	Completed – Case Closed
Chevron #9-2237	1300 Stratford Ave	LUST Cleanup Site	Completed – Case Closed
City Corporation Yard	285 Chestnut St E	LUST Cleanup Site	Completed – Case Closed - Land Use Restrictions
Dixon Sanitary Service	302 N. 1st St	Cleanup Program Site	Completed – Case Closed
Exxon #7-6237 Case #1	1405 Ary Ln	LUST Cleanup Site	Completed – Case Closed
Food & Liquor #88	109 Adams St N	LUST Cleanup Site	Completed – Case Closed
Former Exxon	6618 Milk Farm Rd	LUST Cleanup Site	Completed – Case Closed
Former Exxon 7-6237	1405 Ary Ln	LUST Cleanup Site	Completed – Case Closed
Former Texaco	6615 Milk Farm Rd	LUST Cleanup Site	Completed – Case Closed
Ike's Landscaping	6464 Milk Farm Rd	LUST Cleanup Site	Completed – Case Closed
John's Liquor & Deli	483 Adams St N	LUST Cleanup Site	Completed – Case Closed
Lial Development (MF)	1205 1st St N	LUST Cleanup Site	Completed – Case Closed
Monfort Meats (Armour Foods)	800 1st St N	LUST Cleanup Site	Completed – Case Closed

Table 3.8-1: DTSC and SWRCB Hazardous Sites

<i>Site Name</i>	<i>Location</i>	<i>Site Type</i>	<i>Status</i>
Morgan's Fruit Stand	6646 Milk Farm Rd	LUST Cleanup Site	Completed – Case Closed
N W & Sons Plumbing (Former)	539 Adams St N	LUST Cleanup Site	Completed – Case Closed
Newhall Land & Farming (Dixon)	240 E St W	LUST Cleanup Site	Completed – Case Closed
Private Residence	Private Residence	Cleanup Program Site	Completed – Case Closed
Ron Dupratt Ford	1320 1st St N	LUST Cleanup Site	Completed – Case Closed
Tower Mart Store #18	7864 Schroeder Rd	LUST Cleanup Site	Completed – Case Closed
Ty's Electric	440 1st St N	LUST Cleanup Site	Completed – Case Closed
Unocal #0071 (Former)	165 A St E	LUST Cleanup Site	Completed – Case Closed
USA Gasoline Station # 849	2615 Plaza Court	LUST Cleanup Site	Completed – Case Closed
Valley Farms Transport	8656 Sparling Ln	LUST Cleanup Site	Completed – Case Closed
SWRCB Informational Sites (Geotracker)			
Barber-Rowland	Pedrick & Vaughn Road	Non-case Information	Informational Item
William D. Joslin, Inc.	677 Rio Dixon Rd	Non-case Information	Informational Item
SWCRB Permitted Sites (Geotracker)			
7-Eleven Inc. Store# 38010	1405 Ary Ln	N/A	Permitted Underground Storage Tank

Table 3.8-1: DTSC and SWRCB Hazardous Sites

<i>Site Name</i>	<i>Location</i>	<i>Site Type</i>	<i>Status</i>
AT&T California - Tf027	160 S 2nd St	N/A	Permitted Underground Storage Tank
Black Gold Petroleum, Inc.	2800 W A St	N/A	Permitted Underground Storage Tank
Dixon Chevron	1300 Stratford Ave	N/A	Permitted Underground Storage Tank
Dixon Food & Liquor	109 N Adams St	N/A	Permitted Underground Storage Tank
Dorset 76	170 Dorset Dr	N/A	Permitted Underground Storage Tank
Gas And Shop	7864 Schroeder Rd	N/A	Permitted Underground Storage Tank
Gill & Sidhu Son's	2615 Plaza Ct	N/A	Permitted Underground Storage Tank
Gillsidhu Enterprises Inc	6854 Sievers Rd	N/A	Permitted Underground Storage Tank
Safeway Fuel Center #1258-2	1200 Pitt School Rd	N/A	Permitted Underground Storage Tank
Sapna Enterprises Inc	8665 Pedrick Rd	N/A	Permitted Underground Storage Tank
Sidhu Chevron	2599 N 1st St	N/A	Permitted Underground Storage Tank
United Petroleum	1105 N 1st St	N/A	Permitted Underground Storage Tank
DTSC Cleanup Sites (Envirostor)			
D K Dixon	7300 Chevron Way	Operating	Operating Permit
Fremouw Environmental Services Inc	6940 Tremont Rd	Non-Operating	Closed

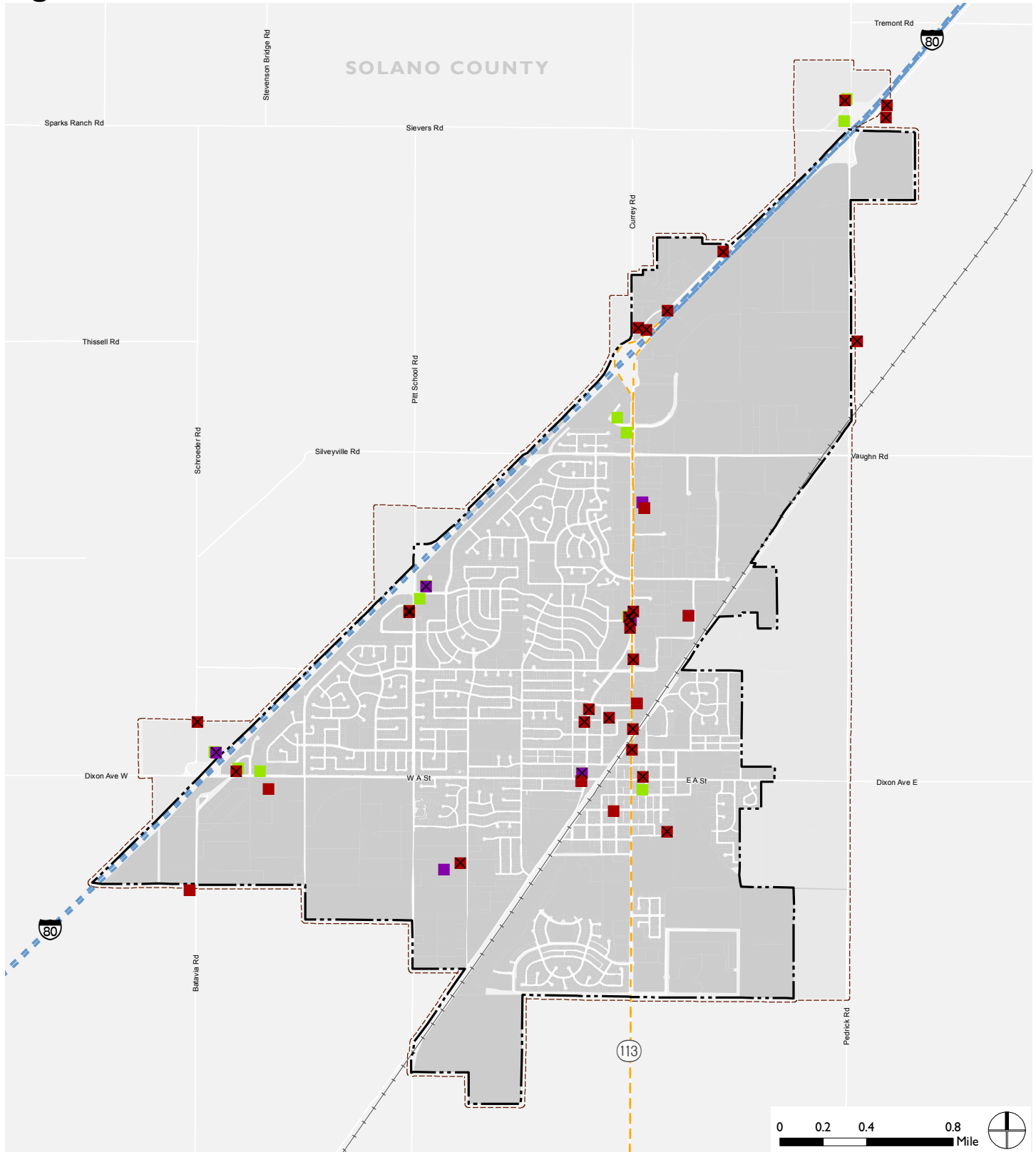
Table 3.8-1: DTSC and SWRCB Hazardous Sites

<i>Site Name</i>	<i>Location</i>	<i>Site Type</i>	<i>Status</i>
J R Simplot Company	Simplot Soilbuilders @ Dixon	Non-Operating	Protective Filer
New Dixon High School	Country Fair Drive/Pedrick Road	School Evaluation	No Further Action
North Elementary School	Pembroke Way/Fountain Way/Bell Drive	School Evaluation	No Further Action
SW Dixon Plan – Harvest Property	630 South Lincoln Street	Voluntary Cleanup	Active

Sources: Geotracker, SWRCB, 2019; Envirostor, DTSC, 2019; Dyett & Bhatia, 2019.

As of July 2019, Solano County no longer performs regulatory oversight for site mitigation cases, and jurisdiction has been transferred to the Central Valley Regional Water Quality Control Board for the City of Dixon. The State Water Board now maintains authority over adopting cleanup policies and regulations regarding hazardous sites, as well as the issuance of Closure/No Further Action (NFA) confirmation letters for site mitigation cases.

Figure 3.8-1: Hazardous Materials Sites and Truck Routes



Data Source: State Water Resource Control Board, GeoTracker 2019; Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Hazardous Materials Sites

- LUST Cleanup Site
- Other Cleanup Site
- Permitted UST Site
- × Closed Site

Truck Routes

- - - State Route 113
- - - Interstate 80

- +—+— Railroad
- ▭ Dixon City Limit
- - - Sphere of Influence
- ▭ County Boundary



Aerially Deposited Lead

Aerially deposited lead is a common hazardous materials issue in urban areas. Soils adjacent to major roadways often contain elevated concentrations of lead. The lead deposition is the result of airborne particulates and surface water runoff associated with tailpipe emissions prior to the time lead was phased out of vehicle fuels. Studies by the California Department of Transportation (Caltrans) suggest that hazardous waste levels of lead, if present, are generally found in soils within 30 feet of the edge of the pavement (Department of Toxic Substances Control, 2000).

Heavily trafficked roadways in the Planning Area are predominantly influenced by traffic from Interstate 80 along the northern edge of the city and California State Route 113 (First Street) which runs through the center of Dixon. Other important circulation routes include Dixon Avenue/West "A" Street, "H" Street, Stratford Avenue, Pitt School Road, Lincoln street, Almond Street, and Adams Street. Vaughn Road and Pedrick Road may be impacted by proposed development and SR 113 realignment projects, respectively. Properties located adjacent to these roadways and corresponding interchanges may contain elevated concentrations of lead in exposed surface soils, which could pose a health hazard to construction workers and users of the properties. Lead is a State-recognized carcinogen (causes cancer) and reproductive toxicant (causes birth defects or other reproductive harm) (CalEPA, 2007). Exposure of construction workers or future site occupants to lead in soil could result in adverse health effects, depending on the duration and extent of exposure.

Hazardous Materials in Building Materials

Hazardous materials, such as lead and asbestos, may be found in building materials and disturbed during demolition and renovation activities associated with development or redevelopment. Lead compounds were commonly used in interior and exterior paints until they were banned in 1978. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance until they were banned. In addition, other common items present in buildings, such as electrical transformers, fluorescent lighting, electrical switches, heating/cooling equipment, and thermostats can contain hazardous materials, which may pose a health risk if not handled and disposed of properly.

Demolition of buildings has the potential to release lead particles, asbestos fibers, and/or other hazardous materials to the air where they may be inhaled by construction workers and the general public. Federal and State regulations govern the demolition of structures where lead or material containing lead is present. During demolition, lead-based paint that is securely adhering to wood or metal may be disposed of as demolition debris, which is a non-hazardous waste. Loose and peeling paint must be disposed of as a California and/or federal hazardous waste if the concentration of lead exceeds applicable waste thresholds. State and federal construction worker health and safety regulations require air monitoring and other protective measures during demolition activities where lead-based paint is present.

Federal, State, and local requirements also govern the removal of asbestos or suspected asbestos-containing materials (ACMs), including the demolition of structures where asbestos is present. The Yolo-Solano Air Quality Management District (AQMD) requires asbestos surveys for certain

renovation and demolition projects¹. Workers conducting asbestos abatement must be trained in accordance with State and federal Occupational Safety and Health Administration (OSHA) regulations.

Fluorescent lighting tubes and ballasts, computer displays, and several other common items **containing hazardous materials are regulated as “universal wastes” by the State of California**. Universal waste regulations allow common, low-hazard wastes to be managed under less stringent requirements than other hazardous wastes. Management of other hazardous wastes is governed under the DTSC hazardous waste rules.

Abandoned Gas Wells

Northern California is known for its rich gas fields. As shown in Table 3.8-2, the Planning Area contains 23 gas wells, all of which have been plugged and abandoned. Three are located within the Northeast Quadrant Specific Plan Area and within the Dixon City Limits. Six are located within the City Limits. Eight are located within **Dixon’s Sphere of Influence**. Two are located within City Limits in the wastewater treatment area.

The California Department of Conservation would have jurisdiction over any development occurring in proximity to the identified abandoned gas wells. No well work may be performed on any oil or gas well without written approval from the Division in the form of an appropriate permit. This includes, but is not limited to, mitigating leaking fluids or gas from abandoned wells, modifications to well casings, and/or any other re-abandonment work. Title 14, Section 1723.5 of the California Code of Regulations states that all well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this grade regulation, a permit from the Division is required before work can start.)

¹ Yolo-Solano Air Quality Management District. Asbestos. Online: <https://www.ysaqmd.org/rules-compliance/asbestos/>
Accessed: December 5, 2019.

Table 3.8-2: Wells Within Planning Area

<i>Operator</i>	<i>Well Number</i>	<i>Abandon Date</i>	<i>Location</i>
H.T. Hillard & Co.	Sparling 1-1	1988	Dixon (Northeast Quadrant)
Two Bay Petroleum	E. Dixon Unit 1-1	1955	Dixon (Northeast Quadrant)
H.T. Hillard & Co.	Rendall #1	1993	Dixon (Northeast Quadrant)
Exxon Mobil Corporation	Mary M. Collier #1	1960	Dixon (Northeast Quadrant)
Two Bay Petroleum	Vaughn #1	1994	Dixon (Northeast Quadrant)
Robert Sumpf	Vaughn #1	1986	Dixon (Northeast Quadrant)
Hillard Oil & Gas Inc.	Nishikawa Unit 1	1982	Dixon
Robert Sumpf	Nishikawa 1	1990	Dixon
F-W Oil Interests, Inc.	Bertolero 1	1999	Dixon
Donald C. Slawson Expl Co., Inc	Ruby 1-24	2008	Dixon
Hillard Oil & Gas Inc.	SW-Kilkenney 1	1977	Dixon
Dekalb Energy Co.	Fukimoto Farms 33-26	1982	Dixon
Venture Oil & Gas Inc.	Etcheverria 6-1	2010	Dixon (Wastewater Treatment Area)
Hunnicuttt & Camp Drilling Co.	Rohwer 1	1980	Dixon (Wastewater Treatment Area)
Chevron U.S.A. Inc.	Sparling #1	1977	SOI
SWEPI, LP	Davis Unit 1 #1	1949	SOI
TXO Production Corp.	Fulmot 11-1	1985	SOI
BTA Oil Producers	9808 JV-P Dann Unit 1	1999	SOI
Natural Gas Corp. of Calif.	Gill Unit 1-13	1984	SOI
Atlantic Oil Company	Timm 1	1982	SOI
Hillard Oil & Gas Inc.	S & W-Lombardo Unit 2	1977	SOI
TXO Production Corp.	Lombardo 24-1	1981	SOI
Hillard Oil & Gas Inc.	S & W-Lombardo Unit 1	1977	SOI

Table 3.8-2: Wells Within Planning Area

<i>Operator</i>	<i>Well Number</i>	<i>Abandon Date</i>	<i>Location</i>
H.T. Hillard & Co.	Sparling 1-1	1988	Dixon (Northeast Quadrant)
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H.T. Hillard & Co.	Rendall #1	1993	Dixon (Northeast Quadrant)
Exxon Mobil Corporation	Mary M. Collier #1	1960	Dixon (Northeast Quadrant)
Two Bay Petroleum	Vaughn #1	1994	Dixon (Northeast Quadrant)
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Hillard Oil & Gas Inc.	Nishikawa Unit 1	1982	Dixon
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F-W Oil Interests, Inc.	Bertolero 1	1999	Dixon
Donald C. Slawson Expl Co., Inc	Ruby 1-24	2008	Dixon
Hillard Oil & Gas Inc.	SW-Kilkenney 1	1977	Dixon
Dekalb Energy Co.	Fukimoto Farms 33-26	1982	Dixon
Venture Oil & Gas Inc.	Etcheverria 6-1	2010	Dixon (Wastewater Treatment Area)
Hunnicutt & Camp Drilling Co.	Rohwer 1	1980	Dixon (Wastewater Treatment Area)

Source: California Department of Conservation, 2018.

Sensitive Receptors

Some populations, such as children, the elderly, and the infirm, are more susceptible to health effects of hazardous materials than the general population. Hazardous materials used near schools, day care centers, senior housing, and hospitals must consider potential health effects to these populations, often referred to as “sensitive receptors.” Construction or redevelopment on contaminated properties that could potentially generate vapors or fugitive dust containing contaminants may potentially pose a health risk to these populations. In addition, commercial businesses in proximity to sensitive receptors may have hazardous emissions or handle hazardous or acutely hazardous materials or wastes that could pose a health risk to these sensitive receptors.

To protect sensitive receptors, Section 17210 et seq. of the State Education Code, Sections 21151.2, 21151.4, and 21151.8 of the Public Resources Code require that prospective school sites be reviewed to determine that such sites are not a current or former hazardous waste disposal site, a hazardous substance release site, or the site of hazardous substance pipelines. These laws also require

consultation with local hazardous materials agencies and air quality districts to ensure that no sites within one-quarter mile of a school that handle or emit hazardous substances would potentially endanger future students or workers at the prospective school site.

Pursuant to the State Education Code, all school districts receiving State funds are required to prepare a Phase I environmental assessment on prospective school sites. The Phase I assessment would detail the historical uses of the property and indicate any potential for contamination. DTSC must review this assessment and make one of the following findings: 1) that no further action is required; or 2) that concerns about contamination exist and the district must conduct a Preliminary Endangerment Assessment (PEA). The PEA process entails site sampling and the development of a detailed risk assessment of any contaminants present on the proposed school property. New Dixon High School and North Elementary School sites were identified by DTSC as school evaluations and have undergone assessment but do not require further action.

Airport Hazards

Risks associated with airport operations include those to people and property located in the vicinity of the airport in the event of an accident, and those to the safety of persons aboard an aircraft.

The City of Dixon does not have an airport and no public-use airports or private airstrips are present within the Planning Area. The nearest regional public use airport is the Nut Tree Airport, located approximately seven miles southwest of the Planning Area. Two other airports are located in Solano County: the Travis Air Force Base (AFB) is located approximately 11 miles southwest of the Planning Area, and the Rio Vista Municipal Airport is located approximately 17 miles southeast of the Planning Area. The Planning Area does not fall within any of the Airport Influence Areas of these airports (see Solano County General Plan for more information).

The nearest private airport is Maine Prairie Airport, located under one mile southeast of the non-contiguous City-owned parcels within the Planning Area. The Maine Prairie Airport is serviced by one gravel-surfaced runway and supports primarily agricultural aircraft operations. There is no control tower at the airport, and permission is required to land. However, private airports and associated environmental impacts are not discussed in the scope of this EIR, which is concerned with public or public use airports.

Emergency Management and Response

Emergency operations in the Planning Area are undertaken by the City of Dixon and Solano County. The Solano County Office of Emergency Services (OES) oversees the development, establishment, and maintenance of programs and procedures related to natural or human-caused disasters in the county and is trained to properly respond to floods, earthquakes, major fires, storms, radiological or hazardous material incidents, aircraft accidents, mass casualty incidents, and any other emergency-related function. City and County departments coordinate fire suppression activities, evacuations, hazardous materials incidents, disaster exercises, planning, and use of resources through the SEMS/Incident Command System. Additionally, Solano County OES conducts emergency preparedness training and awareness presentations for citizens and various organizations to help the public be aware of how to act in case of a disaster or major emergency.

(Solano County Office of Emergency Services, 2017) For the City of Dixon, disaster preparedness, response, and evacuation are coordinated by the Dixon Fire Department.

Fire Hazards

Wildland Fires

In accordance with California Public Resource Code Sections 4201-4204 and 51175-51189, the California Department of Forestry and Fire Protection (CDF) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. Under Government Code, Section 511182 areas within a very high FHSZ must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas. As shown on Figure 3.8-2, no portion of the Planning Area is classified as a moderate, high or very high FHSZ. **Other fire risk analysis is completed as part of CDF's Fire Threat, Fire and Resource Assessment, and is shown on Figure 3.8-3.**

In this analysis, the Planning Area is classified as having little to no or moderate wildfire threat, with the more developed portions of the City of Dixon generally having a moderate risk and surrounding areas as low. The City of Dixon is classified as a Local Responsibility Area (LRA), meaning that the City and other local fire districts are responsible for fire protection services. The Dixon Fire Department provides fire protection services within the city limits and surrounding unincorporated areas. The Department divides the City of Dixon into three sub-districts and the Dixon Fire Protection District into seven sub-districts.

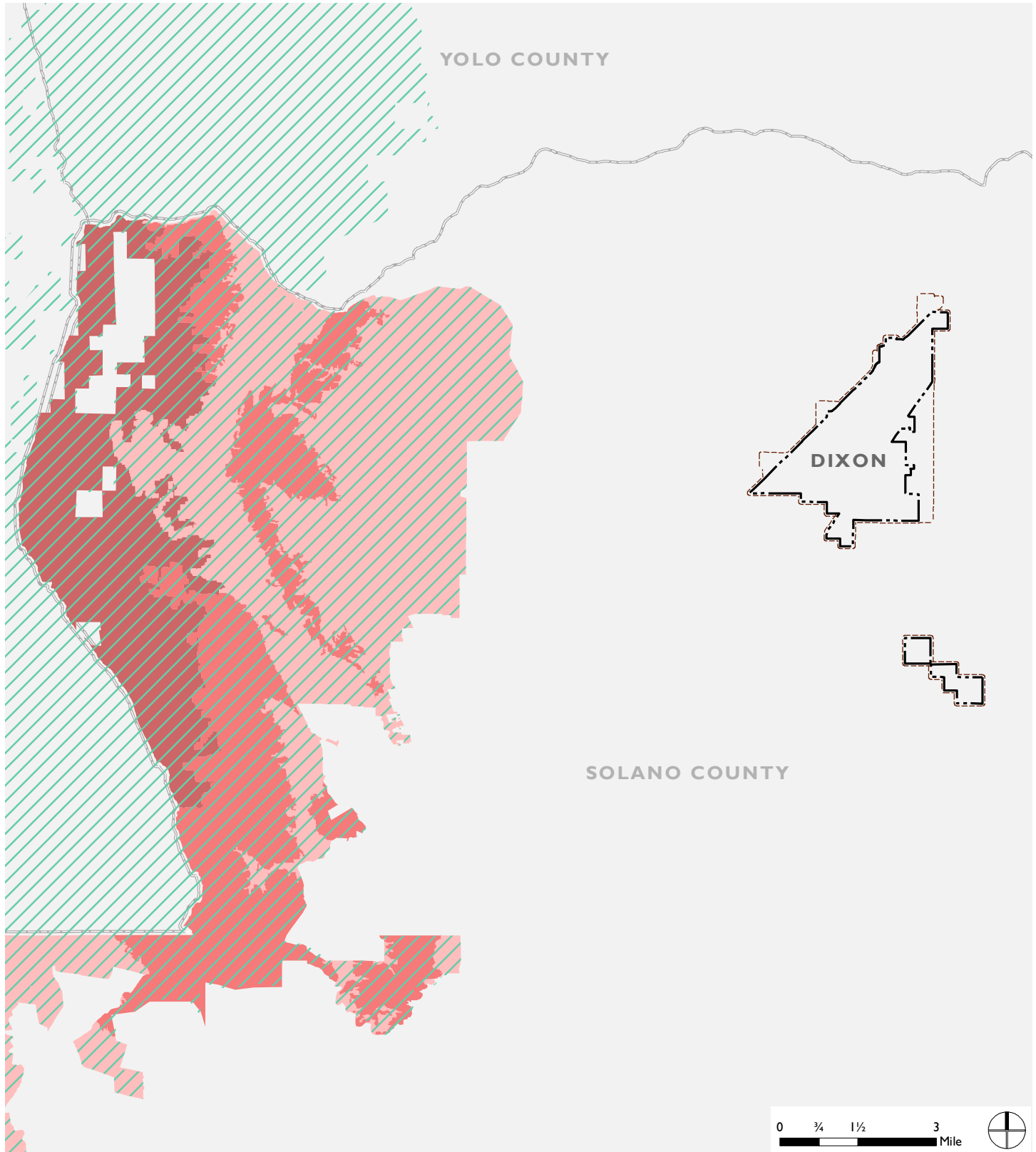
Urban Fires

Urban fires are fires that begin in urban centers. They are typically localized, but have the potential to spread to adjoining buildings, especially in areas where homes and/or business facilities are clustered closely together. Strong winds that can easily spread fires are not typical in the area. Other factors affecting urban fire risk and relative likelihood of loss of life or property include building age, height and use, storage of flammable material, building construction materials, availability of sprinkler systems, and proximity to a fire station and hydrants. Even with these risks, the Insurance Service Organization (ISO) gave the city a rating of 3 and the Dixon Fire Protection District a rating of 3Y/10 in 1993, when the current General Plan was adopted, which is a good rating for an urban area.² This rating takes into account natural risks as well as the provision of fire protection services.

Urban fire risk in the city is mitigated in a number of ways, including through the enforcement of updated building and fire codes and the involvement of the Dixon Fire Department in the development review process. Furthermore, the Solano County General Plan includes policies and programs for fire-safe planning including buffering, creating fuel breaks, clustering, and fire-safe construction that apply to Dixon, though the City does not fall within the Very High FHSZs that these methods were designed for.

² The ISO rating is from one to ten, with one being the best score reflecting the lowest risk.

Figure 3.8-2: Fire Hazard Severity Zones



Data Source: CAL FIRE, FRAP, 2019; Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

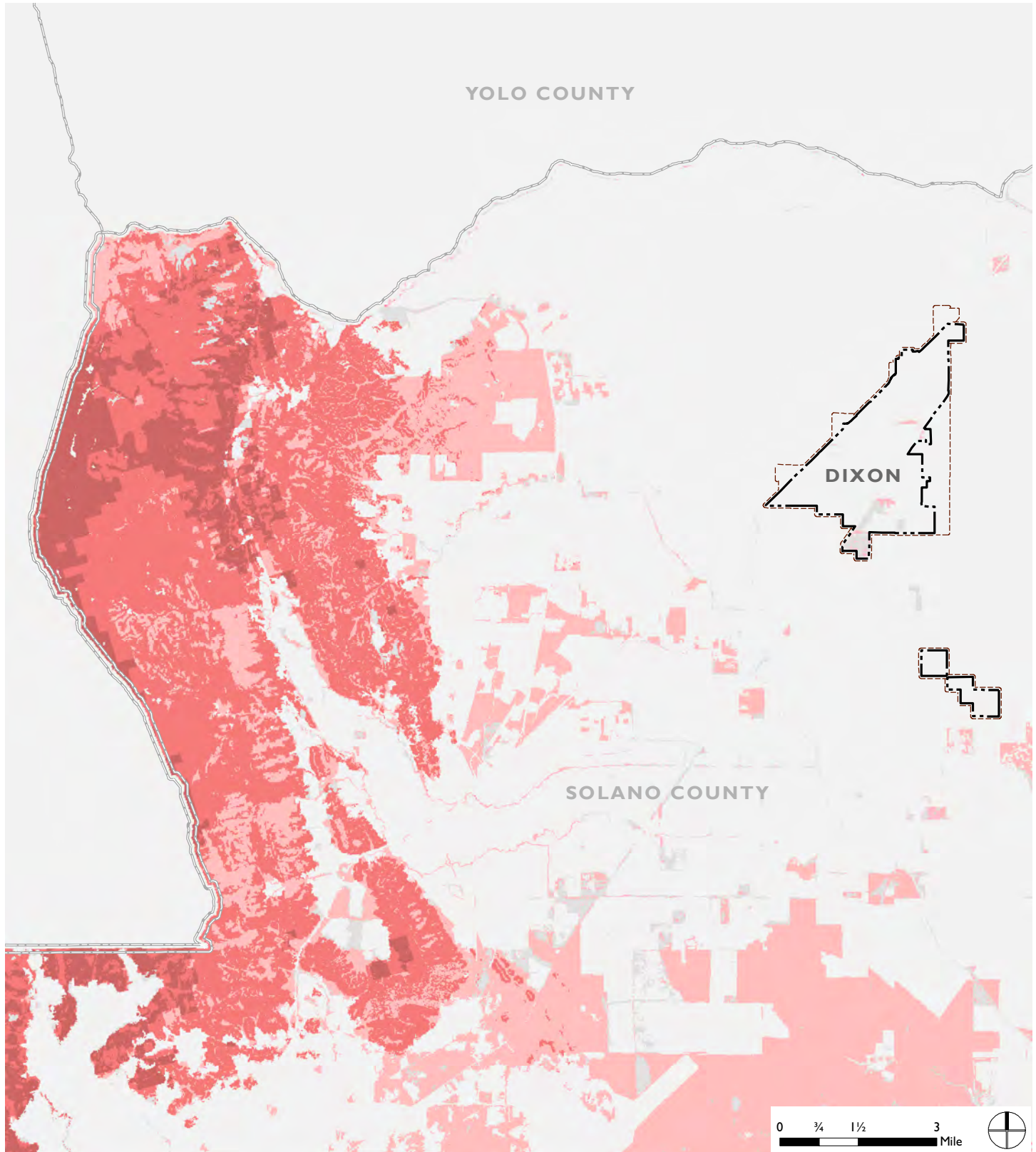
Fire Hazard Severity

- Moderate
- High
- Very High

- Dixon City Limit
- Sphere of Influence
- County Boundary

State Responsibility Area

Figure 3.8-3: Fire Threats



Data Source: CAL FIRE, FRAP, 2019; Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Fire Threat

- Little or No Threat
- Moderate
- High
- Very High
- Extreme

- Dixon City Limit
- Sphere of Influence
- County Boundary

Fire Protection and Prevention

The City and unincorporated portions of the Planning Area are served by the Dixon Fire Department as part of the Dixon Fire Protection District, as contractually agreed upon with Solano County. See Section 3.12 Public Services and Facilities for more detail.

REGULATORY SETTING

Hazardous materials and hazardous wastes are extensively regulated by federal, State, regional and local regulations, with the major objective of protecting public health and the environment. In general, these regulations provide definitions of hazardous substances; identify responsible parties; establish reporting requirements; set guidelines for handling, storage, transport, remediation, and disposal of hazardous materials and wastes; and require health and safety provisions for both workers and the public, such as emergency response and worker training programs. Sites which are subject to these regulations are identified on periodically updated published lists at the federal, state, and local levels; the regulated sites include underground storage tank (UST) locations. The major regulations relevant to the Proposed Plan are summarized in the following subsections.

Federal Regulations

Environmental Protection Agency

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List, which is a list of contaminated sites warranting further investigation by the EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

United States Department of Transportation (USDOT)

The USDOT Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 40, 42, 45, and 49 of the Code of Federal Regulations, and implemented by Title 17, 19, and 27 of the CCR. The USDOT Hazardous Materials Regulations (HMR) apply to persons who undertake transportation of hazardous materials. The Pipeline and Hazardous Materials Safety Administration (PHMSA) issues the HMR. PHMSA has also issued procedural regulations, including provisions on registration and public sector training and planning grants (49 CFR Parts 105, 106, 107, and 110). PHMSA's regulatory functions include issuing rules and regulations governing the safe transportation of hazardous materials and representing USDOT in international organizations and working to assure the compatibility of domestic regulations with the regulations of bodies such as the Federal Motor Carrier Safety Administration (FMCSA). The FMCSA issues regulations concerning highway routing of hazardous materials, the hazardous materials endorsement for a commercial driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials. The Federal Railroad Administration (FRA) is authorized to regulate the transportation of hazardous materials via rail.

Federal Emergency Management Agency

The primary mission of the Federal Emergency Management Agency (FEMA) is to reduce the loss of life and property and to protect the nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation. (6 U.S.C. § 313(b)).

Robert T. Stafford Disaster Relief and Emergency Assistance Act

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 100-707) was signed into law on November 23, 1988 and amended the Disaster Relief Act of 1974 (Public Law 93-288). The Stafford Act constitutes the statutory authority for most Federal disaster response activities especially as they pertain to FEMA and FEMA programs.

Disaster Mitigation Act

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan that incorporates specific program elements of the DMA2K law.

Hazard Mitigation Planning and Hazard Mitigation Grant Program

FEMA requires state, tribal, and local governments to develop and adopt hazard mitigation plans as a condition for receiving certain types of non-emergency disaster assistance, including funding for mitigation projects. Jurisdictions must update their hazard mitigation plans and re-submit them for FEMA approval every five years to maintain eligibility. Through the Hazard Mitigation Assistance (HMA) grant programs (Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and Flood Mitigation Assistance), FEMA offers planning grants that support state, tribal, and local governments in developing and updating mitigation plans. The City has complied with this requirement with the creation of its own Natural Hazards Mitigation Plan (see Local Regulations, below, for a detailed description of this plan.)

Emergency Planning and Community Right-To-Know Act

The Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 was included under SARA law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR Appendix B). The Community Right-to-Know provisions help increase the **public's knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment.**

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 was created to provide adequate protection from the risks to life and property related to the transportation of hazardous materials in commerce by improving regulatory enforcement authority of the Secretary of Transportation.

Occupational Safety and Health Administration (OSHA)

With the Occupational Safety and Health Act of 1970, Congress created the Occupational Safety and Health Administration (OSHA) to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.

State Regulations

California Code of Regulations

Title 3

The California Code of Regulations (CCR) Title 3: Food and Agriculture regulates the storage and transportation of pesticides. Pesticides, or any container or equipment that holds or has held a pesticide, shall not be stored, handled, emptied, disposed of, or left unattended in such a manner

or at any place where they may present a hazard to persons, animals (including bees), food, feed, crops or property.

Title 14

The California Code of Regulations (CCR) Title 14, Section 1723.5 states that all well casings shall be cut off at least 5 feet but no more than 10 feet below grade. If any well needs to be lowered or raised (i.e. casing cut down or casing riser added) to meet this grade regulation, a permit from the Division is required before work can start.

Title 22

The California Code of Regulations (CCR) Title 22 provides the following definition of hazardous materials:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration or physical, chemical, or infectious characteristics, may either (1) cause or significantly contribute to an increase in mortality or an increase in serious, irreversible or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health and safety, or the environment when improperly treated, stored, transported or disposed of. Hazardous materials include waste that has been abandoned, discarded, or recycled on the property and as a result represents a continuing hazard as the development is proposed. Hazardous materials also include any contaminated soil or groundwater.

Title 22 also provides standards applicable to generators and transporters of hazardous wastes, as well as standards for operators of hazardous waste transfer facilities, among other regulations.

Title 27

The California Department of Resources Recycling and Recovery (CalRecycle) and the SWRCB jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, facilities, and disposal sites; documentation and reporting; enforcement, California Emergency Services Act.

The California Emergency Services Act (Government Code Chapter 7, Sections 8550-8668) was adopted in 1970. The act's purpose is to ensure that preparations within the state will be adequate to deal with the effects of natural, manmade, or war-caused emergencies. The act provides for emergency powers to be conferred upon the Governor and local executives; the establishment of the State Office of Emergency Services; the coordination and direction of State entities during an emergency, and mutual aid by the State and its departments and agencies, as well as political subdivisions.

California Environmental Protection Agency (CalEPA)

The CalEPA has a major role in overseeing the management of hazardous materials and waste within California. CalEPA was created by the State of California to establish a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources.

Accidental Release Prevention Law/Chemical Accident Release Prevention Program (CalARP)

SB 1889 established the merging of federal and State of California programs governing the accidental airborne release of chemicals listed under Section 112 of the Clean Air Act. Effective January 1, 1997, CalARP replaced the previous California Risk Management and Prevention Program (RMPP) and incorporated the mandatory federal requirements. CalARP addresses facilities containing specified hazardous materials that, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Hazardous Materials Worker Safety Requirements

The Federal Occupational Safety and Health Administration (Fed/OSHA) and the California Occupational Safety and Health Administration (Cal/OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the 29 CFR as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

The State regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

California Health and Safety Code

Hazardous Materials Release Response Plans and Inventory

The California Health and Safety Code Chapter 6.95 includes provisions for Hazardous Materials Release Response Plans and Inventory. The intent of the code is to protect the public health and safety and the environment; it is necessary to establish business and area plans relating to the handling and release or threatened release of hazardous materials. It calls for the establishment of

a statewide environmental reporting system. Within Solano County, the Hazardous Materials Business Plan (HMBP) meets this requirement.

Aboveground Petroleum Storage Act

Congress requires EPA Region 9 to make RMP information available to the public through the EPA's **Envirofacts Data Warehouse**. The **Envirofacts Data Warehouse** is considered the single point of access to select EPA environmental data. California Health and Safety Code (H&SC) Section 25270, Aboveground Petroleum Storage Act, requires registration and spill prevention programs for above ground storage tanks that store petroleum. In some cases, Aboveground Storage Tanks (ASTs) for petroleum may be subject to groundwater monitoring programs that are implemented by the Regional Water Quality Control Boards (RWQCBs) and the SWRCB.

State Underground Storage Tank Program

State laws also regulate Underground Storage Tanks (USTs) and ASTs containing hazardous substances. These laws are primarily found in the Health and Safety Code, and, combined with CCR Title 23, comprise the requirements of the State UST program. The laws contain requirements for UST permitting, construction, installation, leak detection monitoring, repairs and corrective actions and closures.

Cortese List

The Cortese List refers to provisions in Government Code Section 65962.5. This Section requires the DTSC, State Department of Health Services, SWRCB, and designated local enforcement agencies to compile and update lists of hazardous materials sites under their purview as specified **in the code**. The **"Cortese List"** consists of the information provided by these agencies under the code (See Table 3.8-1, above, for a detailed inventory of all sites within the Planning Area to whom Government Code Section 65962.5 applies.) There are no sites in Dixon that are on the Cortese List.

State of California Emergency Plan, 2017

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Response to hazardous material incidents is one part of this plan. The plan is managed by the California Emergency Management Agency, which coordinates the responses of other agencies, including CalEPA, the California Highway Patrol, California Department of Fish and Wildlife (CDFW), and RWQCB.

Office of Environmental Health Hazard Assessment

The State of California Office of Environmental Health Hazard Assessment (OEHHA) oversees implementation of many public health-related environmental regulatory programs within CalEPA, including implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. The proposition was intended to protect **California citizens and the state's drinking water sources from chemicals known**

to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

The California Department of Toxic Substances Control (DTSC)

Within CalEPA, the California DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, the DTSC has been **authorized to implement the State's hazardous waste management program for the CalEPA.**

The DTSC is responsible for compiling a list of hazardous materials sites pursuant to Government Code Section 65962.5, which includes five categories:

1. Hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the health and safety code;
2. Land designated as “**hazardous waste property**” or “**border zone property**”;
3. Properties with hazardous waste disposals on public land;
4. Hazardous substance release sites selected for (and subject to) a response action; and
5. Sites included in the Abandoned Site Assessment Program.

California Department of Transportation

The California Department of Transportation (Caltrans) manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, permits more than 400 public-use airports and special-use hospital heliports, and works with local agencies. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and inter-city rail services.

State Water Resources Control Board

The Porter-Cologne Water Quality Control Act of 1969 established the SWRCB and divided the state into nine regional basins, each with a RWQCB. The SWRCB is the primary state agency **responsible for protecting the quality of the state's surface and groundwater supplies, while the regional boards are responsible for developing and enforcing water quality objectives and implementation plans.** The Planning Area is within the jurisdiction of Central Valley RWQCB.

The act authorizes the SWRCB to enact state policies regarding water quality in accordance with the U.S. EPA Clean Water Act (CWA) section 303. The SWRCB regulates the handling, storage, and disposal of hazardous substances in construction projects. Permits and/or other action by the SWRCB may be required if contamination of water or soils occurs during the construction of the Proposed Project. In addition, the act authorizes the SWRCB to issue Waste Discharge Requirements (WDRs) for projects that would discharge to State waters.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan that incorporates specific program elements of the DMA2K law.

California Multi-Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Plan (SHMP), was updated in 2018. The SHMP outlines present and planned activities to address natural hazards. The adoption of the SHMP qualifies the State of California for federal funds in the event of a disaster under the DMA2K. The SHMP provides goals and strategies which address minimization of risks associated with natural hazards and response to disaster situations.

California Strategic Fire Plan, 2018

The California Strategic Fire Plan is a statewide plan developed by the State Board of Forestry and Fire Protection and CAL FIRE to achieve a more resilient natural and built environment that is more resistant to the occurrence and effects of wildland fire through local, State, federal, and private partnerships. The plan focuses on a natural environment that is more fire resilient, buildings and infrastructure that are more fire resistant, and a society that is more aware of and responsive to the benefits and threats of wildland fire - all achieved through local, state, federal, tribal, and private partnerships. Land use policies include providing for defensible space, fuel management, development review, and fire-resistant construction.

California Wildland Hazard/Building Code

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the California Building Code (CBC). According to the updated regulations, new buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

1. State Responsibility Areas. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.
2. Local Agency Very-High Fire Hazard Severity Zone. New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.

According to CAL FIRE's maps of fire hazard severity zones, the Planning Area is located in a Local Responsibility Area. No areas within the Planning Area are identified as very high fire hazard severity areas.

California Public Utilities Commission (CPUC) Wildfire Regulations

CPUC works to reduce the probability of wildfires associated with utility operation. CPUC approves wildfire mitigation plans submitted by utilities and transmissions owners³, issues rules and regulations regarding utility operation and maintenance for wildfire prevention, and identifies locations across California that are at high risk of power line fires⁴.

California Senate Bill No. 1028

Signed into law in 2016, SB 1028 requires electrical corporations, local publicly owned electric utilities, and electrical cooperatives to construct, maintain, and operate electrical lines and equipment in a manner that minimizes the risk of catastrophic wildfire. Electrical corporations are required to annually prepare a wildfire mitigation plan, which must be submitted for review by the Public Utilities Commission, and must identify whether the installation of any overhead electrical lines and equipment would pose a significant risk of catastrophic wildfire in any portion of the geographic area where the utility's lines exist. If any area of significant risk is found, the utility or electrical cooperative is required to gain approval for wildfire mitigation measures from the Public Utilities Commission⁵.

Safe School Plan (California Education Code Sections 32282 et seq.)

This statute requires public schools to prepare a school safety plan, which includes routine and emergency disaster procedures and a school building disaster plan. The plan can be amended as needed and shall be evaluated at least once a year to ensure that the comprehensive school safety plan is properly implemented.

Carpenter-Presley-Tanner Hazardous Substance Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), which is modeled after CERCLA, imposes liability for hazardous substance removal or remedial actions and requires the DTSC to adopt, by regulation, criteria for the selection and for the priority ranking of hazardous substance release sites for removal or remedial action under the act.

³ California Public Utilities Commission. Utility Wildfire Mitigation Plans (SB 901). Online: <https://www.cpuc.ca.gov/SB901/>. Accessed: June 19, 2019.

⁴ California Public Utilities Commission. CPUC Fire Safety Rulemaking Background. Online: <https://www.cpuc.ca.gov/firethreatmaps/>. Accessed: June 19, 2019.

⁵ California Legislative Information, 2016. SB-1028 Electrical corporations: local publicly owned electric utilities: electrical cooperatives: wildfire mitigation plans. Online: https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1028. Accessed June 19, 2019

California Public Resources Code

Section 2115.4

Public Resources Code Section 21151.4 regulates hazardous materials near schools. Public Resources Code Section 21151.4 prohibits the certification of an EIR for a project involving the construction or alteration of a facility that might reasonably be anticipated to emit hazardous air emissions or handle extremely hazardous air emissions in a quantity greater than a certain threshold, within one-quarter mile of a school.

Sections 3208 and 3255(a)(3)

Section 3208 and 3255(a)(3) of the Public Resources Code give the Division of Oil, Gas, and Geothermal Resources of the California Department of Conservation the authority to order the re-abandonment of any well that is hazardous, or that poses a danger to life, health, or natural resources.

Local Regulations

CalEPA's Unified Program

In 1993, Senate Bill 1082 gave CalEPA the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The purpose of this program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. CalEPA oversees the Unified Program with support from the DTSC, RWQCBs, the OES, and the State Fire Marshal.

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the Certified Unified Program Agency (CUPA). The Solano County Department of Resource Management is the designated CUPA for the county. (Solano County, 2015) As the Certified Unified Program Agency, the Department of Resource Management administers the following Unified Programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan) Program
- California Accidental Release Prevention Program
- Underground Storage Tank Program
- Hazardous Waste Generator and Hazardous Waste On-Site Treatment Programs
- Above Ground Storage Tank Program (Spill Prevention, Control and Countermeasure Plans)

Solano County Hazardous Materials Business Plan

The Hazardous Materials Business Plan (HMBP) program requires businesses that store hazardous materials and/or hazardous waste in quantities equal to or greater than 55 gallons for liquids, 500 pounds for solids or 200 cubic feet for compressed gas to develop business emergency response plans, also referred to as a hazardous materials business plan (HMBPs) and report this information to the Solano County CUPA. The intent of the disclosure program is to provide first responders with site-specific information such as chemical inventory and facility site maps indicating locations and quantities of hazardous materials and wastes. All regulated facilities in Solano County file their data electronically in the California Environmental Reporting System (CERS).

Solano County Hazardous Waste Management Plan (Tanner Plan)

The Tanner Plan manages all hazardous wastes generated within the county and addresses the siting of hazardous waste facilities for the disposal of those wastes. The County participates with the regional Hazardous Waste Management Facility Allocation Committee in addressing the **Tanner Plan siting requirements**. The **Household Hazardous Waste Element of the County's Integrated Waste Management Plan** addresses the safe collection, recycling, treatment and disposal of hazardous wastes generated by households in the county.

Solano County Code

Title 13, Chapter 13.5 of the County's Code addresses hazards including underground storage of hazardous substances. It is the purpose of this chapter to adopt for the County of Solano the standards for construction and monitoring of facilities used for the underground storage of hazardous substances, and the procedure for issuance of permits for the use of these facilities set forth in division 20, chapter 6.7, California Health and Safety Code, §25280, et seq.⁶

Solano County Emergency Operations Plan

The Solano County Emergency Operations Plan (EOP) establishes an Emergency Management **Organization and assigns functions and tasks consistent with California's Emergency Management System** and the National Incident Management System. It provides for the integration and coordination of planning efforts of multiple jurisdictions within Solano County. This plan applies to any extraordinary emergency situation associated with any hazard, natural or human caused, which may affect Solano County and that generates situations requiring planned, coordinated responses by multiple agencies or jurisdictions. The provisions, policies, and procedures of this plan are applicable to all agencies and individuals, public and private, having responsibilities for emergency preparedness, response, recovery and/or mitigation in Solano County. The city governments within the County maintain their own emergency operations plans but are consistent with the policies and procedures established by the County. (Solano County Office of Emergency Services, 2017)

⁶ County of Solano. Solano County Code. Online:
<https://www.codepublishing.com/CA/SolanoCounty/#!/SolanoCounty1305.html#13.5-10> Accessed: December 5, 2019

Solano County Local Multi-Hazard Mitigation Plan

The Solano County Multi-Hazard Mitigation Plan (MHMP) is an effort undertaken by the County to mitigate the effects of natural hazards and plan for resiliency in the future that respects the character and needs of the people who live and work in Solano County. The purpose of the Solano County MHMP Update is to provide the County with a blueprint for hazard mitigation planning to better protect the people and property of the County from the effects of future natural hazard events. The MHMP was also developed to ensure the County's eligibility for federal disaster assistance, including Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation (PDM), Hazard Mitigation Grant Programs (HMGP), Flood Mitigation Assistance Program (FMA), and Severe Repetitive Loss (SRL). Additionally, the MHMP incorporates a Floodplain Management Plan (FMP) and Community Rating System (CRS) components, which could lower flood insurance premiums in the County. (Solano County Office of Emergency Services and Department of Resource Management, 2012)

Solano County General Plan

The County General Plan acknowledges fire risk in its western regions that have been identified by CAL FIRE as very high severity zones. While the City of Dixon is not within this zone, it is still guided by County policies and programs for fire-safe planning including buffering, creating fuel breaks, clustering, and fire-safe construction. The Public Health and Safety Chapter also provides policies and implementation programs to minimize the likelihood and extent of impacts related to transportation of hazardous and toxic materials and wastes, particularly around major transportation routes throughout the County. (Solano County, 2015)

Dixon City Council Resolution No. 18-057

Resolution of the City Council of the City of Dixon authorizing the Mayor to enter into a Mutual Aid Agreement by and between Solano County Fire Agencies for all Hazard Emergency Response.

Dixon Municipal Code

Chapter 2.10 Civil Emergencies

Chapter 2.10 of the Dixon Municipal Code aims to provide for the preparation and carrying out of plans for the protection of persons and property within the city in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions with all other public agencies, corporations, organizations, and affected private persons. This chapter also establishes responsibilities for developing and carrying out the City of Dixon Emergency Plan.

Chapter 16.02 California Fire Code Adopted

The Fire Code is Chapter 16.02 of the Dixon Municipal Code. It adopts an amended version of the California Fire Code (CFC) of the State of California, amended to address local climatic, geological, or topographic conditions pursuant to Health and Safety Code Section 17958.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Project would:

- Criterion 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Criterion 2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Criterion 3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Criterion 4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Criterion 5: Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety hazard or excessive noise for people residing or working in the project area;
- Criterion 6: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Criterion 7: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
- Criterion 8: Be located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would substantially impair an adopted emergency response plan or emergency evacuation plan;
- Criterion 9: Be located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would exacerbate fire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- Criterion 10: Be located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or

Criterion 11: Be located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

METHODOLOGY AND ASSUMPTIONS

This analysis considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from implementation of the Proposed Project, and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. The analysis included a qualitative evaluation of impacts associated with the potential presence of hazardous materials or hazards in the Planning Area, and an evaluation of the extent to which land use changes suggested within the Proposed Project could enable the development of industrial uses that commonly employ or generate hazardous materials or waste in their production processes, as well as development in or around Very High Fire Hazard Severity Zones. This analysis is based on a review of materials ranging from the Envirostor and Geotracker databases, hazard mapping, and relevant plans and regulations at the federal, State, and local levels.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Natural Environment

- NE-3.2 Ensure that 75 percent of solid waste generated be reduced at source, recycled, or composted by the year 2020 and beyond, per AB 341.
- NE-3.3 Continue to promote the safe disposal of household hazardous waste through public education.
- NE3.C Work with commercial and industrial generators to develop and implement a source reduction and recycling plan tailored to their individual waste streams.
- NE-4.1 Protect life, the natural environment, and property from natural and manmade hazards due to seismic activity, hazardous material exposure, flooding, wildfire, or extreme heat events.
- NE-4.5 Continue to maintain an Emergency Operations Plan to effectively prepare for, respond to, recover from, and mitigate the effects of natural or human caused disasters that require the planned, coordinated response of multiple agencies or jurisdictions.
- NE-4.7 Increase public awareness of City and County emergency preparedness programs and resources.
- NE-4.C Establish a Community Emergency Response Team (CERT) program to educate volunteers about disaster preparedness and train them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

- NE-4.D Annually review and revise the City's Emergency Operations Plan (EOP) as needed and assess the need for modifications following post-incident analyses, post-exercise critiques, and changes in policy.
- NE-5.1 Coordinate with the Yolo-Solano Air Quality Management District and other local, regional, and State agencies to protect and enhance air quality in Dixon.
- NE-5.2 Continue to use the Yolo-Solano Air Quality Management District's Handbook for Assessing and Mitigating Air Quality Impacts for environmental review of proposed development projects.
- NE-5.3 Require dust abatement actions for all new construction and redevelopment projects, consistent with the Yolo-Solano Air Quality Management District's Best Available Control Measures.
- NE-5.4 Ensure adequate buffer distances are provided between offensive odor sources and sensitive receptors, such as schools, hospitals, and community centers.
- NE-5.13 Work with the Solano County Agricultural Commissioner and other responsible agencies to identify and enforce mechanisms to control residual pesticides and pesticide runoff to prevent significant risk to water quality, vegetation, wildlife, and humans.
- NE-5.14 Continue to require remediation of hazardous material releases from previous land uses as part of any redevelopment activities.
- NE-5.15 Regulate development on sites with known contamination of soil or groundwater to ensure that construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination.

Land Use and Community Character

- LCC-5.7 Require industrial and commercial development to incorporate buffering and context-responsive transitions to minimize impacts on adjacent less intensive uses, particularly residential uses.
- LCC-4.D Update the Zoning Code to include performance measures that ensure health and safety compatibility for industrial uses bordering sensitive uses.

Economic Development

- E-1.7 Require industrial, light industrial, and agro-industrial development to meet performance standards based on factors of noise, odor, light, glare, traffic generation and air emissions, soil contamination, and surface and groundwater contamination in order to minimize its impacts on established or proposed residential areas and other adjacent uses.

- E-5.B Work with Caltrans and adjacent property owners to implement a coordinated landscaping and design strategy along State highway corridors.

Public Services and Facilities

- PSF-1.4 Maintain mutual aid agreements that allow for supplemental aid from other police and fire departments in the event of emergencies.
- PSF-1.6 Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.
- PSF-1.9 Support construction of improvements that facilitate emergency access across the rail line, such as over- and underpasses at one or more strategic locations.
- PSF-1.B Explore the cost/benefit of an incentive program to encourage owners of historic buildings with "non-fire stopped" framing construction to retrofit their properties with fire sprinklers, particularly in the downtown area.
- PSF-1.D Continue fire education and prevention outreach programs and activities.

Mobility and Transportation

- MT-1.1 Maintain a transportation network that is efficient and safe, that removes barriers (e.g. accessibility near freeways and rail lines), and that optimizes travel by all modes.
- MT-1.4 Make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle and automobile safety over motor vehicle level of service and motor vehicle parking.
- MT-1.7 Coordinate transportation planning with emergency service providers to ensure continued emergency service operation and service levels.
- MT-1.A Pursue the relocation of State Route 113 from First Street to a route outside the Downtown area.
- MT-1.B Until State Route 113 is relocated outside of the Downtown area, encourage the designation of alternative routes for through truck traffic to avoid conflicts within Downtown Dixon.
- MT-1.C Pursue funding for the construction of grade separated rail crossings at Parkway Boulevard and West "A" Street and a bypass route at Vaughn Road to increase connectivity across the rail tracks and promote safety.
- MT-2.10 Ensure adequate emergency vehicle access in all areas of Dixon by continuing to involve the Police and Fire Departments in the development review process.

- MT-2.B Establish performance standards for each street type that include adequate emergency vehicle use. Include the following considerations in establishing performance metrics:
- quality and connectivity of pedestrian facilities, based on best practice design guidelines including the California Manual on Uniform Traffic Control Devices (MUTCD) and the National Association of City Transportation Officials (NACTO) Urban Street Design Guide;
 - quality and connectivity of the bicycle facilities, based on best practice design guidelines including the California MUTCD, Caltrans Highway Design Manual Chapter 1000, and the NACTO Urban Bikeway Design Guide
 - quality of the transit facilities and service, based on best practice design guidelines, including the NACTO Transit Street Design Guide, as well as on the service capacity and frequency as compared to measured or projected demand
 - adequacy of emergency access provided, as measured by the efficiency of emergency access routes and the presence or absence of barriers along primary routes.
- MT-2.C Secure additional funding necessary to complete transportation improvement projects designed to improve east-west connections in Dixon including the Parkway Boulevard Overcrossing, Vaughn Road realignment, the West "A" Street undercrossing, and redesignation of SR-113.
- MT-6.4 Improve safety and minimize adverse noise, vibrations and visual impacts of operations in the Amtrak rail corridor and truck routes on adjacent public facilities, schools and neighborhoods.
- MT-6.A Work with Caltrans to study options for re-rerouting SR 113 away from Downtown Dixon.

IMPACTS

- Impact 3.8-1 Implementation of the Proposed Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

Current land uses, as well as future land uses under the Proposed Plan, involve or could involve the transport, use, storage, generation, and disposal of hazardous materials, including lead and asbestos from building materials, chemicals from commercial uses, or fertilizers and pesticides from agricultural uses. As described in the Physical Setting Section, many businesses in the Planning Area currently use hazardous materials and generate hazardous wastes, which require regulatory oversight to protect human health and the environment. This includes current and former hazardous materials use sites and agricultural tank sites as well as pesticides used for agriculture.

These uses are regulated by the Solano County Agriculture and Resource Management Departments under State and Federal laws and regulations, including the DTSC which regulates the generation, transport, and disposal of hazardous waste and the SWRCB which enforces the Clean Water Act and protects the quality of ground and surface waters.

Routine transport of hazardous materials on Interstate 80 and State Route 113 are regulated and monitored by USDOT, Caltrans, and the California Highway Patrol. Any hazardous material transport on the Union Pacific Railroad tracks would be regulated and monitored by USDOT. Agricultural transport and use of pesticides, which takes place on most agricultural use-designated land within and adjacent to the Planning Area, is regulated by CCR Title 3, which mitigates risks of hazard through routine use. The Proposed Plan would facilitate efficient transportation, particularly along freeways and rail lines that potentially transport hazardous materials, and also encourages design elements such as landscaping adjacent to State highway corridors that would provide buffers to these sources of hazardous substances, therefore serving as mitigation measures to reduce impacts to less than significant levels (Policy MT-1.1 and Implementing Action E-5.B).

Households in the Planning Area could also use small quantities of potentially hazardous materials for garden care and building maintenance, including but not limited to garden chemicals, paints, solvents and car care products. Similar materials are also maintained for public buildings and uses, such as the City Corporation Yard and City Hall. Title 27 of the CCR regulates waste disposal, including hazardous materials, to reduce exposure to potential hazards. General Plan Policy NE-3.3 addresses the education of Dixon households regarding the use and disposal of hazardous wastes. Furthermore, Policy NE-3.2 and Implementing Action NE-3.C would work to reduce the overall generation of solid waste in the Planning Area, especially by coordinating with commercial and industrial generators to reduce waste streams, thereby potentially reducing the routine handling of hazardous materials and waste.

Although the use and storage of hazardous materials releases cannot feasibly be eliminated, the requirements of existing regulatory programs combined with implementation of Proposed Plan policies referenced above would reduce potential impacts of routine transport, use, or disposal of hazardous materials and reasonably foreseeable upset or accident conditions to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.8-2 Implementation of the Proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (*Less than Significant*)

Implementation of the Proposed Plan could result in future development of land uses that may involve the use, transportation, disposal, and storage of hazardous materials in the City of Dixon. Thus, personal injury, property damage, environmental degradation, or death could potentially result from the release of hazardous materials caused by upset or accident conditions.

Specifically, the Proposed Plan stipulates the realignment of State Route 113, which is adjacent to a number of hazardous materials sites (see Figure 3.8-1) as well as being a designated hazardous material transport route (Policies and Implementing Actions MT-1.A, MT-2.C, MT-6.A). This project may run the risk of upset or accidental release of hazardous materials into the environment. Additionally, implementation of the Proposed Plan could result in future development of land uses in proximity to abandoned gas wells located in the City of Dixon, particularly within the Northeast Quadrant area, and the Sphere of Influence. However, compliance with existing regulations such as Sections 3208 and 3255(a)(3) of the Public Resources Code and Title 14, Section 1723.5 of the California Code of Regulations would preclude impacts associated with the upset or accidental release of hazardous materials from these abandoned wells to the maximum extent practicable.

The Plan also self-mitigated through policies such as E-1.7, NE-5.14, and NE-5.15 that ensure development, particularly on sites with known contamination, continues any existing remediation efforts or otherwise meets performance standards of impacts including soil, surface, and groundwater contamination, protects the environment and public from hazards associated with contamination.

Although the risk of upset and accident conditions involving the release of hazardous materials into the environment cannot be completely eliminated, it can be reduced to a manageable level. Existing regulations at the federal, State, and local levels serve to minimize the potential for upset during routine transportation, use, and disposal, including of agricultural pesticides. Additionally, regulations are in place to minimize the risk of upset or accident involving sites that have previously been contaminated by hazardous substances. Proper implementation of the County's CUPA programs would help to ensure documentation of releases and threatened releases as well as the development of risk management and hazardous materials release response plans and would supplement policies such as NE-5.13 that encourage County-level cooperation to control hazards related to pesticides.

Given existing regulations and programs and Proposed Plan policies and implementing actions that reduce the potential for hazardous materials upsets and promote safe handling and proper disposal of such wastes, impacts associated with the release of hazardous materials into the environment would be less than significant.

Mitigation Measures

None required.

Impact 3.8-3 Implementation of the Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (*Less than Significant*)

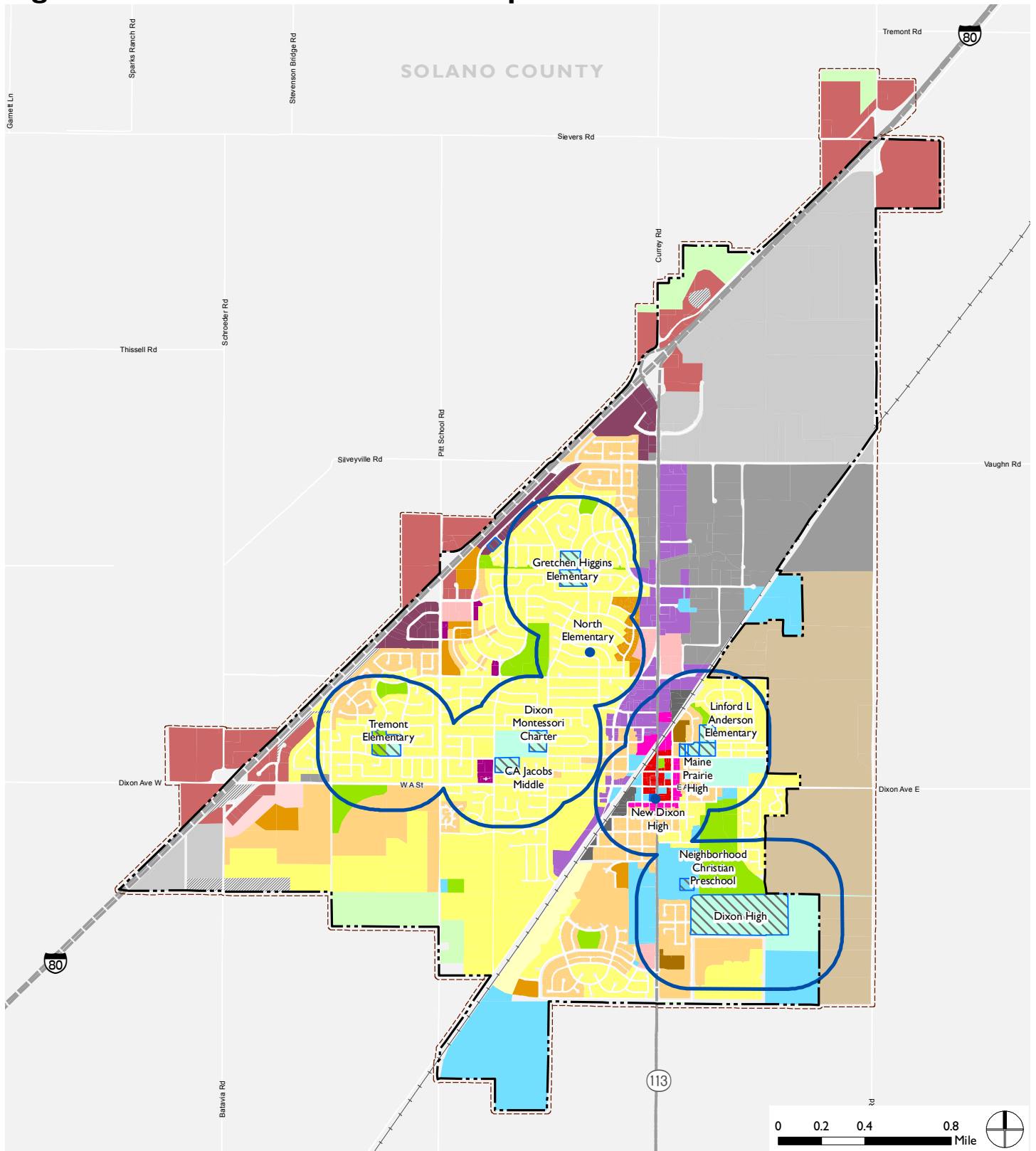
Implementation of the Proposed Plan would allow land uses to be developed within one quarter mile of existing schools that could be reasonably expected to handle hazardous materials or generate hazardous emissions. As shown on Figure 3.8-4, the Maine Prairie High School and the Linford L. Anderson Elementary School are located within one quarter mile of a proposed industrial land use. Industrial land uses are most likely to handle or emit hazardous materials. For example, in areas with industrial land use designations, uses could include manufacturing, storage, processing, printing and warehousing activities, which could handle or emit toxic chemicals or volatile chemicals. While these two schools are within one quarter mile buffer of an industrial land use, they are not in direct vicinity of the industrial land use. The Proposed Plan does not expand the existing agriculture or industrial land use designations and would therefore not increase school exposure to hazardous materials.

Under State law, schools must be sited to prevent them from being located near hazardous materials sites. Therefore, future schools – such as the New Dixon High School and new Anderson Elementary school proposed in the Dixon Unified School District Facilities Master Plan and discussed in detail in Section 3.12 Public Facilities – constructed within the City of Dixon could not be located near hazardous material sites. Furthermore, such sites are subject to inspection requirements by DTSC, and as previously seen in Table 3.8-1, have not been found to contain any contaminants or require further action. According to the California Education Code, public schools are required to evaluate and potentially amend their school safety plan on an annual basis. Additionally, Policy NE-5.4, MT-6.4, and LCC-5.7 and Implementing Action LCC-5.D require buffer zones between industrial properties and adjacent less intensive and sensitive uses, as well as call for an update of the Dixon Zoning code to include performance measures that ensure health and safety compatibility for industrial uses bordering sensitive uses. These measures, as required by the Proposed Plan, in coordination with existing regulatory programs, would reduce potential impacts to a less-than-significant level.

Mitigation Measures

None required.

Figure 3.8-4: School Buffers and Proposed Land Uses



Data Source: Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

General Plan Proposed Land Uses

- Very Low Density Residential
- Low Density Residential
- Medium Density (Low) Residential
- Medium Density (High) Residential
- High Density Residential
- Future Residential
- Downtown

- Core Area Mixed Use
- Neighborhood Commercial
- Community Commercial
- Highway Commercial
- Hwy Commercial/Prof./Admin. Office
- Prof./Admin. Offices
- Commercial Services
- General Industrial

- Planned Business/Industrial
- Employment Center
- Agricultural
- Governmental/Institutional
- School Building/Play Area
- Parks
- Functional (Buffers)

- Schools
- New School Site
- School Buffer
- Freeways
- Railroad
- Dixon City Limit
- Sphere of Influence

Impact 3.8-4 Implementation of the Proposed Project would not result in development located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment. (*Less than Significant*)

Redevelopment of sites with existing soil or groundwater contamination in accordance with the Proposed Plan could potentially pose a significant hazard to the public or the environment through releases of hazardous materials into the environment. As discussed in the “Physical Setting” section, there are numerous sites in the Planning Area that are included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 (see Figure 3.8-1 and Table 3.8-1). The majority of these sites are closed and five are currently undergoing remediation, subject to various State and federal laws and regulators, including CERCLA, EPA, DTSC, and the RWQCB.

Proposed General Plan policies would limit any impacts of development from listed hazardous materials sites by requiring remediation of known hazardous material sites before redevelopment and regulating development on sites with known contamination to ensure protection of workers, future occupants, and adjacent residents (Policies NE-5.14 and NE-5.15). Existing regulations and CUPA programs would also require the reporting and documentation of any hazardous materials incidents in the Planning Area such that property owners could be aware of potential hazards. For future projects, the California Environmental Quality Act (CEQA) requires developers to reference the Cortese List and state if the project or any alternatives would be located on a listed site. Compliance with these policies, regulations, and programs would reduce the impact to less than significant.

Mitigation Measures

None required.

Impact 3.8-5 Implementation of the Proposed Project would not result in development located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public uses airport, and would result in a safety hazard or excessive noise for people residing or working in the project area. (*No Impact*)

There are no airport land use compatibility plans affecting any portion of the Planning Area. Additionally, as described in the “Environmental Setting” section above, no public airports or public use airports are located within two miles of the Planning Area. The nearest public use airport is the Nut Tree Airport, located approximately seven miles southwest of the Planning Area. Two other airports are located in Solano County: The Travis Air Force Base (AFB) is located approximately 11 miles southwest of the Planning Area, and the Rio Vista Municipal Airport is located approximately 17 miles southeast of the Planning Area. The Planning Area does not fall within any of the Airport Influence Areas of these airports, as is discussed above in the Settings section. Thus, implementation of the Proposed Plan would have no impact on safety hazards due to aviation, including smoke, fuel storage, or exposure to hazardous chemicals, on people working or residing within the City of Dixon.

Mitigation Measures

None required.

Impact 3.8-6 Implementation of the Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

The Proposed Plan would increase population and the need for emergency services in the Planning Area and may also allow for development that could affect the adopted emergency response plan or emergency evacuation plan.

Specifically, development is anticipated to occur in Specific Plan areas in the southwest and northeast regions of Dixon, as well as in the downtown Priority Development Area, and the corresponding projects that affect the transportation network and other services to meet the demands and needs of the growing population would impact the Emergency Operations Plan (EOP) currently in place. However, Policies such as NE-4.5 and Implementing Action NE-4.D ensure that the EOP would be continually assessed and revised to maintain adequacy of the plan. Other Proposed Plan initiatives encourage community education and activism to support emergency preparedness (Policy NE-4.7 and Implementing Action NE-4.C). Additionally, the City will work with the County, which maintains the Solano County Emergency Operations Plan upon which the Dixon Emergency Operations Plan expands, to maintain supplemental aid agreements in event of emergencies (Policy PSF-1.4). Finally, any development resulting from the implementation of the Proposed Project would be subject to policies regarding facilitation of efficient transportation and service provision to ensure emergency access such as improving east-west access across the rail line and removing barriers along primary routes that would apply to and

bolster the emergency response plan (Policies MT-1.7 and MT-2.10 and Implementing Action MT-2.B).

Therefore, the Proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, making impacts less than significant.

Mitigation Measures

None required.

Impact 3.8-7 Implementation of the Proposed Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
(Less than Significant)

Implementation of the Proposed Plan could create a significant impact if future development was to occur in areas with high wildfire risk. As described in the “Environmental Setting” section above, however, no areas within the Planning Area have been classified by the State as having “very high” or “high” fire risk, which require implementation of State wildfire prevention measures. Chapter 16.02 of the Dixon Municipal Code adopts an amended version of the California Fire Code, which regulates fire safety for new construction. The California Strategic Fire Plan also reduces the fire risk of new development by focusing on fire suppression and prevention efforts, including hazard and risk assessment, land use planning, cooperation between fire protection jurisdictions, fire-resistant development, and post-fire recovery efforts.

Additionally, several policies and implementing actions in the Proposed Plan address potential fire hazards. To mitigate the predominantly urban risk of fire in the City of Dixon, Policy PSF-1.6 encourages Fire Department review of development and Implementing Actions PSF-1.B and PSF-1.D encourage the retrofit of non-fire stopped framing construction buildings with fire sprinklers and the continuation of fire education outreach programs and activities. These Policies and Implementing Actions, combined with the California Building Code standards and the review of all new structures by the Dixon Fire Department to ensure that hazards from wildfire will be reduced, brings potential impacts to a less-than-significant level.

Mitigation Measures

None required.

Impact 3.7-8 Implementation of the Proposed Project would not result in substantial development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less than Significant*)

Relevant emergency response or evacuation plans in the Planning Area include the Solano County Emergency Operations Plan (EOP) and the City of Dixon EOP, and, to the extent that that it mitigates potential hazards in the Planning Area, the Solano County Local Hazard Mitigation Plan (LHMP). Physical development under the Proposed Project, including new roadways, land uses, and increased densities and traffic volumes, have the potential to create obstacles to the implementation of emergency response or evacuation plans adopted for the Planning Area.

Policies and implementation actions in the proposed General Plan would eliminate or reduce these impacts. Policies NE-1.11, NE-4.1, and NE-4.6 discourage development in hazardous areas and ensure that the siting of critical emergency response facilities and communications facilities have minimal exposure to flooding, seismic and geologic effects, fire, and explosions. In addition, several policies and actions seek to improve east-west connections and emergency access and evacuation routes in Dixon: Policies PSF-1.9, MT-1.1 and Implementing Action MT-1.C support the construction of improvements that facilitate emergency access across the rail line, such as over-and underpasses at one or more strategic locations, and call for completing specific transportation projects designed to improve east-west connectivity, including the Parkway Boulevard Overcrossing, Vaughn Road realignment, the West "A" Street undercrossing, and realignment of SR-113, and Policy MT-1.7 encourages the coordination of transportation planning with emergency service providers to ensure continued emergency service operation and service levels.

Policies MT-2.10, NE-1.5, PSF-1.6 and Implementing Actions MT-1.A and MT-1.B address development review approvals, such as involving the Police and Fire Departments in the development review process to ensure adequate emergency vehicle access and to ensure that development is designed and operated in a manner that minimizes fire hazards and maximizes the potential for responsive fire services. Finally, Policy NE-4.5 and Implementing Action NE-4.D call for the continuous assessment of the need for hazard reduction measures to better protect critical public and emergency response facilities as well as the annual review and **update of the City's EOP**. Regulations, policies, and implementation actions in the Proposed Plan would reduce the impact to less than significant.

Mitigation Measures

None required.

Impact 3.8-9 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would exacerbate fire risks due to slope, prevailing winds, and other factors, thereby exposing project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (*Less than Significant*)

The southwestern, northeastern, and downtown areas of the City of Dixon may experience growth and development with implementation of the Proposed Plan. However, as there are no VFHSZs present in the Planning Area, nor does the City intersect a State Responsibility Area, such development would not occur in or near SRAs or lands classified as VHFHSZs. Moreover, any development impacting wildfire risk would be subject to Proposed Policies and County programs and requirements as well as local fire codes.

Policies such as NE-5.1, NE-5.2, NE-5.3, and NE-5.4 also provide for the protection of sensitive receptors from hazardous concentrations of air pollutants, thereby reducing the potential for exposure to air pollutants associated with wildfire. In the event of a wildfire, the Yolo-Solano Air Quality Management District provides air quality advisories across Solano County, helping ensure that residents can take the appropriate response to reduce exposure (see Section 3.3 Air Quality for more information).

Therefore, compliance with existing programs and regulations and Proposed Project policies would ensure that impacts of the Proposed Project on wildfire risk and associated pollutant exposure would be less than significant.

Mitigation Measures

None required.

Impact 3.8-10 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less than Significant*)

The Proposed Project anticipates that growth may take place within Specific Plan areas in the southwestern and northeastern regions of the Planning Area as well as the designated Priority Development Area downtown, none of which occur in or around VHFHSZs or SRAs. There are no VFHSZs present in the Planning Area, nor does the City intersect a State Responsibility Area. Moreover, any development impacting wildfire risk would be subject to Proposed Policies and County programs and requirements as well as local fire codes.

While the Proposed Plan does encourage the realignment of State Route 113 (Implementing Action MT-1.A), potentially resulting in new major roads, these policies also ensure that such endeavors would improve emergency access and minimize other environmental impacts, including avoiding areas with known hazard contamination or sensitive receptors (Policies MT-2.10, MT-1.7, NE-5.4, and NE-5.15 and Implementing Actions MT-2.B). As a result, such development would not exacerbate fire risk.

Compliance with existing federal, State, and local programs and regulations and Proposed Policies would ensure that impacts of the Proposed Project on wildfire risk would be less than significant.

Mitigation Measures

None required.

Impact 3.8-11 Implementation of the Proposed Project would not result in development located in or near State Responsibility Areas or lands classified as Very High Fire Hazard Severity Zones and would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. *(Less than Significant)*

Areas where the Proposed Project anticipates that growth may take place occur within the southwestern and northeastern regions of the Planning Area, in locations that are predominately zoned for industrial, commercial, and residential uses, none of which occur in or around VFHSZs or SRAs. There are no VFHSZs present in the Planning Area, nor does the City intersect a State Responsibility Area. Therefore, compliance with existing local programs and regulations and Proposed Project policies would ensure that impacts of the Proposed Project on wildfire risk and associated effects on soil and water movement would be less than significant.

The Proposed General Plan contains policies discussed under impact 3.8-7 are intended to address risk associated with wildfire exposure. Additional policies intended to address risk associated with seismic, geotechnical, and flooding hazard are addressed in Sections 3.7 Geology, Soils, and Seismicity, and 3.9 Hydrology and Water Quality.

Mitigation Measures

None required.

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3.9 Hydrology and Water Quality

This section assesses potential environmental impacts on hydrology and water quality from future development under the Proposed Plan. Issues addressed include water quality standards, groundwater resources, drainage, and flood hazards related to rivers, sea level rise, dam failure, seiches, tsunamis, and mudflows. The section describes existing surface water and groundwater hydrology, water quality, and flood hazards in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were two comments on the Notice of Preparation (NOP) regarding topics covered in this section.

- The Central Valley Regional Water Quality Control Board addresses State and local requirements regarding stormwater systems and is addressed in Impact 3.9-4. The remainder of the comment is addressed in Chapter 3.14: Utilities and Service Systems.
- The Solano Irrigation District submitted a comment that the General Plan should consider the increasing strains upon the reliability and economic cost of the groundwater supply, that new land development should not assume an inexhaustible supply of groundwater, and that new land development should only assume availability of groundwater sources if new investment in groundwater and surface water management occurs. This comment is addressed in Impact 3.9-2 and in Chapter 3.14: Utilities and Service Systems.

Environmental Setting

PHYSICAL SETTING

Climate

The City of Dixon experiences a Mediterranean climate, with hot, arid summers and short, cold, wet winters. The average maximum temperature during the months of June and September is about 90 degrees Fahrenheit (°F), and average minimum temperatures drop to 37 to 40°F in winter. The mean annual precipitation is about 20 inches, with most of the rainfall occurring between October and May and the highest average rainfall totals occurring in February (weatherspark.com, 2018). Snowfall is uncommon; Dixon averages 0 inches of snow per year.

Topography

The Planning Area lies within the southern portion of the Sacramento River Valley, the northern portion of the Central Valley. Sited between the Northern Coast Range to the west and the northern Sierra Nevada to the east, the Sacramento Valley flows of California, creeks from the Mayacamas and Vaca mountains flow in a southeasterly direction toward the Sacramento River. The Sacramento River drains most of the California interior north of the Sacramento River Delta and flows through Suisun and San Pablo bays before emptying into San Francisco Bay, and eventually, the Pacific Ocean. The topography of the Planning Area itself is mostly flat, with an average elevation of 62 ft.

Groundwater Resources

The City of Dixon is served exclusively with groundwater from basins underlying the city. The Planning Area overlies the Solano Groundwater Basin, a Subbasin of the larger Sacramento Groundwater Basin. The Solano Groundwater Basin is bounded by Putah Creek on the north, the Sacramento River to the east, the North Mokelumne River to the Southeast, the San Joaquin River to the south, and the English and Montezuma hills to the west. Groundwater recharge within the Subbasin occurs primarily through infiltration and deep percolation of rainfall and applied irrigation water. Monitoring shows seasonal changes from spring to fall during the height of agricultural production, and then the Subbasin is replenished from fall to spring, when the agricultural season dies down.

The Tehama Formation, the principle water-bearing formation in the Dixon area, forms the oldest, deepest and thickest part of the freshwater aquifer in the vicinity of the City. The majority of irrigation and municipal wells in the Solano Subbasin are completed in the Tehama Formation. The Tehama Formation consists of up to nearly 2,500 ft of moderately compacted coarse, clean, sandy deposits. Overlying the Tehama Formation are sediments of the Putah Plain, approximately 165 feet thick, and also yield water. However, the yield, storage capacity and transmissivity of the **Putah Plain sediments are decreased by the presence of finer-grained, muddier sediments which** provide impermeable barriers to water movement. Because of the thickness of the producing zones, production from the Tehama Formation can be up to several thousand gallons per minute (gpm) per well.

Groundwater level trends in the Solano Subbasin are stable in the majority of wells, and not in a state of overdraft. The DWR Bulletin 118 reports that the groundwater elevations prior to 1912 represent the groundwater basin in its natural state (DWR, 2004). Between the years 1912 and 1932, precipitation was below average, which resulted in lower groundwater levels. In 1932 to 1941 groundwater levels recovered slightly because of above average precipitation. After 1941, groundwater levels declined due to increasing agricultural and urban development and the levels reached their lowest in the 1950s. During this period, the Bureau of Reclamation created the Solano Project, which stores surface water in Lake Berryessa to meet the growing water demands in the County and offset groundwater overdraft. With this diversified water supply, groundwater levels began to rise after 1959. Since the 1980s, the groundwater levels have been stable with low levels in the dry season and high levels in the wet season of each year. In other words, the groundwater level changes slightly over short periods of time in response to climatic conditions, and over the past 20

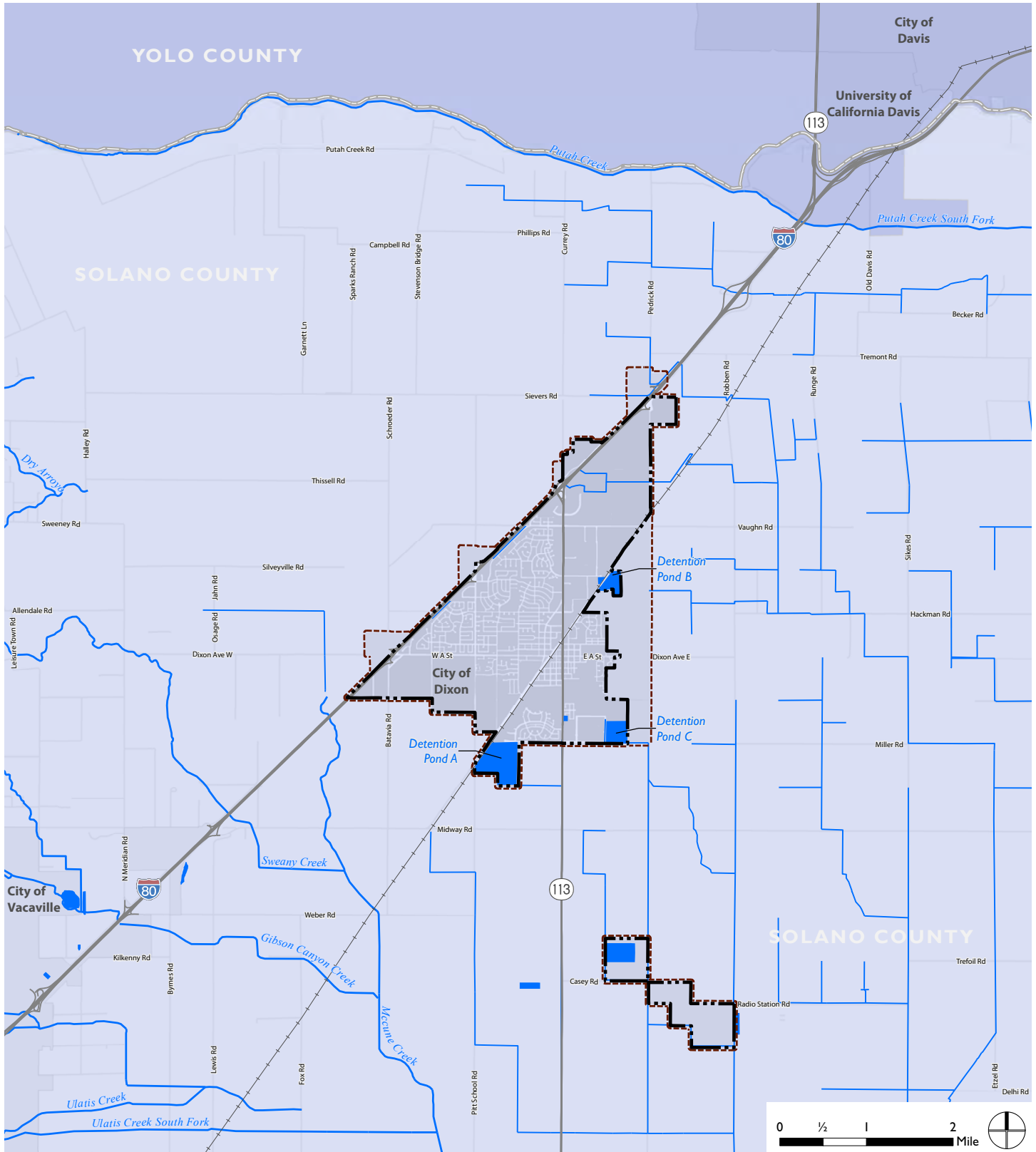
years, the basin has showed an average level of stability despite the increased level of growth and water demands.

Surface Water Resources

Dixon is situated on an alluvial fan formed by Putah Creek to the north. The land within the Planning Area generally slopes downward from the northwest to southeast, and drainage generally follows the historic courses of Dickson Creek and Dudley Creek streambeds, by way of canals, roadside ditches and sloughs, to the Sacramento River. Wetland habitats of seasonal wetland and emergent marsh can be found primarily within the canals, ditches and sloughs that crosshatch the city, as well as along the periphery of the wastewater treatment plant to the southeast (See Figure 3.9-2). Aside from wetlands, emergent marsh, and occasional ponding, there are no other naturally occurring surface water resources in the Planning Area. However, water drains to Ulatis Creek and McCune Creek, and the Hass Slough.

There are three regional watersheds within Dixon: Basin A, which drains to Ulatis Creek, and Basins B and C and Basin D, both of which drain to Hass Slough. These watersheds are shown on Figure 3.9-2 and described below under Storm Drain Facilities. Watersheds channel rainfall to creeks, streams, and rivers, and eventually to the ocean. Dixon also uses detention ponds to prevent flooding and to allow infiltration into the aquifer below. Ponds A, B, and C detain runoff and use native vegetation to filter water. The effluent from the ponds are managed by the Dixon Regional Watershed Joint Powers Authority, a cooperative agency between the City, Dixon Resource Conservation District, Reclamation District 2068, and the Maine Prairie Water District, and include walking trails for residents to enjoy the open spaces.

Figure 3.9-1: Groundwater Basins

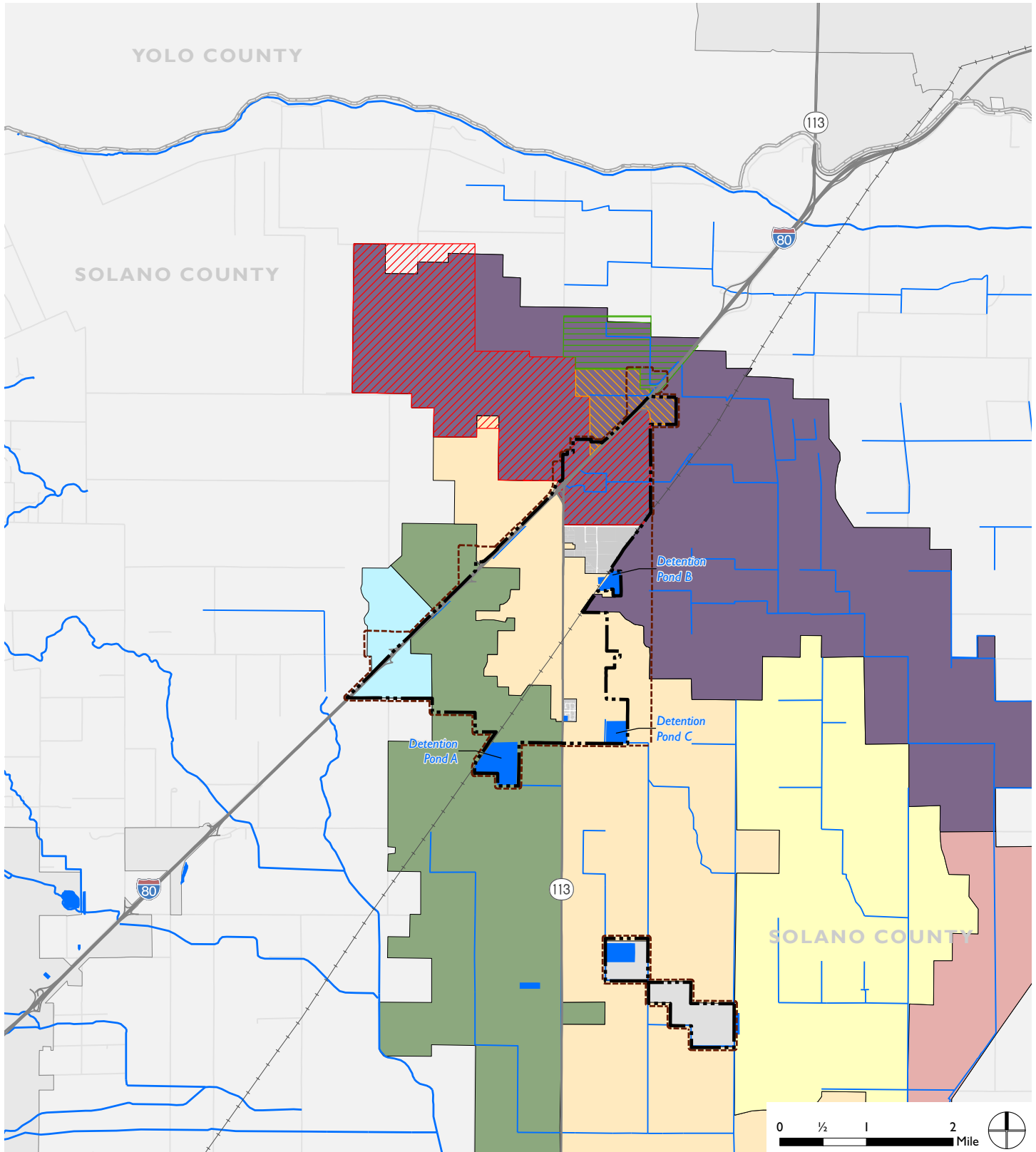


Data Source: DWR, 2018; Solano County, 2019; California Department of Fish and Wildlife, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

- | | | |
|--------------------------|----------|---------------------|
| Groundwater Basin | Railroad | Dixon City Limit |
| Solano Subbasin | Water | Sphere of Influence |
| Yolo Subbasin | | County Boundary |



Figure 3.9-2: Regional Watersheds and Surface Water



Data Source: West Yost, 2016; Solano County, 2019; California Department of Fish and Wildlife, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Watersheds

- Basin A / Lateral 1 Tributary Area
- Basin A / Lateral 1 Tributary Area to be diverted to Westside Pond and McCune Creek

- Lateral 4 and Lateral 5 Watershed
- Basins B and C / Laterals 2 and 3 Tributary Area
- V Drain Watershed
- Tremont No. 3 Watershed

- Basin D
- Basin G
- Basin H

- Railroad
- Water

- Dixon City Limit
- Sphere of Influence
- County Boundary



Storm Drain Facilities

The City's drainage facilities are shown in 3.9-3. The regional watersheds draining the City are described below and shown in Figure 3.9-2. The City's storm drain system includes 63 miles of storm drain piping ranging in size from 12 inches to 84 inches in diameter. The storm water system also includes the three major detention basins (Ponds A, B, and C). There are two pump stations; one pumps water out of Basin B, and the other pumps water from the Valley Glen development into Basin A. Additionally, there are several smaller basins within the City that serve individual residential, commercial, or industrial development projects.

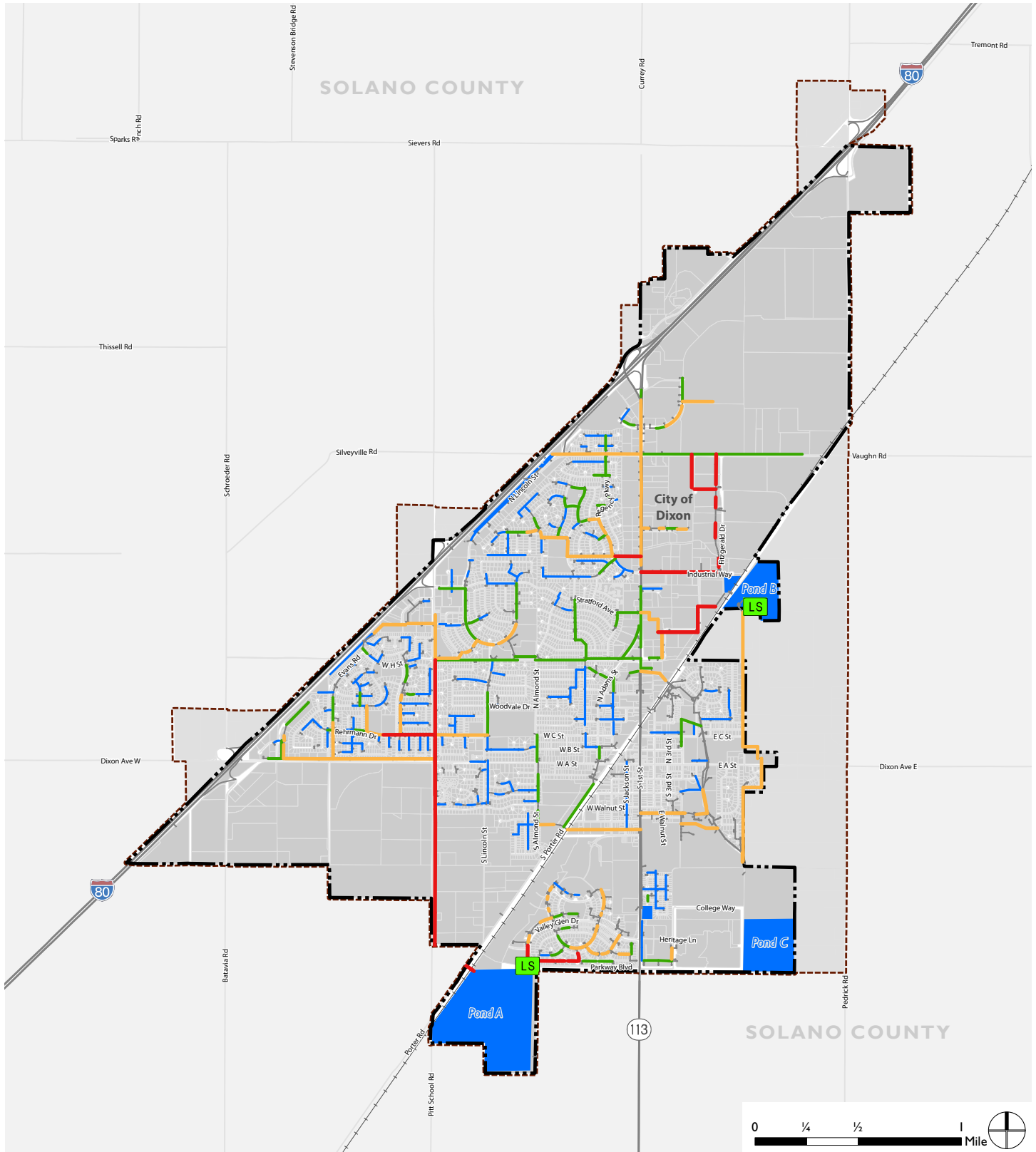
Basin A / Lateral 1

The western side of Dixon is in the City's Basin A watershed. Basin A generally drains from the north to the south. Basin A includes about 2,640 acres, including about 760 acres of agricultural land upstream (north) of I-80 and 1,880 acres of urban and agricultural lands downstream (south) of I-80, but within the city. This watershed mostly flows to the City's Detention Pond A, which provides 640 acre-feet of storage. Detention Pond A flows to the DRCD Lateral 1. When the farmlands downstream (south) of Detention Pond A are flooded, the City cannot release any flow from Detention Pond A. When the downstream farmlands are not flooded, the City can release up to 75 cfs. This flow limit was established in the DRWJPA (discussed below). The flow in DRCD Lateral 1 flows downstream to the Maine Prairie Water District channels, which in turn flow into the Solano County Water Agency's Ulatis Creek.

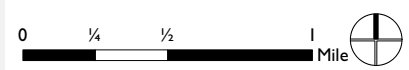
Basins B and C/Laterals 2 and 3

The central area of Dixon is in the City's Basins B and C watersheds. These watersheds generally drain from the north to the south. These watersheds include about 2,190 acres, including about 755 acres of agricultural land upstream (north) of I-80 and 1,438 acres of urban lands downstream (south) of I-80, but within the city. The northern part of this watershed drains to Detention Pond B. From there, the water is pumped into DRCD's Lateral 2. The southern part of this watershed (but within the city) is called Basin C, which also drains to Lateral 2. The combined flow is then detained in Detention Pond C. As agreed upon by the City and DRCD, the maximum allowable release from Detention Pond C is 125 cfs in a 100-year storm event, and the flow goes back into Lateral 2. Downstream of the City, Lateral 2 combines with Lateral 3 and the two drains flow to the DRCD's Dixon Main Drain. The Dixon Main Drain flows into the Reclamation District 2068's (RD2068) V-Drain, and the maximum allowable (by agreement between DRCD and RD2068) flow into the V-Drain is 252 cfs. The V-Drain in turn flows to the Hass Slough.

Figure 3.9-3: Existing Storm Facilities



Data Source: West Yost, 2016; City of Dixon, 2019; Dyett & Bhatia, 2019



- | | | |
|--|---|---------------------|
| Storm Facilities | Storm Drains | Railroad |
| LS Lift Station | No Diameter Information | Dixon City Limit |
| Detention Basin | PIPE | Sphere of Influence |
| | ≤ 21 inch | |
| | 24 to 33 inch | |
| | 36 to 54 inch | |
| | ≥ 60 inch | |

Basin D – Tremont 3 Drain and Main Canal

The northern watershed within the city is called Basin D, which includes about 3,283 acres. This watershed generally drains from the northwest to the southeast. This watershed including about 2,700 acres of agricultural land upstream (north) of I-80 and 583 acres of urban and agricultural lands downstream (south) of I-80, but within the city (called the Northeast Quadrant of Dixon). Basin D flows to the DRCD Tremont 3 Drain. The Tremont 3 Drain (an agricultural drainage channel) is operated and maintained by DRCD. The DRWJPA agreement establishes the allowable flow from the City crossing the Union Pacific Railroad (in all of the culverts combined) into the Tremont 3 Drain to 23.1 cfs in a 5 year storm, 27.2 cfs in a 10-year storm, and 37.2 cfs in a 100-year storm. The Tremont 3 Drain flows into the RD2068 Main Canal at Midway Road, and by an agreement between DRCD and RD2068, the flow is limited to 120 cfs. The RD2068 Main Canal flows into the RD2068 V-Drain, which in turn flows to the Hass Slough.

Dixon Regional Watershed Joint Powers Authority (DRWJPA)

City and regional drainage is provided by several agencies, including the City, DRCD, RD2068, and the Maine Prairie Water District. In 2004, these agencies created and joined the DRWJPA to cooperatively evaluate and resolve several long-term, regional drainage problems. Formation of the DRWJPA resolved longstanding disputes (over 50 years) between the City and the downstream agricultural drainage districts and transformed the relationships between the City and the downstream districts from adversarial to cooperative. The DRWJPA identified several major drainage projects that have/will reduce flooding in and downstream of the City, including:

- Pond A / Lateral 1 Expansion Project – This project was constructed in 2003 to 2004
- Detention Pond C Project – This project was constructed in 2006 and 2007
- Northeast Quadrant (NEQ) Detention Pond – In the DRWJPA, this detention pond was **sized to allow for the development of the City’s NEQ (583 acres) by constructing 478 acre-feet of detention storage.** The release from this pond would be 140 cfs, and when there is no downstream flooding, the release could be increased to 214 cfs. The release from this pond would flow into the Tremont 3 channel, and consequently the Tremont 3 channel capacity would also need to be increased by 214 cfs to account for the flow. The channel expansion is the Eastside Drain Project (below). The NEQ Detention Pond has not been constructed yet. However, the location, size, configuration and discharge rate from this detention pond are currently being re-evaluated to help minimize downstream environmental impacts associated with the Eastside Drainage Project. It has been assumed that this pond will be funded and constructed by development in and near the NEQ. However, this pond is a large regional facility, and it may be difficult for a single developer to successfully implement the NEQ Detention Pond.
- Eastside Drain Project – This project serves the Tremont 3 watershed and allows for development of the City’s NEQ. **This channel enlargement project was subdivided into three segments, including the Eastside Drain Connection, the Three Mile Extension, and the Dixon Main Drain V-Drain.** The Dixon Main Drain V-Drain has been designed, and acquisition of an easement for the channel expansion is underway. None of the Eastside Drain Project components have been constructed yet. Like the NEQ Detention Pond, the Eastside Drainage Project is currently being re-evaluated to minimize associated

environmental impacts. The City collects storm drainage development impact fees which will be used to design and construct the East Side Drainage Project.

Since its formation, the DRWJPA has completed two of its major goals and has made significant progress toward achieving its remaining major project goals.

Solano County Agricultural Limited Industrial Service Area

The 2008 Solano County General Plan created an Agricultural Limited Industrial Service Area (AISA) just east of the City's NEQ, allowing up to about 720 acres of agriculture related industrial land uses. The AISA area drains into the Tremont 3 Drain watershed. Development of the AISA was not included in the DRWJPA planning and sizing of the NEQ Detention Pond or the Eastside Drain Project because the County had not established the AISA when the DRWJPA was prepared. However, the AISA will be included in the re-evaluation of the NEQ Detention Pond and the Eastside Drainage Project. The AISA is in the Tremont 3 watershed, but is not in the DRCD Tremont 3 Drain Service Area. When the Tremont 3 Drain was originally constructed and later extended upstream, property owners within the AISA area and other lands upstream chose not to participate in funding the project. The Tremont 3 Drain therefore does not have any capacity allocated for AISA. This situation has resulted in on-going disputes between the parcels downstream of the railroad (including DRCD and RD2068) who funded the Tremont 3 Drain and the upstream parcels (including the City) who discharge runoff into the Tremont 3 Drain and contribute to flooding of the downstream lands. To help resolve these disputes, the Solano County Water Agency (SCWA) prepared the Dixon Regional Watershed Management Plan (DWMP), discussed in the Regulatory Setting below. The re-evaluation of the NEQ Detention Pond and the Eastside Drainage Project will include the AISA development.

Future Storm Water Facilities

Through previous storm water master plans and other studies, the City has developed plans and sized facilities for much of the expected future growth, as summarized below:

Northeast Quadrant Specific Plan Area

Drainage service for the NEQ was originally planned in the Dixon Storm Drain Report (March 1999). As described above, the NEQ Detention Pond and the Eastside Drain Project have been further planned and sized to allow for the development of the NEQ. Future development of the NEQ will still have to size and design an internal storm drain system to serve the development and convey flows from north of I-80 across the NEQ and to the NEQ Detention Pond.

Southwest Dixon Specific Plan Area

The drainage plan for this area includes splitting the area at Evans Road into western and eastern watersheds. The western watershed will include the West Side Detention Pond with a discharge of up to 50 cfs to McCune Creek southwest of the City. The eastern watershed will drain into the existing 84-inch trunk drain in Pitt School Road and a proposed second 48-inch to 72-inch drain in Pitt School Road. Both of these drains will flow to Pond A. Pond A was sized to allow the full development of the eastern watershed of the Southwest Dixon Specific Plan Area.

Sphere of Influence Area East of the City

This area is called Basin F in the Dixon Storm Drain Report. Approximately the southern half of this area currently drains to the Basins B and C / Laterals 2 and 3 watersheds. Detention Pond C was designed to be expanded in the future for the development of this Sphere of Influence Area. The north half drains into the Tremont 3 watershed, and the required detention pond size and downstream conveyance improvements have not yet been planned or sized.

Areas North of Interstate 80

These areas are summarized below:

- The area draining to West A Street at I-80 is planned to drain into the Southwest Dixon Specific Plan western watershed. The Specific Plan's drainage plan includes a 36-inch trunk drain intended to convey the flow from the undeveloped area to the proposed West Side Detention Pond and ultimately to McCune Creek. Development of the area will require a detention pond to reduce the developed flow to the undeveloped runoff rate.
- The area draining to Pitt School Road at I-80 will require a detention basin to limit the developed flow to the current undeveloped runoff rate.
- The area draining to North First Street at I-80 will require a detention basin to limit the developed flow to the current undeveloped runoff rate or the NEQ Detention Pond and Eastside Drainage Project will need to be revised to accommodate this additional development.
- The area draining to Pedrick Road at Interstate 80 will require a detention basin to limit the developed flow to the current undeveloped runoff rate or the NEQ Detention Pond and Eastside Drainage Project will need to be revised to accommodate this additional development.
- Many of the existing culverts crossing I-80 are undersized for the 100-year flows reaching them and contribute to flooding on the north side of I-80. If/when these areas north of I-80 develop, the detention ponds will need to be sized to accommodate the increased runoff from the development and also detain and store the water that currently floods these areas.

Water Quality

The quality of surface water and groundwater resources is affected by past and current land uses within the watersheds as well as by the composition of geologic materials in the vicinity.

Groundwater Quality

Historically, groundwater in the Subbasin has been generally of good quality and is suitable for domestic and agricultural purposes. Water quality standard exceedances in the Subbasin were limited to trace inorganic elements, boron and iron, found in 1 of 13 wells from the Solano Subbasin sites. This well is not in the Planning Area. The groundwater meets all federal and state standards, except the newest standard: hexavalent chromium (or Chrome 6). Hexavalent chromium can occur naturally in the environment from the erosion of chromium deposits at levels of 20 ppb. It also is produced through industrial processes and then used in electroplating, pigments

manufacture, corrosion control and other manufacturing activities. Long-term exposure to hexavalent chromium can cause cancer and damage the liver, kidney, and nerve tissues.

The City of Dixon is currently served by five active wells that are sources of potable water for the city. **These groundwater supplies are chlorinated prior to entering the City of Dixon's distribution system** (City of Dixon, 2014). Drinking water supply is discussed in more detail in Chapter 3.14: Utilities and Service Systems, of this EIR. The City routinely monitors for the presence of drinking water contaminants and has found hexavalent chromium levels between 7.8 and 27 parts per billion in all five city wells between 2015 and 2017. (City of Dixon, 2016) California became the first state in the nation in 2014 to issue a drinking water standard for hexavalent chromium, setting a maximum concentration of 10 parts per billion. While this regulation was revoked due to financial infeasibility, the state maximum for total chromium (including hexavalent chromium and the nontoxic trivalent chromium) remains in place at 50 parts per billion (Kasler & Sabalow, 2017). The State Water Board will establish a new MCL standard for hexavalent chromium after comprehensive review, which could be at the same level as the invalidated MCL. In response to this issue, Cal Water has installed ion exchange wellhead treatment at affected well sites in order to ensure a continuous and reliable supply of water that meets all primary and secondary water quality standards. Dixon is the first of ten water districts in California affected by hexavalent chromium contamination to have this project completed.

Surface Water Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, agricultural lands, or landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or WDRs. Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas. Water quality of runoff varies with surrounding land uses, topography, and amount of impervious cover, as well as the intensity (energy) and frequency of irrigation or rainfall. Urban runoff may typically contain oil, grease, and metals accumulated in streets and driveways, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, pathogens, metals, and salts. The highest pollutant concentrations **usually occur at the beginning of the wet season during the "first flush,"** when early rainfall flushes out pollutants that have accumulated on hardscape surfaces during the preceding dry months.

The federal Clean Water Act requires local municipalities to implement measures to control these types of pollutants from entering their storm drainage systems. Further discussion of federal, State and local regulations and compliance is presented below in the Regulatory Setting section.

The California Department of Water Resources (DWR) is responsible for assessing the quality of the state's water resources including surface water. According to a Surface Water Quality Data Evaluation for Selected Streams in Central District prepared by the DWR (1989), a monitoring site in Putah Creek near Winters has been identified as having potential water quality problems affecting beneficial uses due to the total hardness and alkalinity. Total Dissolved Solids (TDS) are in the range of 150 - 500 mg. The secondary Maximum Contaminant Level (MCL) for TDS is 500 mg/L (however, short-term exposure to drinking water containing up to 1,500 mg/L TDS is

considered acceptable). Crop irrigation may be adversely affected by TDS of 500 mg/L and can be severely limited at higher concentrations. Recent data is limited on water quality of surface water resources within the Dixon area. Local drainage ditches and canals are intermittent and often have no appreciable surface flow during the dry season. However, during low-flow periods, surface water from these facilities may contain appreciable concentrations of agricultural pollutants including pesticides, herbicides, and fertilizers.

Storm Water Quality

The City's major detention ponds (Ponds A, B, and C) were designed to hold runoff for extended time periods to provide runoff water quality treatment. Ponds A and C have wet pools that allow sediment to settle out and remove nutrients with constructed wetlands. Pond B allows sediment to settle out by holding the runoff for an extended time period, but Pond B does not have a treatment wetland (although Pond B flows to Pond C which does have a treatment wetland). The NEQ Detention Pond will also be designed and constructed to provide water quality treatment. By designing the ponds to provide sediment removal and wetland treatment, the City has precluded the need for individual development projects to construct on-site water quality treatment facilities.

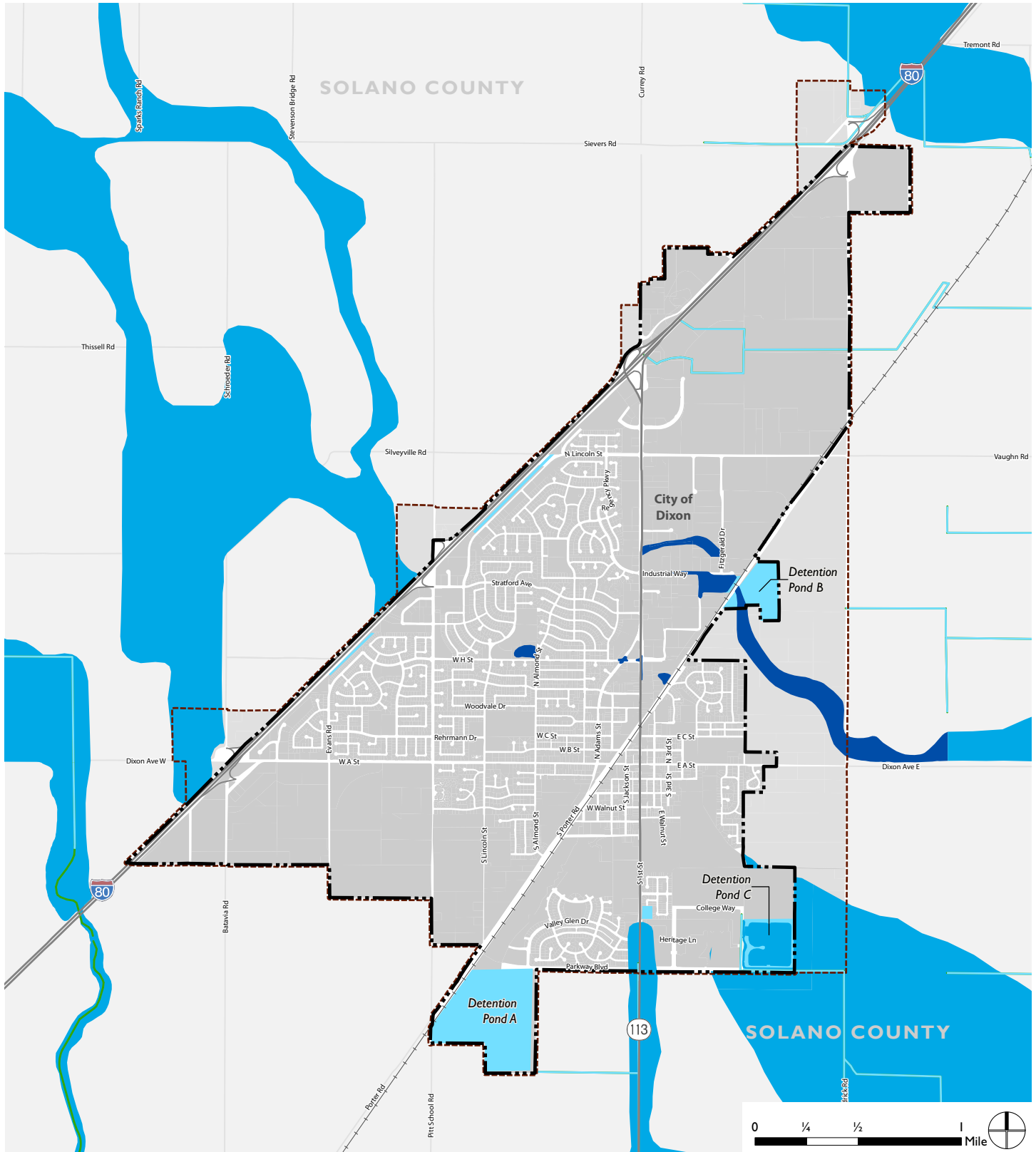
Flooding

Information on flooding and dam inundation zones within the Planning Area is available from the Federal Emergency Management Agency (FEMA), the California Office of Emergency Services (via **the Association of Bay Area Governments [ABAG]**), **the Solano County Water Agency's** countywide flood control master plan, and the Dixon Regional Watershed Management Plan.

The Federal Emergency Management Agency (FEMA) flood map identifies flooding hazards of various intensities, including 100-year and 500-year flood zones. As shown in Figure 3.9-4, there are small portions of the Dixon Planning Area within 100- and 500-year floodplains. The 100-year flood zone indicates those areas that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in a given year. The 500-year flood zone indicates those areas that have between a 0.2- and 1-percent annual chance of flooding in a given year.

As shown in Figure 3.9-4, very little of the City is covered by the FEMA 100-year floodplain. There is a narrow strip of floodplain along Highway 113 near the southern edge of the City. The FEMA mapping also shows a 100-year floodplain on the southeast corner of the City; however, this floodplain was removed from the area within the City limits through a Letter of Map Revision approved by FEMA on May 7, 2015, and the mapping shown on Figure 3.9-4 includes the revised floodplain. **The 100-year floodplain covers some areas within the City's Sphere of Influence north of Interstate 80 and in the southeast corner of the City's Sphere of Influence.** The 500-year floodplain was delineated prior to the construction of Detention Pond B and follows the old Dudley Creek alignment.

Figure 3.9-4: Flood Zones



Data Source: FEMA, 2012; City of Dixon, 2019; Dyett & Bhatia, 2019

2012 FEMA Floodplain Mapping

- 100 Year
- 500 Year Floodplain, 100 Year Floodplain with Water Depth less than 1 Foot, or 100 Year Floodplain Protected by Levees

- Railroad
- Dixon City Limit
- Sphere of Influence

Dam and Levee Failure Inundation Zones

Any dam poses a potential risk of failure, which would most likely be caused from seismically induced ground shaking or other seismic events, and which threatens the area below the dam with inundation. The nearest dam is Monticello Dam, approximately 15 miles away. Constructed between 1953 and 1957 in Napa County, the 270-foot-high Monticello Dam forms Lake Berryessa, which stores over 1.6 million acre-feet of water when full. Uncontrolled water released into Putah Creek could occur either from a major or partial dam failure or from a landslide into Lake Berryessa which could cause overtopping of the dam. Seismic evaluation of Monticello Dam indicates that it could withstand a magnitude 6.5 earthquake with the epicenter located 0.5 mile from the dam. The size and topography of the lake relative to the size of a potential landslide makes the possibility of dam overtopping unlikely, however any landslide that would place debris in the outlet works or spillway of the dam could be a threat. (Yolo County, 2012) Since 1972, the State has required inundation maps for most dams, showing those areas within the potential dam failure inundation zone.

The entirety of Dixon is in the Monticello Dam flood inundation zone, and were a catastrophic event were to occur, could result in the loss of life or major damage to structures and property. In the event of a dam failure, the city of Dixon would have approximately an hour and 16 minutes to evacuate before being reached by floodwaters from the northwest. Because the dam is located in a narrow canyon with the bulk of the water stored in the lake upstream, failure of the dam would release water at a constant rate for many hours (Ward 2014).

Pond A includes levees forming the perimeter of the detention basin. Pond A is regulated by the California Division of Safety of Dams. Other levees are within the Hastings Tract (located approximately 10 miles south of the Planning Area), Yolano Area (located approximately five miles east), and south Davis (located approximately 15 miles north) (U.S. Army Corps of Engineers, 2018). Hastings Tract, Yolano, and other Solano County tracts located outside of the Planning Area are considered part of the 1,100 miles of levees in the Sacramento-San Joaquin River Delta. While the Planning Area is not protected by levees, the regional levees discussed are considered at low risk for flooding (Delta Stewardship Council, 2017). Multiple levees in the Sacramento River Delta **region were built in the 1950's and 1960's and are now part of the** Sacramento River Flood Control Project, a large scale levee project authorized by Congress to ensure levee maintenance and minimize flooding.

Coastal and Bay Hazards

Sea Level Rise

Although climate change is expected to seriously alter the coastlines of the San Francisco Bay Area, Dixon is located at approximately 62 feet of elevation and about 68 miles from the coast. Sea levels are continuing to rise at a rate of about one-eighth of an inch per year (NOAA, 2018) indicating that sea level rise is not likely to affect Dixon in the foreseeable future.

Seiche

A seiche is a standing wave in an enclosed or partially enclosed body of water. Seiches have been observed in lakes, bays, and harbors, and can be triggered by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides.

Earthquake faults in the Bay Area such as the San Andreas Fault and the Hayward Fault, as well as active faults within Solano County such as the Green Valley, West Napa, Cordelia, and Hunting Creek faults, could produce ground shaking within the county. Seiches would be limited to the larger reservoirs in the county; however, the closest of these reservoirs to the Planning Area, Lake Berryessa, is over 15 miles away.

Tsunamis

Tsunamis are long-period water waves caused by underwater seismic events, volcanic eruptions, or undersea landslides. Tsunamis affecting the San Francisco Bay region would most likely originate west of the bay, in the Pacific Ocean. Areas that are highly susceptible to tsunami inundation tend to be low-lying coastal areas, such as tidal flats, marshlands, and former bay margins that have been artificially filled. The nearest body of water is Suisun Bay, more than 20 miles away. The California Department of Conservation's tsunami inundation zones maps show no risk of a tsunami affecting the Planning Area. (California Geological Survey, 2018).

Mudflows

Mudflows are landslides consisting of material that is wet enough to flow rapidly, and that contains at least 50 percent sand-, silt-, and clay-sized particles. Mudflows typically occur in small, steep channels and often occur simultaneously with flooding; there are few such channels within the Planning Area. The Planning Area has slopes of less than two percent; thus, there is no risk of impact on people and property from seismically-induced landslides. Further information on landslide potential is provided in Section 3.7 of this EIR, Geology and Soils.

REGULATORY SETTING

Federal Regulations

Federal Clean Water Act (CWA) of 1972

The Clean Water Act (CWA) of 1972 is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands, and is administered by the EPA. It operates on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit; permit review is the primary regulatory tool of the CWA.

The following sections of the CWA are particularly relevant to the implementation of the General Plan Update:

- Section 303 — Water Quality Standards and Implementation Plans
- Section 401 — Dredge/Fill and Wetlands Certification Program
- Section 402 — National Pollutant Discharge Elimination System

- Section 404 — USACE Fill or Dredge Discharge Permits

With the exception of the 404 permits, the EPA has delegated its authority to implement and enforce the provisions of these sections to the individual states. In California, the provisions are enforced by nine Regional Water Quality Control Boards under the auspices of the State Water Resources Control Board. Additional information on the requirements imposed by CWA Sections 303, 401, 402, and 404 is provided below.

CWA Section 303(d)—Total Maximum Daily Load (TMDL) Program

Section 303(d) of the CWA requires that the states make a list of waters that are not attaining water quality standards after the technology-based limits on point sources are put into place. For impaired waters on this list, the states must develop TMDLs. A TMDL is a written plan that describes how an impaired water body will meet water quality standards. The plan must which contain:

- A measurable feature to describe attainment of the water quality standard(s);
- A description of required actions to remove the impairment; and
- An allocation of responsibility among dischargers to act in the form of actions or water quality conditions for which each discharger is responsible.

A TMDL must account for all sources of the pollutants that caused the water to be listed. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (federally permitted discharges) and contributions from non-point sources (such as agricultural runoff). The impaired water body list and TMDLs must be approved by the EPA prior to adoption by the State Water Resources Control Board and Regional Water Quality Control Board.

CWA Section 401—Dredge/Fill and Wetlands Certification

Section 401 of the CWA grants each state the right to ensure that the state's interests are protected in any federally permitted activity occurring in or adjacent to "Waters of the State." If a proposed project requires a USACE CWA Section 404 permit, or involves dredge or fill activities that may result in a discharge to "Waters of the State," the project proponent is required to obtain a CWA Section 401 Water Quality Certification and/or Waste Discharge Requirements (Dredge/Fill Projects) from the State Water Resources Control Board, to verify that the project activities will comply with state water quality standards. Section 401 of the CWA gives the State Water Resources Control Board the authority to consider the impacts of the entire project and require mitigation for volume, velocity, and pollutant load of the discharge from new outfalls to surface waters, when issuing certifications.

CWA Section 402—National Pollutant Discharge Elimination System (NPDES) Program

CWA Section 402, enacted as an amendment to the original act in 1972, regulates construction-, industrial-, and municipal-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. The NPDES program provides for general permits and individual permits. In California, the State Water Resources Control Board is authorized by the EPA to oversee the NPDES program through the Regional Water Quality Control Boards via the Porter- Cologne Act, as described below.

Stormwater runoff can entrain pollutants from a variety of sources. Many types of human activity, including new construction projects, industrial activity, agriculture, and urbanization, can result in discharge of pollutants to surface waters. The NPDES program contains several sub-programs including: the construction, industrial, and municipal stormwater runoff programs, as discussed **under “State Regulations,”** below. **These programs could apply to projects and activities in the City of Dixon.**

CWA Section 404—USACE Fill or Dredge Discharge Permits

Section 404 of the CWA establishes a permit program, administered by U.S. Army Corps of Engineers (USACE), to regulate the discharge of dredge or fill materials into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA Section 404 permits are issued by USACE.

Federal Flood Insurance Program

In 1968, Congress created the National Flood Insurance Program (NFIP) in response to the rising cost of taxpayer-funded disaster relief for flood victims and the increasing amount of damage caused by floods. The NFIP makes federally backed flood insurance available for communities that agree to adopt and enforce floodplain management ordinances to reduce future flood damage, and federally-backed lenders require development in Special Flood Hazard Areas to obtain flood insurance. FEMA manages the NFIP, and creates Flood Insurance Rate Maps (FIRMs) that designate 100-year floodplain zones and delineate other flood hazard areas. A 100-year floodplain zone is the area that has a one in 100 (one-percent) chance of being flooded in any one year based on historical data, and defines the base flood level for a given area (see Figure 3.9-3: Flood Zones for flood hazard areas). FEMA standards further prohibit development in regulatory floodways, which are channels of rivers and streams and adjacent floodplains that must be reserved to discharge the base flood without increasing the water level, unless the project can demonstrate that the encroachment would not result in elevated flood levels (FEMA). Within the 100-year flood hazard area, FEMA allows development as long as the lowest finished floor (including the basement) is **elevated to or above the base flood level per Section 60.3 of FEMA’s Floodplain Management Criteria (FEMA)**. Relevant flood management requirements for the City of Dixon are discussed **under “Local Regulations.”**

National Dam Safety Act and Federal Guidelines for Dam Safety

The National Dam Safety Act, reauthorized in 2014, aims to reduce risks to life and property arising from dam failure. The US Secretary of the Army is required to maintain a database of all dams in the United States, including inspection details and jurisdiction, and the Act establishes funding and authority for safety oversight and staff safety training. The Interagency Committee on Dam Safety (ICODS) prepared and approved federal guidelines for dam safety risk management and emergency action planning, which requires federally-owned dam operators to conduct risk assessments and risk reduction measures (FEMA, 2019). **The Bureau of Reclamation’s Security, Safety and Law Enforcement Office** carries out safety and risk management for the dams under its jurisdiction, including Monticello Dam (Bureau of Reclamation, 2019).

State Regulations

Porter-Cologne Act and State Implementation of Clean Water Act Requirements

The Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Water Quality), promulgated in 1969, implements the federal CWA. It established the State Water Resources Control Board and divided the state into nine hydrologic regions, each overseen by a Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) is the **primary state agency responsible for protecting the quality of the state's surface water and groundwater resources**, but much of its daily implementation authority is delegated to the nine Regional Water Quality Control Boards.

The Porter-Cologne Act also provides for the development and tri-annual review of **Water Quality Control Plans (Basin Plans) that designate beneficial uses of California's major rivers and groundwater basins** and establish narrative and numerical water quality objectives to protect the beneficial uses of those waters. Basin Plans are primarily implemented through NPDES permits, waste discharge requirements, TMDLs, discharge prohibitions, and watershed management efforts. Basin Plans provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. The Porter-Cologne Act assigns responsibility for implementing the NPDES and Total Maximum Daily Load programs to the State Water Resources Control Board and the Regional Water Quality Control Boards. The Planning Area is located within the Sacramento River Basin Planning Area.

Water Quality Control Plan (Basin Plan)

In California, the SWRCB has broad authority over water quality control issues for the State. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the State by the federal government under the CWA. Other State agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) for drinking water regulations, the California Department of Pesticide Regulation, the California Department of Fish and Game (CDFG), and the Office of Environmental Health and Hazard Assessment. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. Dixon is in the jurisdiction of the Central Valley RWQCB.

The Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins is the **Central Valley RWQCB's master water quality control planning document**. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan establishes water quality objectives for total dissolved solids (TDS), mineral constituents, and turbidity on a watershed-by-watershed basis within the region, while objectives for total and fecal coliform bacteria, nutrients (total nitrogen and total phosphorus), pH, dissolved oxygen, and un-ionized ammonia are set on a region-wide basis. Additionally, water quality objectives for toxic organic and toxic inorganic constituents are established by the corresponding State and federal drinking water standards for waters designated as municipal supply. The RWQCB also implements the federal California Toxics Rule Water Quality Standards for Toxic Pollutants (CTR) established by the US EPA in Title 40, Section 141.38 of the Code of

Federal Regulations. The California Toxics Rule establishes numeric criteria for cyanide, metals, and toxic organic constituents.

The Basin Plan also contains the Antidegradation Implementation Policy (State Water Board Resolution 68-18). The Antidegradation Implementation Policy states that any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent pollution or nuisance, but also to maintain the highest water quality possible. This information must be presented as an analysis of the potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives. This analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge WDRs permitting processes, and environmental review documents should evaluate potential impacts to both surface and groundwater quality.

Drinking Water Standards

Maximum contaminant levels (MCLs) are identified and are made enforceable regulatory standards under the federal Safe Drinking Water Act. Title 22 of the California Code of Regulations (CCR) outlines drinking water standards for California. MCLs must be met by all public drinking water systems to which they apply. At a minimum, surface water and groundwater with a designated beneficial use as domestic or municipal supply in the Basin Plan shall not contain concentrations of constituents in excess of the MCLs or secondary MCLs specified in Title 22, which are incorporated by reference into the Basin Plan.

Stormwater Pollution Prevention Plan

A SWPPP must be prepared by a Qualified SWPPP Developer that meets the certification requirements in the Construction General Permit. The purpose of the SWPPP is to: (1) help identify the sources of sediment and other pollutants that could affect the quality of stormwater discharges; and (2) describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges resulting from construction activity. BMPs must be overseen by a Qualified SWPPP Practitioner that meets the requirements in the permit. For Level 2 and Level 3 projects, the discharger must also prepare a Rain Event Action Plan as part of the SWPPP that must be designed to protect all exposed portions of the construction site within 48 hours prior to any likely precipitation event.

The SWPPP must also include a construction site monitoring program. Depending on the project risk level, the monitoring program will include visual observations of site discharges, water quality monitoring of site discharges (pH, turbidity, and non-visible pollutants, if applicable), and receiving water monitoring (pH, turbidity, suspended sediment concentration, and bioassessment).

Local oversight is provided by the Regional Water Quality Control Board.

National Pollutant Discharge Elimination System (NPDES) Permit

If a proposed project would discharge waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project would require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES in

Dixon. Additionally, if the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project would require coverage under a NPDES permit.

Construction General Permit

Construction activities on one acre or more of land are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (Construction General Permit). To obtain coverage under the Construction General Permit, the discharger must provide via electronic submittal, a Notice of Intent, a Storm Water Pollution Prevention Plan (SWPPP), and other documents required by Attachment B of the Construction General Permit. Activities subject to the Construction General Permit include clearing, grading, and disturbances to the ground, such as grubbing or excavation. The permit also covers linear underground and overhead projects such as pipeline installations.

The Construction General Permit exercises a risk-based permitting approach and mandates certain requirements based on the risk level of the project (Level 1, Level 2, or Level 3). The risk level of the project is based on the risk of sediment discharge and the receiving water risk. The sediment discharge risk depends on the project location and timing (i.e., wet season versus dry season activities). The receiving water risk depends on whether the project would discharge to a sediment-sensitive receiving water, defined by the beneficial uses of the receiving water in the Basin Plan (e.g., cold freshwater habitat), a listing on the 303(d) list due to sediment impairment, or having a TMDL in place to address excessive sedimentation.

The performance standard in the Construction General Permit is that dischargers shall minimize or prevent pollutants in stormwater discharges and authorized non-stormwater discharges through the use of controls, structures, and management practices that achieve Best Available Technology (BAT) for treatment of toxic and non-conventional pollutants and Best Conventional Technology (BCT) for treatment of conventional pollutants. The permit also imposes numeric action levels (Level 2 and Level 3 projects) and numeric effluent limits (Level 3 projects) for pH and turbidity, as well as minimum Best Management Practices (BMPs) that must be implemented at all sites.

Industrial General Permit

Stormwater runoff from industrial sources and associated pollutants is regulated in California by the State Water Resources Control Board under the statewide General Permit for Stormwater Discharges associated with Industrial Activities (Water Quality Order No. 97-03-DWQ, General Permit No. CAS000001). The Industrial General Permit presents the requirements for compliance of certain industries with the NPDES program. A wide range of industries – including mining operations, lumber and wood products facilities, petroleum refining, metal industries, and some agricultural product facilities, such as dairies – are covered under the Industrial General Permit. Coverage is determined by Standard Industrial Classification (SIC) code. New industrial facilities with SICs requiring permit coverage are required to obtain coverage under the Industrial General Permit and comply with the permit requirements, which include preparation and implementation of a facility-specific SWPPP, monitoring, and annual reporting to the State Water Resources Control Board. Local oversight is provided by the Regional Water Quality Control Board.

Municipal Stormwater Permit

California's municipal stormwater permitting program regulates stormwater discharges from municipal storm sewer systems (MS4s). MS4 Permits were issued in two phases. Under Phase I, which was initiated in 1990, the Regional Water Quality Control Boards adopted individual NPDES stormwater permits for medium municipalities (serving between 100,000 and 250,000 people) and large municipalities (serving 250,000 people). Most of these permits were issued to a group of co-permittees encompassing an entire metropolitan area. As part of Phase II, the State Water Resources Control Board adopted a statewide General Permit for the Discharge of Storm Water from Small MS4s (Water Quality Order No. 2003-0005-DWQ, General Permit No. CAS000004) (Phase II General Permit) to provide permit coverage for smaller municipalities, including non-traditional small MS4s such as military bases, public campuses, and prison and hospital complexes.

The City of Dixon is listed by the RWQCB as a NPDES Phase II program municipality. In 2003, the City adopted a **five-year Storm Water Management Plan outlining how the City will comply** with the NPDES program requirements. Compliance with the Plan is monitored through an Annual Report submitted to the RWQCB.

Dewatering Permit

Both the State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 and the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145 cover projects which include construction or groundwater dewatering that would be discharged to land. Small temporary construction dewatering projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

Irrigated Lands Regulatory Program

If the property considered for development will be used for commercial irrigated agriculture, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. The first option to comply is to obtain coverage under a local Coalition Group that supports land owners with the implementation of this program by conducting water quality monitoring and reporting to the Central Valley Water Board on behalf of its members. Dischargers not participating in a Coalition Group are regulated individually under the General Waste Discharge Requirements for Individual Growers, General Order R5-2014-0100. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other action plans regarding their actions to comply with the General Order.

State Water Board Low Impact Development Policy

On January 20, 2005, the State Water Resources Control Board adopted the Low Impact Development (LID) Policy which, at its core, promotes the idea of "sustainability" as a key parameter to be considered during the design and planning process for future development. The State Water Resources Control Board has directed its staff to consider sustainability in all future policies, guidelines, and regulatory actions.

The sustainability practice promotes LID to benefit water supply and contribute to water quality protection. The Regional Water Quality Control Boards are advancing LID in California in various ways, including provisions for LID requirements in renewed Phase I municipal stormwater NPDES permits. The Phase II General Permit includes additional LID requirements to achieve water quality goals and to protect against stream channel hydromodification.

Dam Inundation Mapping Requirement and Dam Oversight

Section 8589.5 of the California Government Code and Title 19 of the Code of Regulations, Sections 2575 to 2578.3 requires that dam owners submit flood routing information, land surveys to delineate the floodplain, and a technical report to support a dam failure inundation map to the California Office of Emergency Services. The purpose of the program is to provide decision support for emergency preparedness planning, mitigation, and response to and recovery from potential damage to life and property from dam inundation flood waves. Based upon approved inundation maps (or the delineated areas), cities and counties with territory in the mapped areas are required to adopt emergency procedures for the evacuation and control of populated areas below the dams. Dam inundation maps are used in the preparation of LHMPs and General Plan Safety Element updates. In addition, CalOES requires all dam owners to develop Emergency Action Plans (EAPs) for warning, evacuation, and post-flood actions in the event of a dam failure.

California Green Building Code

In 2007, Governor Schwarzenegger directed the California Building Standards Commission (CBSC) to work with State agencies on the adoption of green building standards for residential, commercial, and public building construction for the 2010 code adoption process. The 2010 version of CalGreen took effect January 1, 2011 and instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial and low-rise residential buildings, state-owned buildings, schools, and hospitals. The most recent CALGreen code was adopted in 2016 and became effective in 2017. The 2016 edition of CalGreen has been amended and adopted as Chapter 16.17 of the City of Dixon Municipal Code.

New construction and renovations in California are now subject to CalGreen Code requirements. CalGreen includes prescriptive indoor provisions for maximum water consumption of plumbing fixtures and fittings in new and renovated properties. CalGreen also allows for an optional performance path to compliance, which requires an overall aggregate 20% reduction in indoor water use from a calculated baseline using a set of worksheets provided with the CalGreen guidelines.

California Assembly Bill 2140 (2006)

Assembly Bill 2140, enacted in September 2006, allows cities and counties to adopt a local hazard mitigation plan as part of the required safety element of the general plan. The hazard mitigation plan must include (1) an initial earthquake performance evaluation of public facilities that provide essential services, shelter, and critical governmental functions; (2) an inventory of private facilities that are potentially hazardous, including multi-unit, soft story, concrete tilt-up, and concrete frame buildings, and (3) a plan to reduce the potential risk to private and governmental facilities in the event of a disaster. Hazards mitigation plans are to include an evaluation of tsunamis, seiche, and dam failure risks. Assembly Bill 2140 is not a mandate, and compliance is optional. Local

jurisdictions that have not adopted a local hazard mitigation plan shall be given preference by the California Office of Emergency Services to receive FEMA funding to assist in developing such a mitigation plan. The City of Dixon participates in the Solano County Local Hazard Mitigation Plan, last updated in 2012.

California Assembly Bill 162 (2007)

Assembly Bill 162, enacted in October 2007, calls for flood safety planning to be better integrated into local general plans. Specifically, Assembly Bill 162 includes the following requirements related to flood risks:

- The land use element of the general plan must identify and annually review those areas covered by the general plan that are subject to flooding, as identified by floodplain mapping prepared by FEMA or the California Department of Water Resources.
- Upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan must identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management.
- A city or county general plan must contain a safety element for the protection of the community from any unreasonable risks associated with the effects of seismically-induced surface rupture, ground shaking, ground failure, tsunamis, seiche, and dam/levee failure, slope instability leading to mudslides and landslides, subsidence, liquefaction, and other seismic, geologic, and fire hazards.

To comply with AB 162, the Proposed Plan includes flood safety planning within the Natural Environment, Safety and Hazards Element.

Senate Bill 5 (Machado)

The Central Valley Protection Act of 2008 was enacted by Senate Bill (SB) 5. The requirements of SB 5 are as follows:

- By July 1, 2008, the State must develop preliminary 100-year and 200-year flood maps for areas in the Central Valley that are protected by project levees. The State completed this mapping effort in 2008, and it does not affect the Proposed Plan area because it is not protected by project levees. While there are levees protecting surrounding cities and open space within Yolo, Solano, Sacramento, and Napa Counties, these levees do not explicitly protect the Planning Area.
- The Central Valley Flood Protection Board (CVFPB) (formerly the Reclamation Board) adopted the Central Valley Flood Protection Plan (CVFPP) in June 2012. The CVFPP establishes a system-wide approach to improving flood management, including recommendations for structural and non-structural means for improving performance and eliminating the deficiencies of flood management facilities
- Within two years after the adoption of the CVFPP,⁷ communities within the Sacramento-San Joaquin Valley, including Dixon, must amend their General Plans to include data and analysis, goals, and policies for the protection of lives and property from flooding, and

related feasible implementation measures that are consistent with the CVFPP. Within one year of General Plan adoption, zoning ordinance amendments must be enacted to maintain consistency with the General Plan.

- Counties must collaborate with cities within their jurisdiction to develop flood emergency plans.
- To determine if a 200-year level of flood protection is required for the City, the California Department of Water Resources Urban Level of Flood Protection Criteria were reviewed. The critical criteria are the LOC-1 Location Criteria. If all of the criteria discussed below are met, then 200-year flood protection would be required for approval of new development. If even one of these criteria is not met, then a 100-year level of flood protection is required.
 - Is the development located in an urban area with 10,000 residents or more? Dixon has over 10,000 residents, so this criterion is met.
 - Is the development in a FEMA Special Flood Hazard Area (FEMA 100-year or 500-year floodplains)? Some of the potential growth areas of the City are within the FEMA 100-year or 500-year floodplains.
 - Is the development located in the Sacramento-San Joaquin Valley? Dixon is in the Sacramento River Valley.
 - Is the development located within a watershed of 10 square miles or larger? The City is within three regional watersheds. None of the watersheds in and upstream of the City are larger than 10 square miles, so this criterion is not met.
 - Is the development located within an area with a potential flood depth of 3.0 feet from sources of flooding other than localized conditions that may occur anywhere in a community, such as localized rainfall, water from stormwater and drainage problems, and water from temporary water and wastewater distribution system failure? This criterion cannot be evaluated in the Dixon area because there is no 200-year floodplain map.

Thus, because all of the City's watersheds are smaller than 10 square miles, the 200-year level of flood protection is not required for Dixon. A 100-year level of flood protection is the correct requirement for development in the City.

California Assembly Bill 1739 (2011), California Senate Bills 1168 & 1319 (2014)

These three bills are collectively known as the Sustainable Groundwater Management Act (SGMA). The act requires the formation of local ground water sustainability agencies that must assess conditions in local water basins and adopt locally-based ground water sustainability plans for basins that cannot demonstrate sustainable yields for at least ten years.

In Solano County, the State has designated the Solano Subbasin as a medium-priority groundwater basin, and as such, it is subject to SGMA. Local agencies and stakeholders within the Solano Subbasin area are expected to collaborate and coordinate on a basin-wide scale to sustainably manage groundwater at a local level. To help guide the process, the Solano County Water Agency (SCWA) hired a facilitator to support the development of a GSA Advisory Group to identify

constituency interests, concerns, and recommendations relating to GSA formation. Since January 2016, the GSA Advisory Group, in conjunction with the facilitator, held numerous meetings and produced a number of recommendations for the governance guiding principles and proposed structure of the GSA. The GSA Advisory Group has recommended one Solano Subbasin GSA that will be formed and operate under a Joint Powers Authority (JPA) governance structure. The Members of the Solano Subbasin Groundwater Sustainability Agency (Agency) are: City of Dixon, Dixon Resource Conservation District, Maine Prairie Water District, Reclamation District Number 2068, City of Rio Vista, Solano County, and the Solano Resource Conservation District. Collectively, each member either has land use authority, supplies water, or manages water over the portion of the Solano Subbasin (DWR Basin No. 5.21-66) **identified within the Agency's jurisdiction**. Ultimately, several GSAs were established in 2018, including the Solano GSA, City of Vacaville GSA, Sacramento County GSA, Solano Irrigation District GSA, and the Northern Delta GSA. Collectively these GSAs are the Solano Subbasin GSA Collaborative (Solano Collaborative). The purpose of the Solano Collaborative is to work towards development of a single Groundwater Sustainability Plan (GSP) for the Solano Subbasin by January 31, 2022 in order to fulfill the requirements of the SGMA.

Assembly Bill 70 (Jones)

Assembly Bill (AB) 70 was approved by the Governor in 2007 and added Section 8307 to the Water Code. The section was developed to distribute responsibility for flood control damage among State and local entities and it requires local governments to contribute their fair share to a flood's cost when they make unreasonable development decisions.

Local Regulations

California Water Service 2015 Urban Water Management Plan, Dixon District

Cal Water's Dixon District was formed in 1927 with the purchase of the water system from Pacific Gas and Electric Company. Cal Water began operating the water system owned by the Rural North Vacaville Water District in 2003. The District operates eight groundwater wells, two storage tanks, and 32 miles of pipeline. Cal Water is one of two water purveyors operating within the City of Dixon. The second water purveyor, the City of Dixon, was originally operated by the Dixon-Solano Municipal Water Service (DSMWS) and formed in 1984 by a Joint Exercise of Powers between Solano Irrigation District and the City of Dixon. Since August 2014, the City of Dixon water system has been operating the system either under contract or now with city staff.

The UWMP is a foundational document and source of information about the Dixon **District's** historical and projected water demands, water supplies, supply reliability and vulnerabilities, water shortage contingency planning, and demand management programs. The UWMP is used as a long-range planning document by Cal Water for water supply and system planning. It also provides source data on population, housing, water demands, water supplies, and capital improvement projects used in regional water resource management plans prepared by wholesale water suppliers and other regional planning authorities and General Plans prepared by cities and counties, like the Proposed Plan. (California Water Service, 2016)

The 2010 UWMP established 2020 targets for water consumption in the Dixon District, subsequently modified in the 2015 UWMP using updated population estimates. The revised

population estimates decreased the District's 2020 water use target from 164 to 161 gallons per capita daily. The 2015 UWMP also provides water consumption estimates for retail and residential uses, and recommends water conservation methods supporting the regulations discussed above.

Dixon Regional Watershed Management Plan (DWMP)

As discussed in the Environmental Setting above, the Agricultural Limited Industrial Service Area (AISA) development **just east of the City's NEQ** is not currently within the DRCD Tremont 3 Drain Service Area. To resolve disputes between AISA landowners and landowners downstream of the railroad, the SCWA prepared the DWMP in 2001. In 2001, a regional plan for drainage of the Tremont 3 watershed was developed in the DWMP. The DWMP identified optional approaches to resolve the dispute between the upstream and downstream property owners, allow for the development of the NEQ of Dixon, and reduce the flooding of the downstream farms. This plan required several years of effort and resulted in the formation of the DRWJPA. As discussed above, the DRWJPA has been working diligently on implementing the recommended project. The City adopted drainage impact fees sufficient to fund their share of the drainage projects. **The DRWJPA's** drainage plan did not anticipate nor accommodate the development of the AISA. However, the re-evaluation of the NEQ Detention Pond and the Eastside Drainage Project will include the AISA development.

Post-Construction Stormwater Runoff Management Plan

In order to comply with the Phase II General MS4 Permit, the City developed a Stormwater Management Plan in 2003. Chapter 7, Post-Construction Stormwater Management In New And Redevelopment Program, describes good site planning and development review practices to ensure new projects are designed with stormwater protection in mind. This chapter also describes controls to minimize erosion and sedimentation from construction activities. As part of the Plan, the city has developed an ordinance to address postconstruction runoff from new development and redevelopment projects that disturb greater than one acre of land.

2016 Water System Master Plan and Strategic Asset Management Plan

The Water System Master Plan (WSMP) for the City of Dixon identifies existing potable water system deficiencies and required potable water system improvements, based on updated demand estimates and system evaluations, and formulates a comprehensive Capital Improvement Program (CIP) **which meets the needs of the City's existing and future water customers. The WSMP was completed based on information for the City's water distribution system at the end of 2016, but does not include updates to the system and operational changes for 2017.** The resulting WSMP provides the City with a comprehensive and prioritized road map to improve the capacity, operational flexibility, and reliability of the potable water distribution system to meet existing and projected future water demands. The WSMP develops a Strategic Asset Management Plan for the **City's existing water system facilities to provide guidance for the City's preventative maintenance** and rehabilitation and replacement programs. A comprehensive Capital Improvement Program identifying the size and location of required improvements is also developed to address existing potable water system deficiencies and future potable water system needs.

Based on the evaluations performed for this WSMP, several improvement projects have been recommended for **the City's existing, 2030 and buildout water system.** Suggested improvements

include constructing new pipelines throughout the Planning Area, adding storage within the Northeast Quadrant Specific Plan area at buildout, and the Fitzgerald Drive booster pump station. The WSMP also recommends construction of two new wells to increase supply within the Southwest Dixon Specific Plan and Northeast Quadrant Specific Plan #1 Planning Areas by 2030, and two new wells at buildout within the East development area and Northeast Quadrant Specific Plan #2 area (City of Dixon, 2018).

Local Agencies

Dixon Regional Watershed Joint Powers Authority (DRWJPA)

The JPA was formed in 2004 and is comprised of the City of Dixon, DRCD, Maine Prairie Water District, and Reclamation District 2068. The purpose of the JPA is to improve mechanisms to fund, construct, own and operate new or upgraded drainage facilities that provide drainage to two or more of the participating entities.

In 2001, a regional plan for drainage of the Tremont 3 watershed was developed in the DWMP. The DWMP identified optional approaches to resolve the dispute between the upstream and downstream property owners, allow for the development of the NEQ of Dixon, and reduce the flooding of the downstream farms. This plan required several years of effort and resulted in the formation of the DRWJPA. As discussed in the Environmental Settings above, the DRWJPA has been working diligently on implementing the recommended project. The City adopted drainage **impact fees sufficient to fund their share of the drainage projects. The DRWJPA's drainage plan did not anticipate nor accommodate the development of the AISA. However, the re-evaluation of the NEQ Detention Pond and the Eastside Drainage Project will include the AISA development.** (West Yost Associates, 2016)

Solano County Water Agency (SCWA)

SCWA is a Special District originally formed in 1951 as the Solano County Flood Control and Water Conservation District (SCFCWCD) by an act of the California Legislature. In 1989, that legislative act was amended, renaming the District the SCWA. In total, SCWA serves approximately 538,782 acres and a population of approximately 421,657 people (SCWA's UWMP 2005). SCWA has authority to supply untreated water and to provide flood control. The Solano County Water Agency Flood Hazard Warning System was created in 2006 to provide up-to-date information to the community and public agencies on potential flooding in Solano County.

Solano Resource Conservation District (SRCD)

The Solano RCD was formed in 1956 under Division 9 of the California Public Resources Code. The mission of the District is to protect, promote and enhance the soil, water, wildlife, **plant-life** and air quality resources within Solano County. Solano RCD provides landowners and urban dwellers assistance by providing direct conservation planning services, through educational outreach, and modeling best management practices at demonstration sites throughout the county.

Dixon Resource Conservation District (DRCD)

DRCD was organized on September 2, 1952 and operates under Division 9 of the Public Resources Code. The DRCD was formed to construct, operate, and maintain the Dixon Drain; a seventy-mile long system of ditches designed to provide winter drainage, reduce duration of flooding, and diminish ponding of winter water on agricultural lands. (City of Dixon, 1993)

City of Dixon Municipal Code

Chapter 9.04: Flood Damage Prevention Ordinance

The City has adopted a Floodplain Management Ordinance that describes methods for reducing flood losses, including:

- A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- D. Controlling filling, grading, dredging, and other development which may increase flood damage; and
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters, or which may cause flood hazards in other areas.

The Floodplain Management Ordinance contains a number of provisions for flood hazard reduction, including anchoring standards; specifications for construction materials and methods; and elevation and floodproofing requirements.

Chapter 14.01: Sewers

This chapter sets forth uniform requirements for users of the publicly owned treatment works (POTW) for the City of Dixon and enables the City of Dixon to comply with all applicable State and Federal laws, including the Clean Water Act and the Porter-Cologne Water Quality Control Act. This chapter authorizes the issuance of wastewater discharge permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires user reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established in this chapter.

Chapter 14.02: Water

This chapter is the Water Code of the City of Dixon. The provisions of this chapter apply to water **supplies and services operated by the city, systems connecting to the City's distribution system, the issuance of permits, the collection of fees for services and improvements to the City's water facilities, and the provision of penalties for violations of any of the provisions of this chapter.** This

chapter establishes general water use requirements, water conservation methods, permits, fees, and rates. This chapter also addresses the protection of drinking water in order to protect the public potable water supply from the possibility of contamination or pollution by isolating, within each customer's internal distribution system or private water system, such contaminants or pollutants which could backflow into the public water systems; promoting the elimination or control of existing cross-connections, actual or potential, between in-plant potable water systems and nonpotable water systems, plumbing fixtures and industrial piping systems; and providing for the maintenance of a continuing program of protection of drinking water, or cross-connection control program, that will systematically and effectively prevent the contamination or pollution of all potable water systems.

Chapter 16.04: Grading Control Ordinance

This chapter regulates grading on property within the City of Dixon. All development must be consistent with General Plan policies related to hydrology and water quality and Zoning Ordinance requirements associated with creeks and other natural drainage courses/tributary standards. In addition, all new development projects in the City are subject to the requirements of the NPDES Stormwater Permit enforced by RWQCB.

Chapter 16.06: Stormwater Control Ordinance

The City has adopted a Stormwater Control Ordinance to protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act and the Porter-Cologne Act by reducing pollutants in storm water discharges to the maximum extent practicable and by prohibiting non-storm water discharges to the storm drain system.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Violate any water quality standards or waste discharge requirements;
- Criterion 2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Criterion 3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;

- Criterion 4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Criterion 5: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Criterion 6: Otherwise substantially degrade water quality;
- Criterion 7: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Criterion 8: Place within a 100-year flood hazard area structures which would impede or redirect flood flows; or
- Criterion 9: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow.

METHODOLOGY AND ASSUMPTIONS

All Plan elements were analyzed by comparing baseline conditions, as described in the Environmental Setting section, to conditions during construction and/or operation of the Proposed Plan. The analysis focused on issues related to surface hydrology, flood hazards, groundwater supply, and surface and groundwater quality. The key construction-related impacts were identified and evaluated qualitatively, based on the physical characteristics of Dixon and the magnitude, intensity, location, and duration/frequency of activities. This analysis of hydrologic and water quality impacts is based on a determination of the potential for water quality degradation and individual project or cumulative projects potential to cause increased erosion, sedimentation, and adverse conditions associated with changes to stormwater runoff attributable to implementation of the Proposed Plan, with consideration of legally-mandated requirements for protecting water quality. The resultant effects can only be generalized relative to the significance criteria to determine if the project would result in significant impacts and if mitigation measures would be warranted. Cumulative impacts related to hydrology and water quality are discussed in Chapter 5: CEQA Required Conclusions.

Surface Water Hydrology

The surface water hydrology impact analysis considers potential changes in the physical characteristics of water bodies, impervious surfaces, and drainage patterns throughout the City of Dixon as a result of the Proposed Plan's **implementation**.

Groundwater Hydrology

Impacts on groundwater supply and recharge are assessed by comparing existing groundwater use and recharge capabilities with project conditions. Recharge is determined by the ability of water to infiltrate into the soil.

Water Quality

Impacts of the Proposed Plan on surface water and groundwater quality were analyzed by comparing existing water quality conditions and potential project water quality conditions. Potential project-related sources of water contaminants generated by residential, office, and industrial project operational activities, such as vehicle use, building maintenance, pesticide use, trash generation, and the storage or inadvertent release of hazardous materials during project construction, are considered. The potential for water quality objectives to be exceeded and beneficial uses to be compromised is also considered.

Flooding

The flood risk analysis uses FEMA data and historical flood information to determine the existing flood zone and whether the project area overlaps designated 100-year floodplains, whether it would affect the drainage system, and whether it was a flood risk. Pursuant to the recent Supreme Court case decision in California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369, Case No. S213478, CEQA does not require an analysis of how **existing environmental conditions will affect a project's residents or users unless the project would exacerbate an existing environmental hazard**. Accordingly, hazards resulting from a project that places development in an existing or future flood hazard area are not considered impacts under CEQA unless the project would exacerbate the flood hazard. Thus, the analysis evaluates whether the project would exacerbate existing or future flood hazards in the City of Dixon, resulting in a substantial risk of loss injury or death. If evidence indicates it would not, then the analysis will conclude by stating such. If it would potentially exacerbate the issue, then evidence is provided to determine if the exacerbation would or would not be significant.

RELEVANT POLICIES AND ACTIONS

Economic Development

- E-1.7 Require industrial, light industrial, and agro-industrial development to meet performance standards based on factors of noise, odor, light, glare, traffic generation and air emissions, soil contamination, and surface and groundwater contamination in order to minimize its impacts on established or proposed residential areas and other adjacent uses.

Mobility and Transportation

- MT-1.9 Require new residential development projects to implement best practices for street design, stormwater management and green infrastructure.
- MT-1.11 Coordinate roadway improvements with other transportation and utility infrastructure improvements such as sewer and water.

MT-4.8 Require new or redesigned parking lots to optimize pedestrian and bicycle safety and provide green infrastructure for aesthetic and stormwater management purposes.

Natural Environment

- NE-1.6 Recognize the Sacramento Valley - Solano Groundwater Subbasin as a critical resource for Dixon and proactively promote sustainable groundwater management practices.
- NE-1.7 Continue to work with the Solano Subbasin Groundwater Sustainability Agency Collaborative to develop and implement strategies for the long-term health and viability of the Solano Groundwater Subbasin.
- NE-1.8 Facilitate groundwater recharge in Dixon by encouraging development projects to use Low-Impact Development (LID) practices such as bioretention, porous paving, and green roofs, and by encouraging private property owners to design or retrofit landscaped or impervious areas to better capture storm water runoff.
- NE-1.9 Ensure that drainage ditches which discharge directly to or are located within open space lands are regularly repaired and maintained.
- NE-1.D Pursue funding from the Sustainable Groundwater Management Grant Program and other sources for investments in groundwater recharge and implementation of the Solano Basin Groundwater Sustainability Plan.
- NE-2.4 Encourage the retention and reuse of rainwater onsite and promote the use of rain barrels or other rainwater reuse systems throughout the community.
- NE-2.5 Encourage new development to incorporate as many water-wise practices as possible in their design and construction.
- NE-2.6 Conserve water through the provision of water-efficient infrastructure, drought tolerant plantings, greywater usage to support public parks and landscaped areas.
- NE-2.7 Conserve water through the planting and maintenance of trees, which will provide for the capture of precipitation and runoff to recharge groundwater, in addition to providing shading for other landscaping to reduce irrigation requirements. Ensure **that any 'community greening' projects utilize water-efficient landscape.**
- NE-2.A Connect businesses and residents with voluntary programs that provide free or low-cost energy efficiency audits, retrofit installations, rebates, financing and contractors by publishing information on the City's website.
- NE-2.B Explore establishing a rebate program to promote the installation of renewable energy production systems including photovoltaics and other appropriate technologies.

- NE-2.C Continue to provide water customers with information on conservation techniques, services, devices, and rebates by publishing information on the City's website and distributing flyers.
- NE-2.D Update the Municipal Code to allow the use of greywater and rainwater catchment systems for all structures.
- NE-4.4 Collaborate with the Bureau of Reclamation, Solano Irrigation District, Solano County Water Agency and other responsible agencies to ensure the safety of the Monticello Dam.
- NE-4.A Continue to implement provisions for flood hazard reduction in Special Flood Hazard Areas in order to limit the potential for adverse effects on public health, safety, and general welfare.
- NE-5.5 Encourage development to minimize grading related to the topography and natural features in order to limit soil erosion.
- NE-5.6 Require construction projects that disturb 10,000 square feet of ground cover revegetate graded areas with native or locally appropriate vegetation to restore biological diversity and minimize erosion and soil instability.
- NE-5.7 Coordinate with Yolo and Solano counties, the Resource Conservation District, and the Natural Resources Conservation Service in implementing programs to reduce soil erosion by wind and water and prevent soil contamination.
- NE-5.8 Coordinate with the Dixon Resource Conservation District, California Water Service, Solano Subbasin Groundwater Sustainability Agency, Solano County and others to promote, protect, and improve water quality in Dixon.
- NE-5.9 Protect surface water and groundwater resources from contamination from point (single location) and non-point (many diffuse locations) sources by pursuing strategies to minimize the pollutant and sediment levels entering the hydrological system through stormwater, agricultural, and other urban runoff.
- NE-5.10 Encourage, through redevelopment and retrofitting, phasing out of commercial and industrial building materials such as galvanized roofs that leach metals into storm water runoff.
- NE-5.11 Reduce, through redevelopment and retrofitting, the amount of uncovered industrial and commercial areas where the work activity may contribute pollutants.
- NE-5.12 Support programs that encourage residents and business owners to cleanup trash and debris as well as pet waste before it enters the storm drain systems.
- NE-5.13 Work with the Solano County Agricultural Commissioner and other responsible agencies to identify and enforce mechanisms to control residual pesticides and

pesticide runoff to prevent significant risk to water quality, vegetation, wildlife, and humans.

NE-5.B **Update the City's Storm Water Quality Management Plan as needed to comply with the NPDES General Permit for the Discharge of Storm Water from Small Municipal Separate Storm Sewer Systems, Order No. 2003-0005-DWQ, or as amended.**

NE-5.C Consider developing a green infrastructure plan that employs tools such as bioswales, permeable pavement, rain gardens, rain barrels and cisterns, and green roofs to treat stormwater, attenuate floods, increase groundwater recharge, and reduce urban heat islands.

NE-5.D Install grease/oil separators in storm drains along roadways with heavy traffic to keep these contaminants out of storm runoff.

Public Facilities and Services

PSF-2.2 **Expand the City's water supply system, including wells, pipelines and storage facilities, in order to meet future need as development occurs, particularly in the Northeast Quadrant and in Southwest Dixon.**

PSF-2.3 **Improve the reliability of the City's water system to meet future demand, including through the construction of additional wells and the identification of potential surface water supply sources.**

PSF-2.4 **Prioritize improvements to the City's water system to ensure the provision of safe, clean water.**

PSF-2.8 Coordinate with the Dixon Regional Watershed Joint Powers Agency, the Solano County Water Agency, the Solano Irrigation District and other responsible agencies to address storm drainage and flood control on a sub-regional basis in order to optimize the use of existing and planned conveyance facilities.

PSF-2.9 Require through development agreements that new development provide necessary storm drainage improvements and ensure that upstream stormwater generators fully address stormwater needs on their property.

PSF-2.11 Encourage project designs that minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.

PSF-2.B Study options for diversifying and expanding the City's water supply sources.

IMPACTS

Impact 3.9-1 Development under the Proposed Plan would not violate any federal, state, or local water quality standards or waste discharge requirements. (*Less than Significant*)

The Proposed Plan would have a significant environmental impact if it would violate water quality standards and waste discharge requirements set out in the NPDES Permit Phase II General Permit for Discharge of Storm Water from Small MS4s NPDES Permit in force for the City of Dixon. Violation could occur if the Proposed Plan would substantially increase pollutant loading levels in the sanitary sewer system, either directly, through the introduction of pollutants generated by industrial or other land uses, or indirectly, through stormwater pollution.

The City complies with the RWQCB Monitoring and Reporting Program. The Proposed Plan would primarily involve construction and operation of residential and commercial uses and would involve few industries likely to substantially increase pollutant loading levels in the sanitary sewer system. Any new industrial uses would have to comply with the Industrial General Permit, as described in the Regulatory Setting section, above.

Additionally, in compliance with the SWRCB Construction General Permit, a SWPPP would be prepared for any projects resulting from the Proposed Plan, detailing the methods for preventing the pollution of stormwater with sediment, petrochemicals, or other pollutants associated with construction activities or equipment. Further, implementation of Phase II Municipal Stormwater NPDES Permit BMPs described below in Impacts 3.9-3 and 3.9-4 would provide natural filtration of stormwater, reducing the volume of contaminants entering the City's storm sewer system.

Several policies in the Proposed Plan would also ensure that federal, State, and local water quality standards and waste discharge requirements are met. **The Proposed Plan would update the City's Storm Water Quality Management Plan** as needed to comply with the NPDES General Permit, and require development to meet performance standards and include measures to limit potential water pollution (NE-2.1, NE-2.2, NE-5.B, and E-1.7). Proposed strategies to minimize the pollutant and sediment levels entering the hydrological system through stormwater, agricultural, and other urban runoff include a green infrastructure plan, grease/oil separators in storm drains along roadways with heavy traffic, low-pesticide landscaping practices, stormwater BMPs, and LID measures aimed at minimizing impervious surfaces and increasing urban stormwater runoff treatment (MP-4.8, NE-5.7, NE-5.9, NE-5.10, NE-5.11, NE-5.12, NE-5.13, NE-5.c, NE-5.D, and PSF.2.11). These policies and actions would reinforce and strengthen federal, State, and local requirements.

Groundwater within the Planning Area has historically met all federal and state standards, except the recent state standard for hexavalent chromium. The national MCL for total chromium (including the non-toxic chromium-3) is 100 ppb, and 50 ppb in California. In 2014, the California Department of Public Health established an MCL of 10 ppb for hexavalent chromium. Although the SWQCB removed the MCL of 10 ppb for hexavalent chromium in 2017 due to insufficient documentation on the economic feasibility of compliance, the SWQCB continues to believe that hexavalent chromium is a threat to public health and is working to establish a new MCL, which could be the same as the previous MCL. Levels of hexavalent chromium found in wells within the Planning Area have historically met the standard of 50 ppb total chromium but have repeatedly exceeded the 10 ppb limit for hexavalent chromium. If the SWQCB reinstates an MCL of 10 ppb

for hexavalent chromium, groundwater levels of hexavalent chromium under the Proposed Plan could violate this water quality standard. In response to this issue, Cal Water has installed ion exchange wellhead treatment facilities at affected well sites in order to ensure a continuous and reliable supply of water that meets all primary and secondary water quality standards. Additionally, because the process recycles a portion of the salt brine utilized to remove hexavalent chromium from the water, this method produces 25 percent of the waste of its nearest competitor. While the Proposed Plan includes industrial and light industrial land uses that could contribute to hexavalent chromium levels, existing treatment facilities would ensure that the potential impact on hexavalent chromium standards is less than significant. Policies discussed above to reduce potential sources of water pollution could reinforce the success of these facilities. Additionally, the issue of hexavalent chromium contamination would be pertinent regardless of implementation of the Proposed Plan due to existing conditions and the naturally occurring level of hexavalent chromium at 20 ppb.

Therefore, development under the Proposed Plan would not violate established water quality standards or waste discharge requirements and the impact would be less than significant.

Mitigation Measures

None required.

Impact 3.9-2 Development under the Proposed Plan would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). (*Less than Significant*)

Groundwater table stability is a balance between how much water infiltrates the aquifer and how much water is drawn out. The City of Dixon is entirely dependent on groundwater drawn from the Solano Groundwater Subbasin. As the Proposed Plan anticipates up to 9,340 new residents and 2,578 new jobs over the planning horizon, a significant impact could occur if groundwater were drawn to serve the needs of these new residents and employees in a way that would result in a net deficit of aquifer volume or lead to a lowering of the water table.

However, the City of Dixon is a participant in the Solano Subbasin Groundwater Sustainability Agency (SSGSA), operating under a Joint Powers Authority (JPA) governance structure. As described in the Settings section, the State has designated the Solano Subbasin as a medium-priority groundwater basin, and as such, it is subject to SGMA. The Solano Subbasin groundwater levels have been stable with low levels in the dry season and high levels in the wet season of each year since the 1980s. The SSGSA is required to complete and maintain a plan for long term sustainability of the Solano Subbasin. Compliance with the SGMA legislation, by regularly demonstrating that the basin is not overdrafted, ensures that the groundwater draws will be carefully managed and sustainably used, and that the Proposed Plan will not substantially deplete groundwater supplies from increased demand.

Further, existing regulations would ensure that overall infiltration into the aquifer would remain robust, including LID techniques to capture and infiltrate stormwater runoff, consistent with City

of Dixon required compliance with NPDES permitting and MS4 requirements, as applicable. Policies in the Proposed Plan would help to reduce per capita water use, reducing the future burden on groundwater supplies, through proactive water conservation measures and education (NE-2.2, NE-2.4, NE-2.5, NE-2.6, NE-2.7, NE-2.C, and NE-2.D). Policies in the Proposed Plan would also help to conserve surrounding farmlands and open spaces, ensuring good water infiltration surrounding Dixon (NE-1.1, NE-1.2, NE-1.3, NE-1.4, NE-1.5, NE-1.A); require LID techniques to manage stormwater and promote open space, bioswales, detention ponds, and landscaped buffers, which would reduce the amount of impervious area associated with new development that could adversely affect groundwater recharge (NE-1.8 and PSF-2.11); require continued participation in the SSGSA, proactively promote sustainable groundwater management practices, and pursue grants for investments in groundwater recharge and management programs (NE-1.6, NE-1.7, NE-1.D); and require the City to explore alternative water sources, reducing future reliance on groundwater (PSF-2.3 and PSF-2.B).

Overall, compliance with existing federal, State and local programs and regulations and implementation of the BMPs discussed above would ensure that impacts related to substantial decreases in groundwater supply or substantial interference with groundwater recharge from implementation of the Proposed Plan would be less than significant.

Mitigation Measures

None required.

Impact 3.9-3 Development under the Proposed Plan would not substantially alter the existing drainage pattern of the City of Dixon, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site. (*Less than Significant*)

Under the Proposed Plan, a number of areas within the Planning Area will be converted from agricultural use non-agricultural uses. As many agricultural lands within the Planning Area—which are permeable by nature—are currently served by drainage ditches, development could potentially increase runoff and alter existing drainage patterns. Additionally, construction of projects developed under the Proposed Plan could involve excavation and disturbance of existing ground surface, exposing base soil and temporarily altering surface drainage patterns.

Each individual project would be required to develop and implement a SWPPP with erosion and sediment control BMPs as required by the **State's** Construction General Permit and MS4 Permit regulations. Standard erosion and sediment control measures and other housekeeping BMPs, such as vehicle and equipment maintenance, material delivery and storage, and solid waste management, would be identified in the SWPPP. BMPs included in the SWPPP would represent the best available, economically achievable technology, and the best conventional pollutant control technology to reduce pollutants. These measures would be identified for each individual project and implemented during construction to reduce contamination and sedimentation in waterways.

The SWPPP would also include a range of stormwater control BMPs (e.g., installing silt fences, staked straw wattles, or geofabric to prevent silt runoff to storm drains or waterways); requirements for the stockpiling, protection, and replacement of topsoil and backfill at the conclusion of

construction activities; and requirements for revegetation of turf, plants, and other vegetation upon completion of construction. Projects disturbing less than an acre of ground surface during construction would not be required to prepare a SWPPP, but would be required to implement the construction site control BMPs required by the City of Dixon's NPDES permit (MS4). Projects would also be subject to requirements of the Construction General Permit, the City's Stormwater Management Standards for construction activity, and the City's grading requirements, as applicable. With implementation of erosion and sediment control BMPs, project construction activities would result in less than significant erosion, siltation, and flooding impact during project construction activities.

Policies and actions of the Proposed Plan would provide additional safeguards: new developments would be required to adequately plan for stormwater management, on-site water retention, and inclusion of low impact development and other stormwater BMPs into development projects, (PSF-2.9, PSF-2.11, NE-1.8, and NE-2.4), facilitating natural drainage and maintaining and repairing drainage ditches, preserving open space, collaborating with regional stormwater and water management agencies, and planting and maintaining trees, all of which would reduce or prevent substantial erosion, siltation, and runoff (NE-1.1, NE-1.2, NE-1.3, NE1.A, NE-1.9, NE-1.15, NE-1.F, NE-2.7, PSF-2.8).

Therefore, compliance with applicable federal, State, and local programs and regulations and implementation of BMPs discussed above would ensure that risks associated with substantial alteration of the existing drainage pattern of the City of Dixon in a manner which would result in substantial erosion, siltation, or flooding on- or off-site would be reduced to the maximum extent practicable and would be less than significant.

Mitigation Measures

None required.

Impact 3.9-4 Development under the Proposed Plan would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (*Less than Significant*)

Buildout of the Proposed Plan is expected to generate an increase in impervious surfaces with the development of up to 3,022 new housing units and up to 2,568 new jobs. These impervious surfaces would include new buildings, roads, sidewalks, pathways, parking areas and similar improvements. Unless properly treated, runoff from these surfaces could include various pollutants, such as asbestos, oils, solvents and other pollutants that could be transported through drainage channels and ultimately the Sacramento River. By implementing these long-term changes to streetscapes and pedestrian walkways, increasing parking spaces, building new residential developments, and otherwise introducing new impervious surfaces, implementation of the Proposed Plan could create or contribute polluted runoff. This additional runoff could also exceed the capacity of existing or planned stormwater drainage systems within the City of Dixon.

The City's storm drain system includes 63 miles of storm drain piping ranging in size from 12 inches to 84 inches in diameter. The stormwater system also includes three major detention

basins (Detention Basins A, B, and C; sometimes called Ponds A, B, and C). There are two pump stations, one pumps water out of Detention Basin B, and the other pumps water from the Valley Glen development into Detention Basin A. Additionally, there are several smaller detention basins within the City that serve individual residential, commercial, or industrial development projects.

The Dixon Storm Drain Report (DSDR) (City of Dixon, 1999a) divided the City into eight separate watersheds, Watersheds A through H (sometimes called Basins A through H). Figure 3.9-2 shows the location of these watersheds. The three major watersheds (Watershed A, Watersheds B/C, and Watershed D/G/H) drain into three Dixon Resource Conservation District (DRCD) agricultural drains (drainage ditches), called Lateral 1, Lateral 2/3, and Tremont 3, respectively. These major watersheds and drains are described below. The City also includes two smaller watersheds, including: 1) Watershed E, in which all runoff is retained on site and no runoff is released to either the City's storm drain system or the DRCD agricultural drains, and 2) Watershed F, which drains to the DRCD's Tremont 3 Drain and DRCD's Lateral 2/3 Drains.

The western side of the City is in Watershed A. Watershed A generally drains from the north to the south. Watershed A includes about 2,640 acres, including about 760 acres of agricultural land upstream (north) of I-80 and 1,880 acres of urban and agricultural lands downstream (south) of I-80, but within the City. **This watershed mostly flows to the City's Detention Basin A, which provides 640 acre-feet of storage volume. Detention Basin A flows to the DRCD Lateral 1. The DSDR recommended several drainage projects to improve the drainage within the existing City areas (primarily the enlargement of Pond A and DRCD's Lateral 1, which have been constructed).**

Most of the future development in this watershed is in the Southwest Dixon Development Specific Plan Area. The developers of the Southwest Dixon Development Specific Plan Area are currently preparing a drainage study that further refines the recommended improvements from the DSDR, including the diversion of the Almond Street Area from Watershed C into Pond A to eliminate minor flooding in Watershed C.

Thus, for Watershed A and DRCD Lateral 1, drainage improvements that eliminate impacts from the Proposed Plan have been identified and several have been constructed. The others will be constructed by the City or by the Southwest Dixon Development Specific Plan Area developers. Consequently, there will be no impact from the Proposed Plan in this watershed.

The central area of the City is in the Watersheds B and C. These watersheds generally drain from the north to the south. These watersheds include about 2,190 acres, including about 750 acres of agricultural land upstream (north) of I-80 and 1,440 acres of urban lands downstream (south) of I-80, but within the City. The northern part of this watershed drains to Detention Basin B. **From there, the water is pumped into DRCD's Lateral 2. The southern part of this watershed (but within the City) is called Watershed C, which also drains to Lateral 2. The combined flow is then detained in Detention Basin C. From Detention Basin C, the runoff is released into DRCD's Laterals 2/3 system.**

The DSDR recommended two drainage projects to improve the drainage within the existing City areas and accommodate future development within these watersheds, including: 1) the diversion of the Almond Street Area from Watershed C into Pond A (which will be implemented by the

Southwest Dixon Specific Plan developers), and 2) The Pond C detention basin (which was previously constructed by the City).

Thus, for Watersheds B and C the drainage improvements that eliminate impacts from the Proposed Plan have been identified and will soon be or have been constructed. Consequently, there will be no drainage impacts from the Proposed Plan in this watershed.

Watersheds D/G/H constitute the northern watersheds within the City and just north of the City, **including the County's Agricultural Industrial Services Area (AISA). Watershed D includes about 3,280 acres.** This watershed generally drains from the northwest to the southeast. This watershed includes about 2,700 acres of agricultural land upstream (north) of I-80 and 580 acres of urban and agricultural lands downstream (south) of I-80, mostly within the City's Northeast Quadrant. Watershed D flows to the DRCD Tremont 3 Drain. The smaller Watersheds G and H combine with Watershed D between Pedrick Road and the railroad; consequently, they are sometimes collectively called Watershed D.

The improvements needed to mitigate the drainage impacts from the development in these watersheds from both the Proposed Plan and the County's **Agricultural Industrial Services Area** are currently being evaluated in a drainage study by the Dixon Regional Watershed Joint Power Authority and in a study being sponsored by the Solano County Water Agency. The proposed drainage improvements include:

- A linear detention basin along the north and south sides of Interstate 80.
- A trunk storm drain from the south linear detention basin to the regional detention basin
- A regional detention basin between Pedrick Road and the railroad (set about 800 feet back from Pedrick Road.
- A trunk storm drain system serving the Northeast Quadrant.
- Connection of two existing retention basins to the trunk storm drain system.
- A flow split structure at the regional detention basin that releases flow to the railroad ditch that approximately matches the agricultural runoff into the northern I-80 detention basin and diverts the rest of the flow to the regional basin.
- An option improvement that may be included is a small pump station that would allow the regional detention basin to be deeper than the culvert under the railroad, thereby improving the performance of the regional basin and providing increased flood protection for the Tremont 3 watershed downstream of the railroad.

Thus, for Watersheds D, G, and H, these on-going studies will identify the needed drainage improvements to eliminate impacts from the Proposed Plan. The City is implementing a Northeast Quadrant Finance District Infrastructure Phasing and Reimbursement Schedule and has a development impact fee that will generate the funds needed to construct the required drainage improvements. Consequently, there will be no drainage impacts from the Proposed Plan in this watershed.

The southeast portion of the City is in the Watershed F. Watershed F includes about 810 acres of **agricultural land that drains to the east and then southward in DRCD's Laterals 2 and 3.** The DSDR determined that the about 260 acre-feet of detention storage will be needed to reduce the post-development runoff to a flow rate of about 11 cubic feet per second per square mile, which is the design flow rate of the DRCD drainage channels, and is much lower than the agricultural runoff rate from this watershed. Thus, the development in Watershed F with the required detention storage will not cause drainage impacts, and in fact will reduce the downstream flooding. Consequently, there will be no drainage impacts from the Proposed Plan in this watershed.

Based on these existing and planned stormwater improvements, there will be a less than significant **impact on the capacity of Dixon's stormwater drainage systems due to implementation of the Proposed Plan.**

Further, required compliance with existing local regulation would reduce the risks of the Proposed Plan contributing significant additional polluted runoff. Any new development resulting from the Proposed Plan would be required to comply with best practices for stormwater treatment, as required by the City of Dixon's **Phase II Small MS4 General Permit.** These stormwater treatment guidelines would require new development within the City of Dixon to detain storm runoff with bioretention facilities, minimize surface flow velocities, and make use of all applicable LID techniques. New development, during both construction and operations phases, would be required **to comply with the City of Dixon's Stormwater Management Standards, which require the preparation of a SWPPP and implementation of BMPs to mitigate risks of polluted runoff.**

In addition, new inputs to the stormwater drainage system must comply with Title 16 of the Municipal Code, which requires a new stormwater drainage system to be designed by a registered civil engineer for ultimate development of the watershed, to convey runoff generated by the ten-year flood. Per Title 16, the stormwater drainage system must also be designed to provide for the protection of abutting and off-site properties, and off-site storm drain improvements may be required to satisfy this requirement. In addition, under Title 16, retention ponds, drainage swales, and/or check dams may be required to reduce the off-site peak storm flow that projects contribute to the historic flow.

Policies and actions in the Proposed Plan would further mitigate risk of polluted runoff. The Proposed Plan would require implementation of Low-Impact Development (LID) techniques and green infrastructure such as bioretention, porous paving and green roofs (NE-1.8, PSF-2.11, MT-1.9, and MT-4.8); maintenance and planting of urban trees, reducing runoff through evapotranspiration (NE-1.4, NE-1.5, NE-1.6, NE-1.7, NE-1.F, NE-1.G, and NE-2.7); promote rainwater reuse and retention through rainbarrels and other and other rainwater reuse systems (NE-2.4 and NE-2.D); and by requiring that development agreements require new developments to provide stormwater treatment (PSF-2.9).

With continued compliance with the existing federal, State, and local regulations identified above, and with implementation of the policies and implementing actions of the Proposed Plan, projects within the City of Dixon would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site or generate substantial polluted runoff. Therefore, the impact of the Proposed Plan as related to increased runoff would be less than significant.

Mitigation Measures

None required.

Impact 3.9-5 Development under the Proposed Plan would not substantially degrade water quality. (*Less than Significant*)

As discussed in Impacts 3.9-3 and 3.9-4, construction and operational activities associated with implementation of the Proposed Plan would not violate water quality standards because specific projects developed under the Proposed Plan would be required to implement the NPDES requirements, Phase II Small MS4 Permit, for post-construction stormwater management including LID techniques. Construction activities would be required to comply with the City of Dixon's Stormwater Management Standards, implementing SWPPPs and BMPs to reduce impacts on water quality. These requirements would require stormwater runoff retention onsite through the implementation of site design BMPs that would be maintained throughout development operation. Compliance with these requirements, along with adherence to applicable policies contained in the Proposed Plan, would prevent degradation of surface water quality from runoff in the City of Dixon, and downstream water quality would be maintained. Therefore, the Proposed Plan would result in a less than significant impact associated with degrading water quality.

Mitigation Measures

None required.

Impact 3.9-6 Development under the Proposed Plan would not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (*Less than Significant*)

A significant impact could occur if substantial new housing resulting from the Proposed Plan was subject to flooding within 100-year flood hazard areas, which could cause significant risks to life and property.

However, the only area within City limits designated as being within a 100-year flood hazard zone is along SR-113 south of College Way (see Figure 3.9-4) and is already fully built out as housing. There are three areas designated as 100-year flood hazard areas within the SOI, all north of I-80, none of which are envisioned as locations for new housing within the Proposed Plan.

Further, policies and actions in the Proposed Plan will work to reduce future flood risks, including preserving surrounding agricultural lands and open space, ensuring that neighboring drainage ditches are in good repair, retaining and reusing stormwater on-site throughout the community, and implementing flood hazard reduction measures (NE-1.1, NE-1.2, NE-1.3, NE-1.4, NE-1.5, NE-1.A, NE-1.9, NE-2.4, and NE-4.A). Therefore, the risk associated with new housing planned for 100-year flood hazard zones is considered to be less than significant.

Mitigation Measures

None required.

Impact 3.9-7 Development under the Proposed Plan would not place within a 100-year flood hazard area structures which would impede or redirect flood flows. (*Less than Significant*)

As discussed in Impact 3.9-6 above, **no significant new development is envisioned within FEMA's 100-year flood hazard area. The City of Dixon's Municipal Code also prohibits** the construction of flood barriers which could unnaturally divert flood waters, or which could cause flood hazards in other areas. Therefore, the impact of the Proposed Plan on flood flows within the 100-year flood hazard area would be less than significant.

Mitigation Measures

None required.

Impact 3.9-8 Development under the Proposed Plan would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (*Less than Significant*)

A significant impact would occur if development resulting from the Proposed Plan exposed future residents, employees and visitors to Dixon to significant risk from flooding, including from dam or levee failure.

As discussed in the Settings section, the entirety of Dixon and its SOI are in the flood inundation zone of the federally-owned Monticello Dam and have a risk of major loss of life and damage to property if a catastrophic event were to occur. However, the potential for dams to fail and inundate the city is low, due to oversight from the Bureau of Reclamation, which inspects the dam to ensure it is safe, performing as intended, and not developing problems. Monticello Dam was last inspected on October 11, 2017 (US Secretary of the Army, 2019). The dam is subject to the National Dam Safety Act, reauthorized in 2014, which aims to reduce risks to life and property arising from dam failure. The US Secretary of the Army is required to maintain a database of all dams in the United States, including inspection details and jurisdiction, and the Act establishes funding and authority for safety oversight and staff safety training. The Interagency Committee on Dam Safety (ICODS) prepared and approved federal guidelines for dam safety risk management and emergency action planning, which requires federally-owned dam operators to conduct risk assessments and risk reduction measures (FEMA, 2019). **The Bureau of Reclamation's Security, Safety and Law Enforcement Office** carries out safety and risk management for the dams under its jurisdiction, including Monticello Dam.

Further, policies and actions in the Proposed Plan would require adequate emergency response procedures to be in place and periodically updated in the case of a dam failure that requires evacuation, including **continuing to maintain the City's Emergency Operations Plan, increasing** public awareness of emergency plans and resources, establishing a volunteer Community Emergency Response Team, and collaborating with the Bureau of Reclamation, Solano Irrigation District, Solano County Water Agency, and other responsible agencies to ensure the safety of Monticello Dam (NE-4.3, NE-4.5, NE-4.7, NE-4.C, and NE-4.D)

There are no levees within or near the Planning Area that could threaten development under the Proposed Plan with flooding. Further, the drainage patterns of the Central Valley preclude the City of Dixon from other catastrophic flooding events; any flooding that could occur from significant rainfall would be absorbed by Dixon's storm drainage system, regional drainage systems, and pervious surfaces, including surrounding agricultural lands, as discussed in Impact 3.9-4 above.

Consequently, the potential flooding impacts associated with catastrophic flooding, including from the failure of a dam or levee, are determined to be less than significant.

Mitigation Measures

None required.

Impact 3.9-9 Development under the Proposed Plan would not result in inundation by seiche, tsunami, or mudflow. (*Less than Significant*)

As discussed in the Physical Setting section above, Dixon's elevation above mean sea level and its distance away from the coast and San Francisco/San Pablo Bay precludes the potential for inundation by a tsunami. A seiche, a standing wave in an enclosed or partially enclosed body of water, would not be a threat to Dixon as there are no large bodies of water nearby. Ponds A, B, and C are too small to present a substantial risk to development under the Proposed Plan. Therefore, development under the Proposed Plan could not result in inundation by tsunamis or seiches.

Mud and debris flows are mass movements of dirt and debris that occur after intense rainfall, earthquakes, and severe wildfires. The speed of a slide depends on the amount of precipitation, steepness of the slope, and alternate freezing and thawing of the ground. Most debris flows occur during intense rainfall in areas with steep slopes. The soil composition within the majority of the Planning Area is 85 percent Yolo soil, 5 percent Reiff, 5 percent Brentwood, and 5 percent Sycamore soil. Slopes within the Planning Area range between zero and four percent. The entirety of the Planning Area is classified as zero landslide potential by USGS.

Therefore, based on existing conditions within the City of Dixon, the relatively gentle topography, and with compliance with applicable programs and regulations, the risk of development under the Proposed Plan resulting in seiche, tsunami, or mudflow would be less than significant.

Mitigation Measures

None required.

3.10 Land Use, Population, and Housing

This section assesses potential environmental impacts from future development under the Proposed Plan, as related to **land use, population, and housing, including evaluation of the Plan's** consistency with existing land use plans and regulations, community division, population growth, and housing displacement. This section describes existing land uses, demographics, and housing in the Planning Area, as well as relevant federal, State, and local regulations and programs. Agricultural uses and recreational uses are addressed separately in sections 3.2 and 3.12, respectively.

There were no responses to the NOP involving topics relating to this chapter.

Environmental Setting

PHYSICAL SETTING

The Planning Area encompasses a land area of approximately 5,522 acres (8.6 square miles), including the City of Dixon and its Sphere of Influence (SOI). Currently, all of the land within the city limits is located south of I-80 except for 60 acres referred to as the Milk Farm, which is located on Highway 113 just north of I-80. **The city's SOI boundary incorporates a total of 887 acres outside of the city limits (1.4 square miles) or 16 percent of the total land located in the Planning Area.**

The Union Pacific Railroad mainline bisects the city in a southwest-northeast direction, carrying **freight and passengers, although trains do not currently stop in Dixon.** SR 113 serves as the "Main Street" of the community as it passes through downtown Dixon. The Planning Area contains agricultural lands, business and industrial uses, and single- and multi-family residential neighborhoods.

Agricultural lands, including agriculture, winery, and rural/agricultural residential uses, comprise approximately 44 percent of the land area within the Planning Area. Within the urbanized areas of the Planning Area, residential land uses occupy the majority of land area (22 percent). Downtown Dixon is characterized by several historic buildings, some dating to the late 1800s, and contains retail, restaurant, business, and service uses.

Existing Land Use

Existing land use (2018), as provided by Solano County Assessor's parcel data, is shown in Figure 3.10-1. Existing land uses within the Planning Area include residential, commercial, industrial, public, parks and recreation, and agricultural uses. The existing land uses largely correspond to the existing and Proposed Plan land use designations.

Residential Uses

The main core of residential development within the Planning Area is located west of Highway 113, although some neighborhoods are located east of the highway on the southern side of the Union Pacific Railroad tracks (see Figure 3.10-1). Housing in the residential areas consists mostly of single-family detached houses. Some residential areas, especially rural residential areas farther from the center of Dixon, abut agricultural uses. Multi-family housing developments are situated mainly in the central core of the Planning Area, typically adjoining single-family areas.

Single-family housing occupies approximately 956 acres (17 percent) of the total land area within the Planning Area. Multi-family housing occupies approximately 76 acres (1.4 percent) of the Planning Area. Total existing residential land uses, including single-family, multi-family, mobile home parks, and townhomes within the Planning Area occupy approximately 1,058 acres (19 percent of land).

Commercial Uses

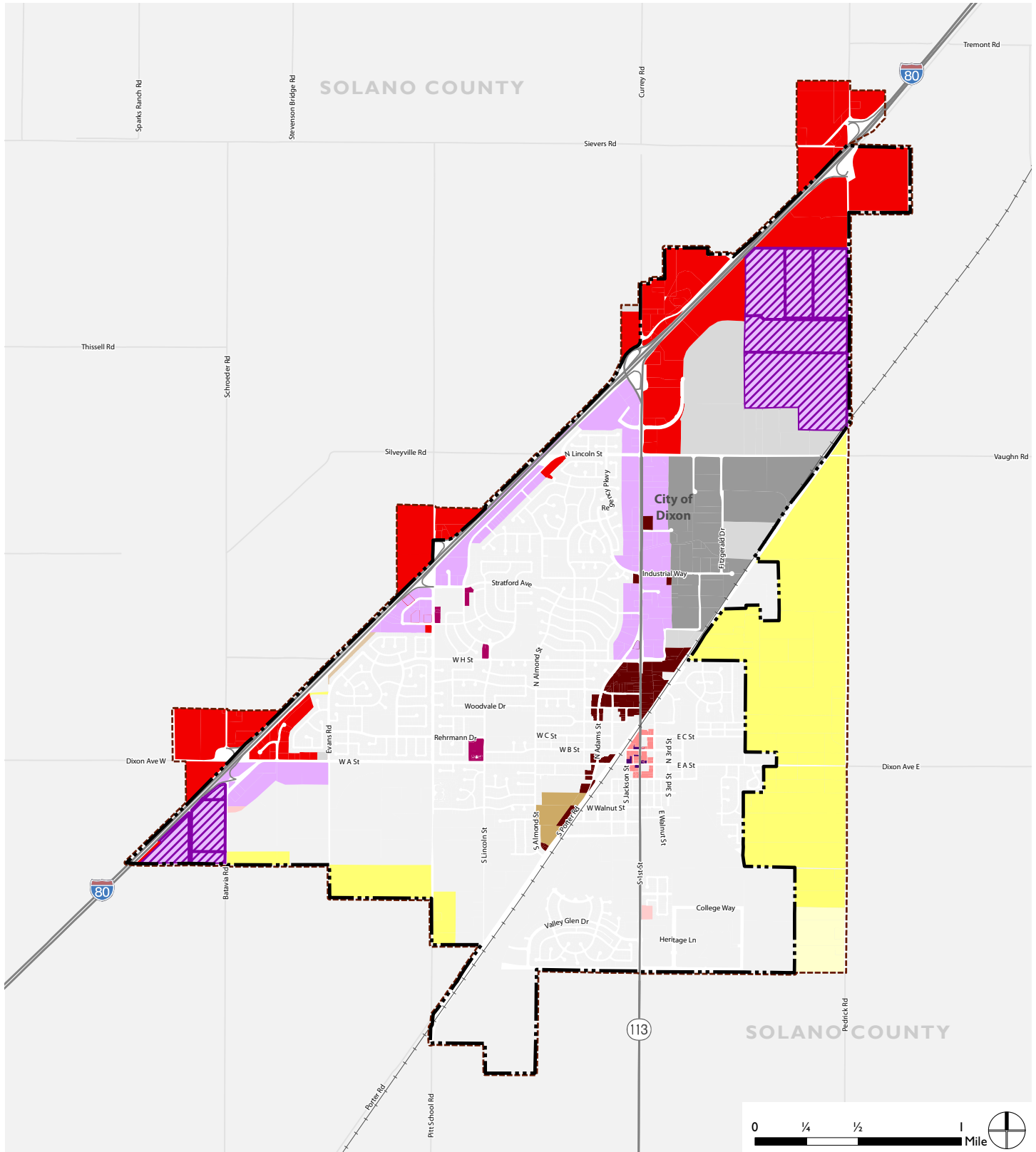
Existing commercial land uses, including service commercial, retail, restaurants, office and other similar central business uses, are located along the Highway 113 corridor and near freeway off-ramps along the I-80 corridor (see Figure 3.10-1). Other commercial uses include the area at the intersection of South 1st Street and A Street, near the center of town.

Commercial uses (retail, restaurant, and similar uses) occupy approximately 64 acres (about 2 percent) of the total land area within the Planning Area. Office uses occupy 17 acres (0.3 percent) of land uses within the total Planning Area. Mixed uses, which consist of combined office and commercial uses, are located predominantly along Stratford Avenue. In total, existing commercial land uses, including hotel/lodging commercial, commercial, office, and mixed office and commercial uses, occupy approximately 176 acres (about 3 percent of land uses within the Planning Area).

Industrial Uses

Existing industrial land use in the Planning Area can be found mainly in the triangular area bound by Vaughn Road, SH 113, and the rail line, with Industrial Way bisecting the area. Two other areas of industrial use include parcels along South Porter Road, and some auto repair shops along West E Street. Industrial uses occupy approximately 371 acres (7 percent) of the total land area within the Planning Area.

Figure 3.10-1: Proposed Land Use Change Areas



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019

Land Use Designations

- | | | | | | | | |
|--|-----------------------------------|--|-------------------------|--|---------------------|--|---------------------|
| | Very Low Density Residential | | Corridor Mixed Use | | Regional Commercial | | Railroad |
| | Low Density Residential | | Downtown Mixed Use | | Office Commercial | | Dixon City Limit |
| | Medium Density (Low) Residential | | Campus Mixed Use | | Service Commercial | | Sphere of Influence |
| | Medium Density (High) Residential | | Neighborhood Commercial | | Light Industrial | | |
| | | | Downtown Commercial | | General Industrial | | |

Public and Quasi-Public Uses

Public and quasi-public land uses in the Planning Area include government-owned facilities, schools and churches. Public uses and utilities are located primarily to the east of South Porter Road, in the western part of the Planning Area. Schools and churches are distributed throughout the Planning Area. Existing public and quasi-public, religious/institutional, and educational uses occupy approximately 541 acres (10 percent) of the total land area within the Planning Area.

Parks, Recreation, and Open Space Uses

Public facilities and parks can be found in many of the residential neighborhoods across the city, with some of the largest parks including Northwest Park, Hail Memorial Park, Westside Park, and the Silveyville Cemetery. Park and recreational uses occupy approximately 138 acres (3 percent) of the total land area within the Planning Area.

Existing open space land uses within the Planning Area are primarily located along I-80, southwest of Vaughn Road. Open space land uses include areas preserved for habitat, aesthetic value, such as views, or passive recreation. Within the Planning Area, approximately 18.6 acres (0.3 percent) are open space lands. There are large, vacant lots in the northeast and southern parts of the city, totaling just about 9 percent of the Planning Area.

Agricultural Uses

Agricultural uses make up nearly 39 percent of the land area in the Planning Area, including about 2,134 acres. Agricultural uses border the residential and industrial uses on the southern, eastern, and northern edges of the city. The predominant existing land use, most parcels used for agriculture are relatively large and used primarily for crops like alfalfa, tomatoes, wheat, walnuts, and sunflowers.

For more discussion of agricultural uses, see Chapter 3.2: Agricultural Resources of this EIR.

Population, Housing, and Jobs

The Proposed Plan uses a baseline year of 2018. Past trends for population, housing units, and jobs data are presented using projections from the Association of Bay Area Governments (ABAG) or estimates from the California Department of Finance (DoF). The 2018 baseline population, housing units, and jobs in the City of Dixon, were estimated using land use assumptions from the regional traffic model, adjusted with reference to data from the DoF, ABAG, and the Solano County Assessor. While a 2018 baseline for population, housing, and jobs was estimated for the Planning Area, DoF and ABAG data is only available at the state, city, county, or unincorporated area level, **and is therefore not included in the “Past and Current Trends” section below.**

Past and Current Trends

As shown in Table 3.10-1, the City of Dixon has an estimated population in 2018 of 19,500, making it the second smallest city in Solano County. This estimate represents an approximately 21 percent increase from 2000, **when the city’s population was 16,103 (US Census, 2010).** This population growth was more rapid than growth in Solano County as a whole, which increased by

approximately 13 percent between 2000 and 2018, from a population of 394,542 to 446,610 (US Census, 2010) (American Community Survey, 2018).

Between 2000 and 2018, the number of housing units increased throughout the Bay Area by approximately 13.2 percent, from 2,552,404 to 2,888,882 (California Department of Finance, 2012) (California Department of Finance, 2018). During this period, Solano County experienced an approximate 18 percent growth in the housing stock, adding about 24,243 units (California Department of Finance, 2012) (California Department of Finance, 2018). During the same time, the number of housing units in the City of Dixon increased by approximately 23 percent, from 5,172 housing units in 2000 to 6,337 in 2018 (including accessory dwelling units, or ADUs).

Within the City of Dixon, approximately 81 percent of housing units are single-family and 19 percent are multi-family. This is consistent with the ratio of single to multi-family housing in 2000. Compared to Solano County as a whole, the city has a slightly higher proportion of single-family housing and a slightly lower proportion of multi-family housing. Table 3.10-1 presents a comparison of housing types in Dixon and in Solano County as a whole. The average household size in Dixon is approximately 3.20 people, which is slightly higher than Solano County's average of approximately 2.88 people (California Department of Finance, 2018).

Table 3.10-1: Population and Housing Trends: City of Dixon & Solano County, 2000-2018

	2000	2018
<i>City of Dixon</i>		
Population	16,103	19,508
Housing Units	5,172	6,337
Single Family (Attached and Detached)	4,463	5,028
Multifamily	623	2,428
Vacancy Rate	1.9%	3.8%
Persons per Household	3.17	3.20
Population Growth Rate (2000-2018)		21%
Housing Growth Rate (2000-2018)		23%
<i>Solano County</i>		
Population	394,930	439,793
Housing Units	134,513	158,756
Single Family (Attached and Detached)	101,974	120,580
Multifamily	27,913	33,608
Vacancy Rate	3.06%	6.4%
Persons per Household	2.93	2.88
Population Growth Rate (2000-2018)		11%
Housing Growth Rate (2000-2018)		18%

Sources: DoF, 2000; DoF, 2018; Dyett & Bhatia, 2018.

In 2016, 33.4 percent of all ownership households with a mortgage in Dixon paid more than 30 percent of the household income towards housing costs, and over half of renter households paid more than 30 percent (American Community Survey, 2016). Table 3.10-2: Housing Cost Overpayment (2016), shows the number and percentage of households in Dixon with a housing cost burden, as defined as those households paying more than 30 percent of income on housing.

Table 3.10-2: Housing Cost Overpayment (2016)¹

<i>Housing Units with a Mortgage</i>	3,212
Overpaying Owner Household	1,072
Percentage of Overpaying Owners	33.4%
<i>Housing Units without a Mortgage</i>	771
Overpaying Owner Household	56
Percentage of Overpaying Owners	7.3%
<i>Rented Units</i>	1,811
Overpaying Renter Households	1,100
Percentage of Overpaying Renter Households	60.7%

Notes:

1. Households paying in excess of 30% of income towards housing cost.
2. Numbers may not sum due to units that were not computed in the American Community Survey.

Source: 2012-2016, American Community Survey 5-Year Estimates.

Projections

Using the 2018 baseline population of approximately 20,099 estimated for the Proposed Plan, the **City of Dixon’s population is projected to increase 42 percent by 2040, to 28,449.** The estimated Planning Area population in 2018 is 20,130 people, with an estimated 31 residents in the unincorporated portion of the Planning Area. Very little growth is projected within the SOI during the planning horizon. Therefore, the population of the Planning Area is projected to be 28,893 by full buildout in 2040.

As described in Chapter 2: Project Description, future development projected in the city considers potential development on the Housing Element housing inventory opportunity sites, in the focus areas, and on vacant sites designated as residential in the Proposed Plan. Residential development **in the City of Dixon was projected based on Dixon’s Measure B, which limits the number of new housing units that can be built in a given year to three percent of the total existing the prior year.** Measure B is intended to create and maintain an approximate mix of 80 percent single-family housing units (including single-family attached and duplex units) and 20 percent multi-family dwelling units.

Using the methodology discussed above, as shown in Table 3.10-3, the number of housing units within the City of Dixon is projected to increase by 43 percent from 6,536 to 9,358 between 2018 and 2040. The Planning Area as a whole is projected to experience a 45 percent increase in housing units, though very little additional development is envisioned under the Proposed Plan outside of

City limits. In total, the Planning Area is expected to add 2,957 housing units – 2,350 single-family units and 605 multi-family units.

Table 3.10-3: Population and Housing Units Projections (2040)

Year		2018	2040
Population	City of Dixon	20,100	28,450
	Planning Area ¹	20,130	28,890
Housing Units	City of Dixon	6,540	9,360
	Planning Area ¹	6,550	9,510

Notes:

1. Includes the City of Dixon and the Sphere of Influence
2. Numbers may not add up due to rounding

Sources: Dyett & Bhatia, 2019

A 24 percent increase in jobs is projected to occur in the Planning Area between 2018 and 2040, for a total of 6,637 jobs, with all the job growth projected for within City limits.

Table 3.10-4: Jobs Projections (2040)

Geography	Number of Jobs	
	2018	2040
City of Dixon	4,950	6,220
SOI	410	410
Planning Area Total	5,360	6,640

Notes:

1. Numbers may not add up due to rounding

Sources: Dyett & Bhatia, 2019

REGULATORY SETTING

Federal Regulations

There are no relevant federal laws, policies, plans, or programs that apply to the Proposed Plan in relation to this issue area.

State Regulations

Government Code Sections 65919 to 65919.11

Government Code Sections 65919 to 65919.11 summarize procedures related to interagency referrals for different types of lead agency actions, including general plan updates. Among other referrals, this part of the Government Code provides a procedure and protocols for requesting counties keep cities informed regarding land use actions within the unincorporated portions of spheres of influences and Planning Areas.

State Planning Law

State law [California Government Code Section 65300 et seq.] requires each California municipality to **prepare a general plan**. A **general plan is defined as “a comprehensive, long-term general plan for the physical development of the county or city, and any land outside its boundaries which in the planning agency’s judgment bears relation to its planning.”** State requirements call for **general plans that “comprise an integrated, internally consistent and compatible statement of policies for the adopting agency.”** While allowing considerable flexibility, State planning laws do establish some requirements for the issues that general plans must address. The California Government Code establishes both the required content of general plans and rules for their adoption and subsequent amendment. Together, State law and judicial decisions establish three overall guidelines for general plans:

- The General Plan Must Be Comprehensive. This requirement has two aspects. First, the general plan must be geographically comprehensive. That is, it must apply throughout the entire incorporated area and it should include other areas that the city determines are relevant to its planning. Second, the general plan must address the full range of issues that affect the city’s physical development.
- The General Plan Must Be Internally Consistent. This requirement means that the general plan must fully integrate its separate parts and relate them to each other without **conflict**. **“Horizontal” consistency applies both to figures and diagrams as well as general plan text**. It applies to data and analysis as well as policies. All adopted portions of the general plan, whether required by State law or not, have equal legal weight. None may supersede another, so the general plan must resolve conflicts among the provisions of each element.
- The General Plan Must Be Long-Range. Because anticipated development will affect the city and the people who live or work there for years to come, State law requires every general plan to take a long-term perspective.

Department of Housing and Community Development

The State Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California and ensuring the availability of affordable housing for all income groups.

Regional/Local Regulations

Association of Bay Area Governments (ABAG)

Through its role as the Bay Area’s council of governments, ABAG has been designated by the State and federal governments as the official comprehensive planning agency for the Bay Area. ABAG reviews projects for regional significance for consistency with regional plans and is also responsible for preparation of the Regional Housing Needs Assessment (RHNA), pursuant to California Government Code section 65584(a). **ABAG’s locally adopted Regional Housing Needs Allocation and the San Francisco Bay Area Housing Needs Plan provide a policy guide for planning the region’s housing, economic development, environmental quality, transportation, recreation, and health and safety.**

ABAG's most recent projected housing needs are for the period 2015 to 2023. ABAG has determined that a total of 197 housing units would be needed in Dixon during this eight -year period, consisting of 50 units affordable to very low-income households, 24 units affordable to low-income households, 30 units affordable to moderate-income households, and 93 units affordable to above moderate-income households (ABAG, 2015). These "fair-share" totals represent the ABAG-projected number of units that would need to be added to Dixon's housing stock over the period 2015 to 2023 in order to achieve an equitable distribution of housing opportunities (Association of Bay Area Governments (ABAG), 2013).

Solano County General Plan

Provisions of the Solano County General Plan apply to unincorporated areas of Solano County, including the Spheres of Influence adjacent the Dixon city limits analyzed in the Proposed Plan and EIR. The Solano County General Plan land use map designates the areas east of the city limits for Agricultural Resource land uses.

The Solano County General Plan contains a series of policies for an area "northeast of Dixon" that limit industrial uses to those that support agriculture, including noting storage or sales of products for commercial agriculture, agricultural processing, and corporation yards for the storage and maintenance of agricultural equipment. This limitation is to "protect the county's high quality soils and not adversely affect surrounding agricultural uses" (County of Solano, 2015).

Solano County Measure A and Orderly Growth Initiative

Solano County's voters adopted Measure A in 1984. The provisions of Measure A were extended with the adoption of the Orderly Growth Initiative, in 1994. The purpose of the initiative is to continue to ensure protection of Solano County's agricultural and open space resources by extending the following provisions:

1. Amending the General Plan to restrict redesignation of lands identified as Agriculture or Open Space on the Land Use and Circulation Map through December 31, 2010; and
2. Amending the General Plan to restrict the density of residential and other development of lands designated Agriculture or Open Space through December 31, 2010, preventing large scale residential or mixed use developments outside of municipal areas.

Under the provisions of the Orderly Growth Initiative, a popular vote is required in order to redesignate Agriculture or Open Space lands to another land use category, or to increase the density of development on designated Agriculture or Open Space lands.

Measure T, an amendment to Solano County's 1994 Orderly Growth Initiative that updated certain provisions of the Solano County General Plan relating to agriculture and open space policies and land use designations, was passed in 2008 and extended the amended initiative until December 31, 2028.

Solano County Local Agency Formation Commission

Under State law (Government Code Section 56000 et seq., known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000), each county must have a Local Agency Formation Commission (LAFCO). The LAFCO is responsible for creating orderly local government boundaries, with the goals of preserving open space lands and discouraging urban sprawl. The Solano County LAFCO is the commission responsible for the Planning Area. While the Solano LAFCO has no direct land use power, it is empowered to review, approve, or deny boundary changes, city annexations, consolidations, special district formations, incorporations for cities and special districts, and to establish Spheres of Influence (SOI.) The SOI for a jurisdiction is a plan for a future boundary and service area. State Government Code Sections 56425 and 56430 require a Municipal Service Review (MSR) must be prepared when the LAFCO updates a SOI. The MSR must consider growth and population projections for the affected area; present and planned presence of public facilities and adequacy of public infrastructure in place to serve the new growth; financial ability of relevant agencies to provide services; accountability of community service needs, including governmental structure and operational efficiencies; and any other matter related to effective and efficient service delivery, as required by LAFCO policy. The most recent MSR for Dixon was prepared in 2014.

Local Control Mechanisms

City of Dixon Municipal Code

Title 18 Zoning Ordinance

The Dixon Zoning Ordinance (Title 18 of the Municipal Code) implements the General Plan and provides location-specific regulation, such as use restrictions and building height and bulk limitations. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless the proposed action conforms to the Zoning Ordinance or a variance is granted pursuant to provisions of the Zoning Ordinance.

The Zoning Ordinance establishes 17 as follows (City of Dixon, 2018):

- Temporary (T) Unclassified District
- Agriculture (A) District
- One Family (R1) Districts
- Multiple-Family (RM) Districts
- Professional and Administrative (PAO) Districts
- Neighborhood Commercial (CN) District
- Downtown Commercial (CD) District
- Community Commercial (CC) District
- Highway Commercial (CH) District
- Planned Mixed Use (PMU) District
- Planned Multiple Residential (PMR) District

- Commercial Service (CS) District
- Light Industrial (ML) District
- Public Service (PS) District
- Planned Development (PD) District
- Assembly Use (AU) District

The locations of these zoning districts are generally consistent with current land use patterns.

Dixon Specific Plans

Northeast Quadrant Specific Plan

Adopted in 1995, the Northeast Quadrant Specific Plan (NQSP) establishes a land use and circulation plan, policies, and guidelines for the ultimate development of 643 acres in the northeast portion of the City of Dixon. The purpose of the NQSP was to institute development criteria for this parcel after it was rezoned from agriculture to Employment Center (E) and Highway Commercial (HC) under the 1993 General Plan. The NQSP has been amended a number of times, the most recent being June 2009. In February 2003, it was amended relative to the signage regulations for the 140-acre parcel (Wal-Mart) at the corner of N. First Street and Dorset Drive. To date, about 24 acres of land with retail commercial uses have been developed.

Southwest Dixon Specific Plan

The Southwest Dixon Specific Plan was adopted in 2005 and provides for the development of residential, commercial, and employment center uses within approximately 477 acres of primarily agricultural land in Southwest Dixon. The purpose of the Plan is to guide land use location, intensity and density, infrastructure requirements and the overall circulation pattern of the area. Specific Plan goals include balancing a mix of employment, commercial, and residential uses in the Plan Area; providing transportation and public service systems; reserving land for community and recreational facilities; enhancing livability; establishing a high level of quality in design; and contributing to the overall infrastructure plans for the City, as described in the General Plan. In 2005, the City approved a Development Agreement with the major landowners to allow the development of 906 single-family homes and 231 multi-family homes; however, to date, no residential or commercial projects in the Southwest Dixon area have been developed.

Priority Development and Priority Production Areas

In 2011, the City nominated Downtown Dixon as a Priority Development Area (PDA) to promote transit-oriented development in the vicinity of the newly reconstructed train station and support revitalization of the traditional commercial heart of the community. PDAs are an integral part of the regional sustainable growth strategy that coordinates housing plans, open space conservation efforts, economic development strategies, and transportation investments throughout the San Francisco Bay Area. A Downtown PDA Plan was prepared in 2017 but was never formally adopted by the City of Dixon.

In 2017, the Metropolitan Transportation Commission (MTC) initiated a new Priority Production Area (PPA) program intended to strengthen selected clusters of industrial development in the region and support the growth of middle-wage jobs in sectors involving production, distribution, and repair services, including logistics and advanced manufacturing. In September 2019, the City of Dixon nominated a 282-acre area within the Northeast Quadrant as a PPA, and the area was formally designated a PPA by MTC in January 2020. With the designation of the PPA, MTC removed the Downtown PDA designation.

City of Dixon Measure B

In 1986, Dixon voters approved Measure B, a growth management initiative. Voters reaffirmed the measure in 1996. The measure limits annual residential growth in the city to a number of dwelling units that is no more than 3 percent of the total number of housing units as of December 31 of the prior calendar year. In addition, Measure B is intended to create and maintain an approximate mix of 80 percent single-family housing units (including single-family attached and duplex units) and 20 percent multi-family dwelling units. The purpose of Measure B is to achieve a balanced housing mix and a steady, controlled rate of annual growth. While the housing stock in 2000 consisted of 14 percent multi-family units, Measure B enables the City to enhance the mix of housing types by encouraging 20 percent multi-family units. The measure was also designed to ensure that City services and facilities would be adequate to serve the needs of existing and future residents. Measure B includes one key categorical exemption so that it does not unduly constrain residential development, particularly affordable housing. This categorical exemption excludes development that was approved prior to the enactment of Measure B. This development is also exempt from the 80/20 residential mix objective and the 3 percent annual growth rate.

In order to encourage the production of housing, any unallocated allotments from the residential development allotment pool that remain unallocated under Measure B at the end of each Housing Element Dixon Housing Element Update February 2015 III-20 consecutive five-year period may continue to be used for housing. Furthermore, Measure B contains a nondiscretionary exemption **that permits a higher number of units to be built in a single year. The measure's "rollover" provision** enables units not built during one year to be constructed in subsequent years as long as the total number of units approved over the five-year period averages 3 percent a year. While Measure B manages residential growth in Dixon, it is not designed to prevent the City from meeting its share of the regional housing needs. In addition to the exemptions listed above, Measure B also allows the City Council to grant an exception to increase the number of residential units built in any one year **above the 3 percent threshold to meet the City's share of the regional housing needs.**

City of Dixon General Plan 2015 Housing Element Update

Article 10.6 of the California Government Code outlines the State's Housing Element requirements. A housing element must analyze existing and projected housing needs, examine special housing needs within the population, evaluate the effectiveness of current goals and policies, identify governmental and other constraints, determine compliance with other housing laws, and identify opportunities to incorporate energy conservation into the housing stock. The element must also establish goals, policies and programs to maintain, enhance, and develop housing.

The City of Dixon's RHNA (as explained above under ABAG Regional Housing Needs Allocation) for the planning period (2015 through 2023) projected a need for the construction of an additional

197 housing units in Dixon during this eight-year period, consisting of 25 units affordable to very low-income households, 24 units affordable to low-income households, 30 units affordable to moderate-income households, and 93 units affordable to above moderate-income households.

The City of Dixon's 2015-2023 Housing Element describes the rezoning plans to address the low lower-income RHNA shortfall of 250 units. It also includes policies and implementing actions to meet housing demands, including to promote residential and mixed-use infill development; to streamline the residential project process to encourage housing production; to encourage a diversity of housing type production to serve a variety of resident types, including those with low incomes or special needs; and to preserve and conserve the existing housing stock in Dixon.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

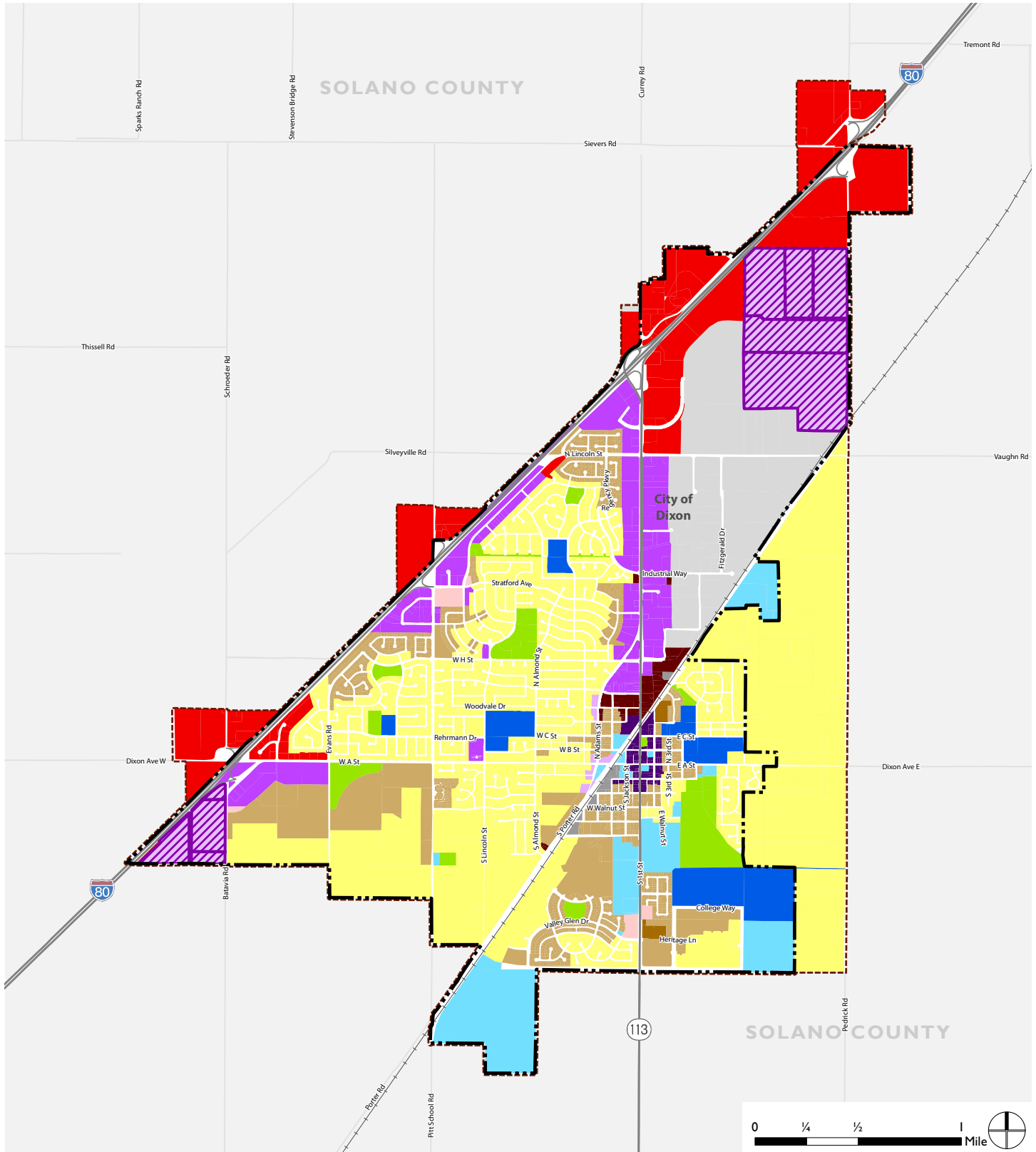
- Criterion 1: Physically divide an established community;
- Criterion 2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;
- Criterion 3: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

METHODOLOGY AND ASSUMPTIONS

This EIR analysis considers current and Proposed Plan policies and goals, existing and proposed land use conditions within Dixon, and applicable regulations and guidelines.

The Proposed Plan has a year 2040 horizon; however, the Proposed Plan does not speculate when buildout will occur, as long-range demographic and economic trends are difficult to predict. The designation within the Proposed Plan of a site for certain use, as seen in Figure 3.10-2, does not necessarily mean that the site will be developed or redeveloped with that use during the planning period, as most development will depend on property owner initiative. For the purposes of this EIR, the environmental analysis assumes that sites will be developed or redeveloped with the designated land use at buildout of the Proposed Plan.

Figure 3.10-2: Proposed Plan Land Use



Data Source: City of Dixon, 2019; Dyett & Bhatia, 2019



Land Use Designations

Residential

- Low Density Residential
- Medium Density Residential
- High Density Residential

Mixed Use

- Neighborhood Mixed Use

- Commercial Mixed Use

- Downtown Mixed Use

- Campus Mixed Use

Commercial

- Neighborhood Commercial
- Regional Commercial
- Service Commercial

Other

- Light Industrial
- General Industrial
- Governmental/Institutional
- School Buildings/Play Areas
- Parks

Railroad

Dixon City Limit

Sphere of Influence

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Land Use

- LCC-1.B Coordinate with Solano County to ensure that land use designations and development standards in unincorporated portions of the Planning Area are consistent with those set forth in the Dixon General Plan.
- LCC-3.6 Foster transit-oriented development within one-half mile of the train station in anticipation of future passenger rail service.
- LCC-6.5 Discourage features in residential development that tend to detract from the sense of an integrated community, such as perimeter walls and gated single-family neighborhoods.

Mobility and Transportation

- MT-1.1 Maintain a transportation network that is efficient and safe, that removes barriers (e.g. accessibility near freeways and rail lines), and that optimizes travel by all modes.
- MT-1.3 **Design, construct, operate, and maintain city streets based on a “complete streets”** concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.
- MT-1.5 Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders through appropriate roadway modifications and improvements.
- MT-1.6 Ensure that improvements to the transportation network support a land use pattern that connects the community, integrates neighborhoods, provides multi-modal access and facilitates travel among Dixon’s neighborhoods.

IMPACTS

- Impact 3.10-1 Implementation of the Proposed Plan would not physically divide an established community. (*Less than Significant*)

The Proposed Plan would not physically divide any established community. There are no proposed new roads, highways, rail lines, walls, or fences that would result from implementation of the Proposed Plan.

Rather, by improving connectivity within and between existing neighborhoods, the Proposed Plan provides more linkages within the City and the region. Changes to land use designations under the Proposed Plan, as shown in Figure 3.10-2, would reflect existing land uses and would not result in the division of any established community. Furthermore, proposed improvements to the bicycle, sidewalk, and road networks will make it easier for residents to travel throughout the community (MT-1.1, MT-1.3, MT-1.5, and MT-1.6). LCC-6.5 discourages perimeter fences and walls in new developments. Therefore, the impact is less than significant.

Mitigation Measures

None required.

Impact 3.10-2 Implementation of the Proposed Plan would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (*Less than Significant*)

Since a General Plan updates policies and land use designations for future development and would replace the 1993 General Plan, it may naturally be inconsistent with existing planning regulations outside of the proposed General Plan, such as density/intensity standards, zoning, and allowed uses, that were designed to implement the 1993 General Plan and subsequent amendments. These existing regulations would be updated to be consistent with and/or effectively implement the Proposed Plan, **if it were adopted. Additionally, the City's Zoning Ordinance** would be revised to implement the Proposed Plan, as required by State Law (Government Code Section 65860[a]), and it would translate the Proposed Plan policies into specific use regulations, development standards, and performance criteria to govern development on individual properties. The Zoning Ordinance would ultimately prescribe standards, rules, and procedures for development and the Zoning Map will provide more detail than the Proposed Plan Land Use Diagram. The proposed General Plan includes multiple policies from the 1993 General Plan and proposes more stringent policies for the purpose of avoiding or mitigating an environmental effect. However, these policies would not result in conflict with 1993 General Plan policies or existing planning regulations designed to implement the 1993 General Plan and subsequent amendments.

In addition to its General Plan, the City of Dixon has adopted specific plans for some areas within the City to tailor appropriate development standards and policies to individual neighborhoods, as described in the Regulatory Setting above. By State law, specific plans must be consistent with the General Plan. With implementation of the General Plan, mitigation policies adopted through the environmental review process would remain in effect for both the Northeast Quadrant Specific Plan area and the Southwest Quadrant Specific Plan area. Proposed Plan policies would not conflict with policies included in these specific plans adopted for the purpose of avoiding or mitigating an environmental effect.

The Community Development Department has primary responsibility for administering the laws, regulations, and requirements that pertain to the physical development of the City. Specific duties relating to implementation of the Proposed Plan would include preparing zoning and subdivision ordinance amendments, reviewing development applications, conducting investigations and making reports and recommendations on planning and land use, zoning, subdivisions, development plans, and environmental regulations.

The Proposed Plan also must be consistent with regional and local plans. Policy LCC-1.B requires the City of Dixon to coordinate with Solano County to ensure consistency in unincorporated areas. The City of Dixon Housing Element would be reviewed for consistency and amended as necessary to maintain an internally consistent General Plan.

Given that (1) the Proposed Plan **does not conflict with any other agencies' applicable land use plan**, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and (2) the preparation of amendments to other City policies and regulations where required will be consistent with the Proposed Plan, conflicts with existing local and regional plans and the Zoning Ordinance are expected to have a less than significant impact.

Mitigation Measures

None required.

Impact 3.10-3 Implementation of the Proposed Plan would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (*Less than Significant*)

The majority of developed land in the Planning Area is comprised of residential uses, which are not anticipated to undergo significant land use changes under the Proposed Plan. The Proposed Plan focuses infill development opportunities in vacant and underutilized areas in Dixon, while preserving existing neighborhoods. As shown in in Figure 3.10-2, the majority of the proposed land use changes are within non-residential neighborhoods or change areas; no existing housing is projected to be removed or replaced due to implementation of the Proposed Plan. Further, the General Plan would be developed in accordance with the 2015-2023 Housing Element, which requires Dixon to protect and conserve existing housing stock. Therefore, this impact is considered less than significant.

Mitigation Measures

None required.

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3.10 Noise

This section assesses potential environmental impacts related to noise from future development under the Proposed Project, including those impacts associated with noise standards compliance, groundborne vibration, ambient noise levels, railway noise and airport noise. The section describes the characteristics, measurement, and physiological effects of noise; characteristics of groundborne vibration; and existing sources of noise and vibration in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were no comments on the Notice of Preparation (NOP) regarding topics covered in this section.

PHYSICAL SETTING

Noise

Noise Characteristics and Measurement

Because of the technical nature of noise and vibration impacts, a brief overview of basic noise principals and descriptors is provided below.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air). Noise is generally defined as unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement. The dB scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude, with audible frequencies of the sound

spectrum ranging from 20 to 20,000 Hz. The typical human ear is not equally sensitive to this frequency range. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner **corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies**. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements. Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in Table 3.11-1.

An individual's noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time. However, noise levels rarely persist at that level over a long period of time. Rather, community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which together constitute a relatively stable background noise exposure, with many of the individual contributors being unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding to the addition and subtraction of distant noise sources, such as changes in traffic volume. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

Table 3.11-1: Typical Noise Levels in the Environment

<i>Source of Noise</i>	<i>A-Weighted Sound Pressure Level in Decibels</i>
Civil Defense Siren (100 feet in distance between source and listener)	130
Jet Takeoff (200 feet in distance between source and listener)	129
Riveting Machine	115
Rock Music Band	110
Piledriver (50 feet in distance between source and listener)	105
Ambulance Siren (100 feet in distance between source and listener)	100
Boiler Room	90
Printing Press Plant	89
Freight Cars (50 feet in distance between source and listener)	88
Garbage Disposal in the Home	85
Pneumatic Drill (50 feet in distance between source and listener)	80
Inside Sports Car: 50 mph	79
Vacuum Cleaner (10 feet in distance between source and listener)	69

Table 3.11-1: Typical Noise Levels in the Environment

<i>Source of Noise</i>	<i>A-Weighted Sound Pressure Level in Decibels</i>
Data Processing Center	65
Department Store	61
Speech (1 foot in distance between source and listener)	60
Auto Traffic near Freeway	58
Typical Minimum Daytime Levels – Residential Areas	55
Private Business Office	52
Large Transformer (200 feet in distance between source and listener)	49
Light Traffic (100 feet in distance between source and listener)	48
Average Residence	42
Typical Minimum Nighttime Levels – Residential Areas	41
Soft Whisper	30
Rustling Leaves	21
Recording Studio	20
Mosquito	10

Notes:

1. 10 decibels is the Threshold of Hearing
2. 120 decibels is the Threshold of Pain

These successive additions of sound to the community noise environment change the community noise level from instant to instant, requiring the noise exposure to be measured over periods of time to legitimately characterize an existing community noise environment. The following noise descriptors are used to characterize environmental noise levels over time, which are applicable to the Project.

- L_{eq} : The equivalent sound level over a specified period of time, typically, one hour (L_{eq}). The L_{eq} may also be referred to as the average sound level.
- L_{max} : The maximum, instantaneous noise level experienced during a given period of time.
- L_{min} : The minimum, instantaneous noise level experienced during a given period of time.
- L_x : The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.

- L_{dn} : The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dB to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).
- CNEL: The Community Noise Equivalent Level (CNEL) is the average A-weighted noise level during a 24-hour day that includes an addition of 5 dB to measured noise levels between the hours of 7:00 a.m. to 10:00 p.m. and an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

Physiological Effects of Noise

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

1. Subjective effects (e.g., dissatisfaction, annoyance)
2. Interference effects (e.g., communication, sleep, and learning interference)
3. Physiological effects (e.g., startle response)
4. Physical effects (e.g., hearing loss)

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep. Sleep interference effects can include both awakening and arousal to a lesser state of sleep (Caltrans, 2013a).

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of **annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise.** Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur (Caltrans, 2013a):

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;

- Outside of the laboratory, a 3 dBA change in ambient noise levels is considered to be a barely perceivable difference;
- A change in ambient noise levels of 5 dBA is considered to be a readily perceivable difference; and
- A change in ambient noise levels of 10 dBA is subjectively heard as a doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but rather logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and ten sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source (Caltrans, 2013a).

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance at a rate that depends on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between six dBA for acoustically “hard” sites and 7.5 dBA for “soft” sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet, etc.). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, increase the ground attenuation value by 1.5 dBA (per doubling distance) (Caltrans, 2013a).

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as “line” sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.” Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans, 2013a). Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels.

Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances (e.g., more than 500 feet). Other factors such as air temperature, humidity, and turbulence can also have significant effects on noise levels (Caltrans, 2013a).

Noise-Sensitive Receptors

Many land uses are considered sensitive to noise. Noise-sensitive receptors are land uses associated with indoor and/or outdoor activities that may be subject to stress and/or significant interference from noise, such as residential dwellings, transient lodging, dormitories, hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. Special Status species and their habitat may also be considered noise-sensitive. Noise-sensitive receptors within the Planning Area include single- and multi-family residential housing, schools, parks, libraries, hospitals, churches, habitat, and open space.

Sources of Noise

The major sources of noise within the Planning Area include vehicle traffic along roadways; agricultural, industrial, and commercial processes; and residential noises, such as people talking, sporting events in parks, and vocalizations from domesticated animals (e.g., dogs).

Traffic

Vehicular traffic, including automobile and truck traffic, is the predominant noise source within the city. Interstate 80, State Route 113, and city streets contribute to the noise environment of the city.

Existing traffic CNEL noise levels were calculated for roadway segments based on vehicular turning movement data at intersections identified for traffic impact analysis by the City (DKS, 2019). Turning movements at each studied intersection were used to determine traffic volumes along major roadway segments within the Planning Area. The roadway segments selected for analysis were those that are expected to be the most directly impacted by Project-related traffic.

Existing traffic CNEL noise levels were calculated using the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (FHWA-TNM) (Caltrans, 2013a) and traffic volumes at the study intersections reported in Chapter 3.13: Transportation. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The noise levels along these roadway segments are presented in Table 3.11-2 with an indication of where the measurement was taken, in terms of distance from the roadway. Two measurements were taken at each location; the maximum measurement is used. The location of 60, 65, 70, 75, 80, and >80 dB noise contours are shown Figure 3.11-1.

Table 3.11-2: Existing Traffic Noise Levels (2019)

#	Roadway	Distance (Feet)	Noise Level dBA DNL
1	I-80	200	77
2	Hwy 113	40	73
3	Railroad	65	79
4	A Street	40	70

Notes:

1. Traffic volumes are per Salter data received December 2019.

Source: Salter, 2019.

Railway

The noise impacts associated with train activity depends on the type of train, number of cars, track conditions, the number of trains operating per day, the speed of the engine car, and the proximity of the rail line to surrounding receptors.

Rail operations contribute to the noise environment in the city. The Union Pacific Railroad and Amtrak Capital Corridor railroad pass through but do not stop in Dixon, paralleling South Porter Road through the length of the city. These trains generate high noise levels when passing through the city.

Noise from Agricultural Activities

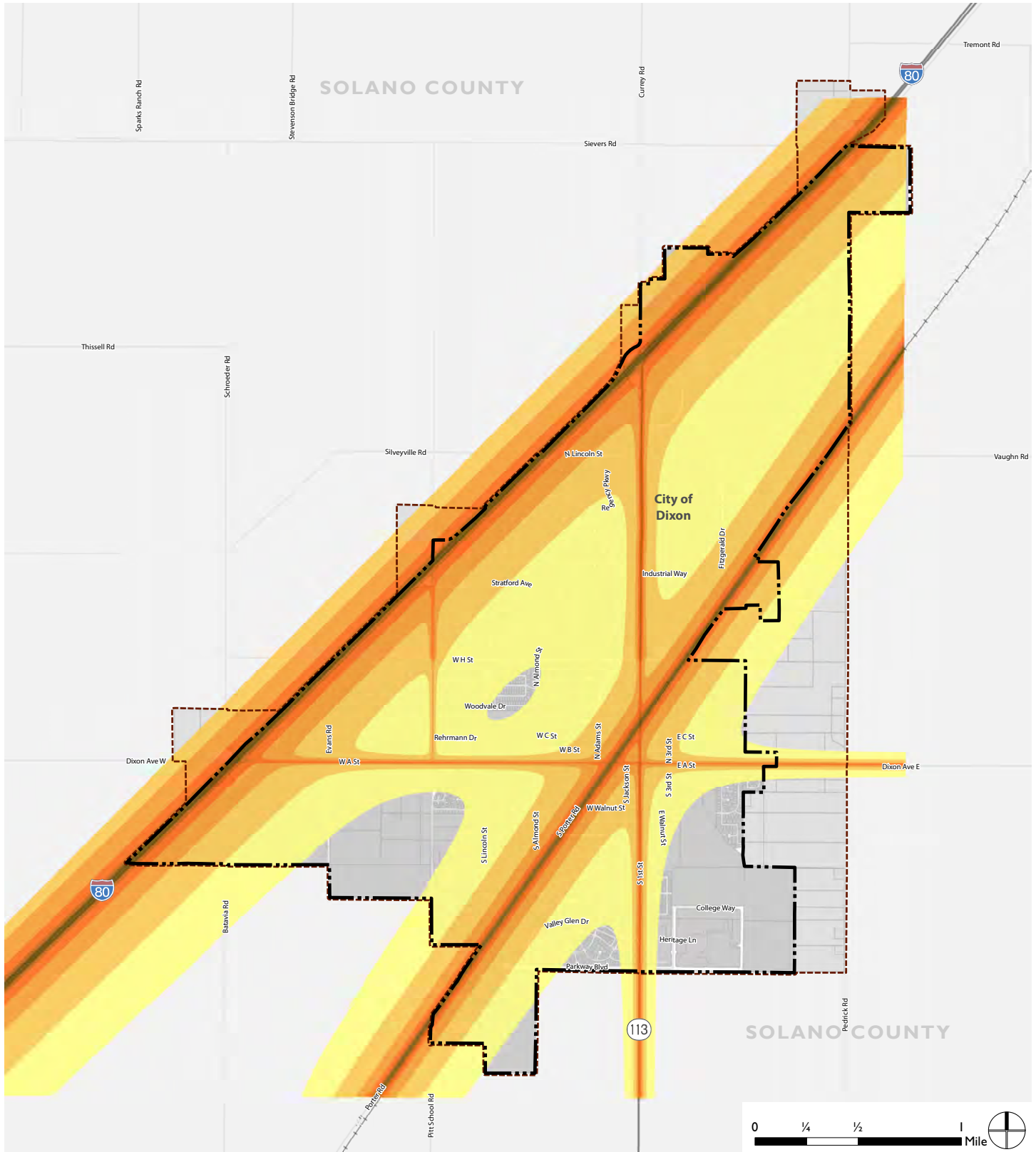
Agricultural activities in the Planning Area can be sources of intermittent noise. For example, high noise levels are generated by wind machines used for agriculture in the early spring, with noise levels of approximately 90 dBA at nearby residential receptors.

Stationary Noise Sources

A stationary noise source is defined as a land use, building, or activity that produces noise at a fixed location. They can be temporary, intermittent, or continuous sources of noise. Stationary noise sources include heating, ventilation, and air conditioning (HVAC), appliances, power tools, generators, non-mobile motors, and other amplified sounds. Exposure to stationary sources can usually be limited by means of setbacks, housings for noise-emitting motors or generators, walls between properties, or dense landscaping.

Temporary stationary noise sources include amplified music from parties or bars, engines idling, and pets barking.

Figure 3.1 I-1: Existing Noise Contours



Data Source: CM Salter Associates, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Dixon Existing Contours - Feet

- DNL 55 to 60 dB
- DNL 60 to 65 dB
- DNL 65 to 70 dB
- DNL 70 to 75 dB
- DNL 75 to 80 dB
- > DNL 80 dB

- Railroad
- Dixon City Limit
- Sphere of Influence

Other Noise Sources

Other existing sources of noise include commercial, recreational, school, and transportation uses. Noise sources associated with commercial uses include mechanical equipment, as well as activities associated with parking lots, loading docks, and drive-throughs. Mechanical equipment is used extensively in buildings to provide heating, cooling, air circulation, and water supply. Mechanical equipment that produces noise includes motors, pumps, and fans. Although noise levels from these sources are generally low at nearby properties, such sources may operate continuously and may include pure tones that make them audible and sources of annoyance at a substantial distance. Intermittent or temporary noise sources include portable power equipment such as leaf blowers, lawn mowers, portable generators, electric saws and drills.

The closest airports to the City are the Sacramento Airport and the Rio Vista Municipal Airport, both located about 26 miles from Dixon. Noise from aircrafts would produce temporary noise lasting a short period of time.

Groundborne Vibration

Vibration Characteristics and Measurement

Vibration can be interpreted as energy transmitted in waves through the ground or structures, which generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment*, groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard (Federal Transit Authority, 2018). In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment (Caltrans, 2013b).

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec), and is most frequently used to describe vibration impacts on buildings. The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. The relationship of PPV to RMS velocity is expressed in terms of the "crest factor," defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity. The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations

within the building or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment (Federal Transit Authority, 2018).

Effects of Vibration

The effects of groundborne vibration include movement of the building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. In extreme cases, the vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. Annoyance from vibration often occurs when the vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Sources of Vibration

Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earthmoving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to within about 100 feet of the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet.¹ When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible.

REGULATORY SETTING

Federal Regulations

Environmental Protection Agency

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (U.S. EPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential land use areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA (U.S. EPA, 1974). These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility.

Occupational Safety and Health Administration

Under the Occupational Safety and Health Act of 1970 (29 United States Code [U.S.C.] Section 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that involves

¹ Federal Transit Authority, 2006

monitoring the noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically **testing the workers' hearing to detect any degradation.**

Department of Housing and Urban Development

The U.S. Department of Housing and Urban Development's environmental criteria and standards are presented in 24 Code of Federal Regulations (CFR) Part 51. New construction proposed in high noise areas (exceeding 65 dBA DNL) must incorporate noise attenuation features to maintain acceptable interior noise levels. A goal of 45 dBA DNL is set forth for interior noise levels and attenuation requirements are geared toward achieving that goal. It is assumed that with standard construction, any building will provide sufficient attenuation to achieve an interior level of 45 dBA DNL or less if the exterior level is 65 dBA DNL or less. Approvals in a "normally unacceptable noise zone" (exceeding 65 dB, but not exceeding 75 dB) require a minimum of 5dB of additional noise attenuation for buildings having noise sensitive uses if the DNL is greater than 65 dB, but does not exceed 70 dB, or a minimum of 10 dB of additional noise attenuation, if the day-night average is greater than 70 dB, but does not exceed 75 dB.

Federal Highway Administration

An assessment of noise and consideration of noise abatement per Title 23 of the CFR, Part 772, **"Procedures for Abatement of Highway Traffic Noise and Construction Noise,"** is required for proposed federal or federal-aid highway construction projects on a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. The FHWA considers noise abatement for sensitive receivers, such as picnic areas, recreation areas, playgrounds, active sport areas, parks, residences, motels, hotels, schools, places of worship, libraries, and hospitals when **"worst-hour"** noise levels approach or exceed 67 dBA Leq. The California Department of Transportation (Caltrans) has further defined **"approach"** as meaning to be within 1 dB of the Noise Abatement Criteria (NAC).

Federal Transit Administration

This analysis uses the FTA's **vibration impact criteria for sensitive buildings, residences, and institutional land uses near railroads.** The thresholds for residences and buildings where people normally sleep are 72 vibration decibels (VdB) for frequent events (more than 70 events of the same source per day), 75 VdB for occasional events (30 to 70 vibration events of the same source per day), and 80 VdB for infrequent events (less than 30 vibration events of the same source per day). As the threshold of perception is usually taken to be approximately 65 VdB, vibration from train pass-bys may be felt even if the requirements are met.

Federal Aviation Administration

The Federal Aviation Administration (FAA) enforces Title 14 of the CFR, Part 150, which describes the procedures, standards and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs. Title 14 also identifies the land uses that are normally compatible with various levels of exposure to noise by individuals.

FAA has determined that sound levels up to 45 dBA CNEL are acceptable within residential buildings.

Federal Railroad Noise Emissions Compliance Regulation

FTA's Office of Safety is responsible for enforcing the Railroad Noise Emissions Compliance Regulation that sets maximum sound levels from railroad equipment and for regulating locomotive horns.

Federal Vibration Guidelines

FTA has adopted vibration criteria that are used to evaluate potential structural damage to buildings by building category from construction activities. The vibration damage criteria adopted by FTA are shown in Table 3.11-3.

Table 3.11-3 Construction Vibration Damage Criteria

<i>Building Category</i>	<i>PPV (in/sec)</i>
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA, 2018.

FTA has also adopted vibration criteria associated with the potential for human annoyance from groundborne vibration for the following three land-use categories: Category 1 – High Sensitivity, Category 2 – Residential, and Category 3 – Institutional. FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, historic buildings, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but still have the potential for activity interference. FTA uses a screening distance of 100 feet for highly vibration-sensitive buildings (e.g., historic buildings, hospitals with vibration sensitive equipment, Category 1) and 50 feet for residential uses (Category 2) and institutional land uses with primarily daytime use (Category 3) (Federal Transit Authority, 2018). The vibration criteria associated with human annoyance for these three land-use categories are shown in Table 3.11-4. No vibration criteria have been adopted or recommended by FTA for commercial and office uses.

Table 3.11-4 Indoor Groundborne Vibration Impact Criteria for General Assessment

<i>Land Use Category</i>	<i>Frequent Events^a</i>	<i>Occasional Events^b</i>	<i>Infrequent Events^c</i>
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ^d	65 VdB ^d	65 VdB ^d
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

^a“Frequent Events” is defined as more than 70 vibration events of the same source per day.
^b“Occasional Events” is defined as between 30 and 70 vibration events of the same source per day.
^c“Infrequent Events” is defined as fewer than 30 vibration events of the same kind per day.
^d This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

Source: FTA, 2018.

State Regulations

State of California Noise Standards

The State of California does not have statewide standards for environmental noise, but the **Governor’s Office of Planning and Research (OPR) has established general plan guidelines** for evaluating the compatibility of various land uses as a function of community noise exposure. The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise compatibility by different land uses types is categorized into four general levels: “normally acceptable,” “conditionally acceptable,” “normally unacceptable,” and “clearly unacceptable.” For instance, a noise environment ranging from 50 dBA CNEL to 65 dBA CNEL is considered to be “normally acceptable” for multi-family residential uses, while a noise environment of 75 dBA CNEL or above for multi-family residential uses is considered to be “clearly unacceptable.”

In addition, California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) specifically requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community and analyze and quantify current and projected noise levels; (2) show noise contours for noise sources stated in CNEL; (3) use noise contours as a guide for establishing a pattern of land uses; and (4) implement measures and possible solutions that address existing and foreseeable noise problems.

The State of California has also established noise insulation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such

units are proposed in areas subject to noise levels greater than 60 dBA CNEL. Title 24 standards are enforced by local jurisdictions through the building permit application process.

Local Regulations

Dixon Municipal Code

The Dixon Municipal Code addresses noise performance standards in Section 18.28.030. These performance standards specify that land uses within Residential and Medical Districts shall not generate sound in excess of 55 dB, land uses within Multifamily Districts shall not generate sound in excess of 60 dB, land uses within “C” Districts shall not generate sound in excess of 70 dB, and land uses within “M” Districts shall not generate sound in excess of 75 dB.

Section 18.28.040 provides several correction factors for sound generation maximums set in Section 18.28.030. Noise emissions that occur only between 7 a.m. and 10 p.m. are permitted a 5 dB increase in maximum permissible sound. Noise of unusual character, such as hammering, drill pressing, hammering, or screeching, is granted a sound level maximum 5 dB below that defined in Section 18.28.030.

Exceptions to noise performance standards are defined in Section 18.28.050. Exceptions are granted for:

- Time signals produced by places of employment or worship and school recess providing no one (1) sound exceeds five (5) seconds in duration and no one (1) series of sounds exceeds twenty-four (24) seconds in duration;
- Devotional and patriotic music of worship, provided such music is emitted only between the hours of 7:00 a.m. and 10:00 p.m.;
- Sounds from transportation equipment used exclusively in the movement of goods and people to and from a given premises, temporary construction or demolition work; and
- Sounds made in the interest of public safety.

Section 18.28.080 outlines vibration performance standards. This section states that no use shall be operated in a manner that produces vibrations discernible without instruments at any point on the property line of the lot on which the use is located.

Solano County General Plan, Public Health & Safety Element

Provisions of the Solano County General Plan apply to unincorporated areas of Solano County, including the Spheres of Influence adjacent the Dixon city limits analyzed in the proposed Plan and EIR.

The Health and Safety contains noise performance standards and guidelines for noise reduction in **land use and site planning**. **The County’s noise reduction and abatement strategy focuses on preventative techniques that protect noise-sensitive land used from noise-producing sources by:**

- Developing strategies for reducing excessive noise exposure through cost-effective measures and appropriate zoning that avoids placing incompatible land uses in proximity of each other;
- Protecting existing regions of the county where noise levels are currently acceptable, as well as locations that are deemed to be noise-sensitive;
- Protecting existing noise-generating commercial and industrial uses from encroachment of new noise-sensitive developments;
- Preventing new noise-generating commercial and industrial uses in Solano County from encroaching on noise-sensitive uses; and
- Providing sufficient information regarding existing and future community noise levels so that noise may be effectively considered in land use planning.

The General Plan defines noise-sensitive land uses to include schools, hospitals, rest homes, long-term care facilities, mental care facilities, and residences.

The General Plan defines Normally Acceptable, Conditionally Acceptable, Normally Unacceptable, and Clearly Unacceptable noise levels for different land use types, as described in Table 3.11-5.

Table 3.11-5 Land Use Noise Compatibility Guidelines

<i>Land Use Category</i>	<i>Community Noise Exposure (L_{dn} or CNEL, dba)</i>			
	<i>Normally Acceptable^a</i>	<i>Conditionally Acceptable^b</i>	<i>Normally Unacceptable^c</i>	<i>Clearly Unacceptable^d</i>
Residential—Low Density Single Family, Duplex, Mobile Home	<60	55-70	70-75	75+
Residential—Multifamily	<65	60-70	70-75	75+
Transient Lodging—Motel, Hotel	<65	60-70	70-80	80+
Schools, Libraries, Churches, Hospitals, Nursing Homes	<70	60-70	70-80	80+
Auditoriums, Concert Halls, Amphitheaters	-	<70	65+	-
Sports Arena, Outdoor Spectator Sports	-	<75	70+	-
Playgrounds, Neighborhood Parks	<70	-	67.5-75	72.5+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	<75	-	70-80	80+
Office Building, Business Commercial, and Professional	<70	67.5-77.5	75+	-

Table 3.11-5 Land Use Noise Compatibility Guidelines

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dba)			
	Normally Acceptable ^a	Conditionally Acceptable ^b	Normally Unacceptable ^c	Clearly Unacceptable ^d
Industrial, Manufacturing, Utilities Agriculture	<75	70-80	75+	-

^a Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

^b New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

^c New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design. Outdoor areas must be shielded.

^d New construction or development should generally not be undertaken.

Source: State of California Governor's Office of Planning and Research 2003, EDAW 2007

Levels of acceptable outdoor and interior noise levels for various land uses are shown in Table 3.11-6.

Table 3.11-6 Noise Standards for New Uses Affected by Traffic and Railroad Noise

New Land Use	Sensitive Outdoor Area (dBA L_{dn})	Sensitive Interior ^a Area (dBA L_{dn})	Notes
All Residential	65	45	b
Transient Lodging	65	45	b,c
Hospitals and Nursing Homes	65	45	b,c,d
Theaters and Auditoriums	-	35	c
Churches, Meeting Halls, Schools, Libraries, etc.	65	40	c
Office Buildings	65	45	c
Commercial Buildings	-	50	c
Playgrounds, Parks, etc.	70	-	
Industry	65	50	c

^a Interior-noise-level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

^b If these uses are affected by nighttime railroad passages, the potential for sleep disturbance shall be addressed.

^c Where there are no sensitive exterior spaces proposed for these uses, only the interior-noise-level standard shall apply.

^d Hospitals are often noise-generating uses. The exterior-noise-level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

Source: Solano County, 2008

Non-transportation noise standards are shown in Table 3.11-7.

Table 3.11-7 Non-transportation Noise Standards—Average (dBA L_{eq})/Maximum (dBA L_{max})^a

Receiving Land Use	Outdoor Area		Interior ^b	Notes
	Daytime	Nighttime Area	Day and Night	
All Residential	55/70	50/65	35/55	
Transient Lodging	55/75	-	35/55	c
Hospitals and Nursing Homes	55/75	-	35/55	d,e
Theaters and Auditoriums	-	-	30/50	e
Churches, Meeting Halls, Schools, Libraries, etc.	55/75	-	35/60	e
Office Buildings	60/75	-	45/65	e
Commercial Buildings	55/75	-	45/65	e
Playgrounds, Parks, etc.	65/75	-	-	e
Industry	60/80	-	50/70	e

^a The standards shall be reduced by 5 dBA for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, then the noise level standards shall be increased at 5-dBA increments to encompass the ambient.

^b Interior-noise-level standards are applied within noise-sensitive areas of the various land uses, with windows and doors in the closed positions.

^c Outdoor activity areas of transient lodging facilities are not commonly used during nighttime hours.

^d Hospitals are often noise-generating uses. The exterior-noise-level standards for hospitals are applicable only at clearly identified areas designated for outdoor relaxation by either hospital staff or patients.

^e The outdoor activity areas of these uses (if any), are not typically utilized during nighttime hours.

Source: Solano County, 2008

The Health and Safety Element addresses noise arising from stationary sources. Stationary noise source control strategies focus on preventing on introduction of new stationary noise sources near noise-sensitive areas and preventing encroachment of noise-sensitive uses on existing stationary noise sources. The General Plan contains policies for minimizing noise conflicts between existing and proposed land uses and recommends using buffering to mitigate noise issues by putting space between incompatible land uses.

The Plan requires that truck routes be designated where noise conflicts with land uses are least likely to occur, that new development proposals incorporate noise measures, that industrial and other noise-generating land uses be located away from noise-sensitive land uses, and that the County works with the California Department of Transportation to mitigate freeway noise in locations where such noise adversely affects unincorporated residential land uses.

Solano County Municipal Code

Section 28.70.10 of the Solano County Municipal Code establishes general development standards applicable to all uses in every zoning district. This code section requires that all uses of land and structures shall be conducted in a manner, and provide adequate controls and operational management to prevent, noise that exceeds 65 dBA LDN at any property line. Likewise, wireless telecommunication facilities located in or within 100 feet of a residential district are required to maintain exterior noise levels to a maximum of 50 Ldn at the facility site's property line.

Section 2.2-70 includes provisions for the use of noise making devices, including gas cannons, scare guns, automatic exploders, or any similar devices used to frighten wildlife away from an agricultural crop. The Municipal Code stipulates that use of these devices are prohibited except for the purpose of protecting agricultural crops susceptible to bird or wildlife damage.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse noise impact would occur if implementation of the Proposed Project would:

- Criterion 1: Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Criterion 2: Result in generation of excessive groundborne vibration or groundborne noise levels;
- Criterion 3: Be located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and could expose people residing or working in the project area to excessive noise levels.

METHODOLOGY AND ASSUMPTIONS

Construction Noise

Construction noise impacts were evaluated using the FHWA Roadway Construction Noise Model (FHWA, 2006) and the associated reference noise levels for each piece of construction equipment that may be used under the proposed General Plan update. Noise impacts were assessed using the reference noise level distance of 50 feet from a sensitive receptor and were evaluated based on maximum noise levels produced by each piece of construction equipment.

Construction vibration impacts were evaluated using FTA methodology from the FTA Transit Noise and Vibration Impact Assessment Manual (FTA, 2018). Setback distances for preventing

vibration damage were evaluated using reference vibration levels for specific construction equipment.

Traffic Noise

Roadway noise impacts were evaluated using the methodology described in the FHWA Traffic Noise Model Technical Manual based on the roadway traffic volume data provided in Chapter 3.12: Transportation. Calculations are provided in Appendix D of this Draft EIR.

Railway Noise

This analysis evaluates impacts associated with the proposed General Plan update at the program level. Accordingly, specific details on future railway expansions or improvements are unknown at this time, neither are the specific noise sources that might occur in conjunction with development of land uses near the railway under the Proposed Plan. Therefore, railway noise and vibration impacts are discussed on a qualitative basis.

Stationary Noise

This analysis evaluates impacts associated with the proposed General Plan update at the program level. Accordingly, specific details on future mechanical equipment or HVAC equipment and layout are unknown at this time, neither are the specific noise sources that might occur in conjunction with development of land uses allowable under the Proposed Plan. Therefore, stationary and other noise source impacts are discussed on a qualitative basis.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Natural Environment

- | | |
|---------|---|
| NE-5.16 | Ensure that noise does not have a substantial, adverse effect on the quality of life in the community. |
| NE-5.17 | Apply the General Plan noise and land use compatibility standards to all new residential, commercial, and mixed-use development and redevelopment, as shown in Table NE-2. |
| NE-5.18 | Require acoustical studies with appropriate mitigation measures for projects that are likely to be exposed to noise levels that exceed the ‘normally acceptable’ standard and for any other projects that are likely to generate noise in excess of these standards. |
| NE-5.19 | Require that new noise-producing uses are located sufficiently far away from noise-sensitive receptors and/or include adequate noise mitigation, such as screening, barriers, sound enclosures, noise insulation, and/or restrictions on hours of operation. |

IMPACTS

Impact 3.11-1 Implementation of the Proposed Project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (*Less than Significant*)

Construction

Existing limitations on construction have the potential to reduce noise and vibration generation and were taken into account in the analysis of potential impacts. According to the Dixon Municipal Code, activities that take place strictly between 7 a.m. and 10 p.m. are granted a 5 dB increase in maximum permissible sound. In contrast, the maximum permitted level of noise of unusual character, such as hammering, drill pressing, or screeching, is reduced by 5 dB. This means that, depending on the timing, location, and nature of construction activities, the maximum permissible intensity of construction noise could range from 50 dB (in Multifamily districts) to 80 dB (in “M” districts).

On-Site Construction Noise

Construction would require the use of heavy equipment during the demolition, grading, excavation, and other construction activities within the Planning Area. During each stage of development for any given construction project, a different mix of equipment would be used. As such, construction activity noise levels would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment.

Individual pieces of construction equipment expected to be used during construction could produce maximum noise levels of 75 dBA to 101 dBA L_{max} at a reference distance of 50 feet from the noise source, as shown in Table 3.11-8. These maximum noise levels would occur when equipment is operating at full power. The estimated usage factor for the equipment is also shown in Table 3.11-8. **The usage factors are based on FHWA’s Roadway Construction Noise Model (RCNM) User’s Guide (Federal Highway Administration, 2006).**

Table 3.11-8 Construction Equipment Noise Levels

<i>Construction Equipment</i>	<i>Estimated Usage Factor, %</i>	<i>Noise Level at 50 Feet (dBA, Lmax)</i>
Air Compressors	40%	78
Bore/Drill Rig	20%	79
Cement and Mortar Mixer	40%	79
Compactor	20%	83
Concrete Saw	20%	90
Crane	16%	81
Dumpers/Tenders	40%	76
Excavator	40%	81
Forklift	10%	75
Generator Sets	50%	81
Jackhammers	20%	89
Off-Highway Trucks	20%	76
Other Equipment	50%	85
Paver	50%	77
Paving Equipment	20%	90
Roller	20%	80
Rough Terrain Forklift	10%	75
Rubber Tired Loader	50%	79
Surfacing Equipment	50%	85
Tractor/Loader/Backhoe	25%	80
Vacuum Street Sweeper	10%	82
Vibratory Pile Driver	20%	101

Source: FHWA, 2006.

The exact locations of future projects and construction that would be implemented under the proposed General Plan update are not known at this time, though it is assumed that some of the activities would take place in close proximity to sensitive receptors given that the planning area includes a wide range of receptors. The severity of construction-related noise impacts depends on the proximity of construction activities to sensitive receptors, the presence of intervening barriers, the number and types of equipment used, and the duration of the activity. While the details of these factors are not available for future projects under the proposed General Plan update, it is assumed that individual projects would be implemented in compliance with the City and County standards. Future development under the Proposed Plan would be required to comply with the restrictions of the City Municipal Code, as well as the County Municipal Code for activities within the SOI; if a project requests to deviate, the project proponent would need to obtain permission from the City and/or the County, including conditions and standards to minimize noise impacts. Therefore, assuming any future development complies with City and County noise regulations, temporary increases in noise levels from construction would be less than significant.

Traffic Noise

The proposed General Plan update would generate traffic that would increase noise levels along existing and future roadways. The FHWA Highway Traffic Noise Model (FHWA-TNM) was used to evaluate future (2040) traffic-related noise conditions in the City and SOI at the study intersections. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. Table 3.11-9 provides the existing and future buildout noise levels at 50 feet from the centerline of these roadway segments and the distances to the 60, 65, and 70 dBA CNEL future roadway noise contours, shown in Figure 3.11-2. As shown in Table 3.11-9, traffic noise along the analyzed roadway segments would not be significantly different when existing noise levels are compared to future roadway noise levels with implementation of the Proposed Plan. The maximum increase would be 3.6 dBA along Pitt School Road between West H Street and West A Street. A 3 dBA increase in noise levels is considered barely perceivable by the human ear. Therefore, impacts from traffic noise would be less than significant.

Figure 3.11-2 demonstrates that future noise contours would expand following implementation of the Proposed Plan, and the majority of land in the planning area would be exposed to noise levels between 55 and 70 dBA L_{dn} . The Proposed Plan would expand the areas of the 55 to 60, 60 to 65, 65 to 70, and 70 to 75 dB noise contours. Land uses directly adjacent to major roadways in the planning area would be exposed to noise in excess of 80 dBA L_{dn} , but the Proposed Plan would not increase noise levels in any part of the planning area to 80 dBA L_{dn} . The areas of the 75 to 80 and 80 dB and above noise contours would not significantly change.

Table 3.11-9: Existing and Future Traffic Noise Levels (2040)

#	Roadway	Segment	Existing	Future with Proposed General Plan				
			Noise Level (dBA CNEL) at 50 ft from CL	Distance (ft) from CL to 60, 65, and 70 dBA CNEL Contours			Noise Level (dBA CNEL) at 50 ft from CL	Increase (dBA CNEL) at 50 ft from CL
				60	65	70		
1	I-80		83.7	2210	1020	480	84.7	1.0
2	N. First St.	I-80 to West H St.	71.0	300	140	70	71.7	<1
3	N. First St.	West H St. to West A. St.	65.9	120	50	<50	65.5	<1
4	S. First St.	South of West A St.	67.7	160	70	<50	67.4	<1
5	Pitt School Road	I-80 to West H St.	67.1	180	80	<50	68.2	1.1
6	Pitt School Road	West H St. to West A St.	60.1	90	<50	<50	63.8	3.6
7	West A St.		67.0	200	90	<50	69.2	2.2
8	Railway		79.2	960	440	210	79.2	<1

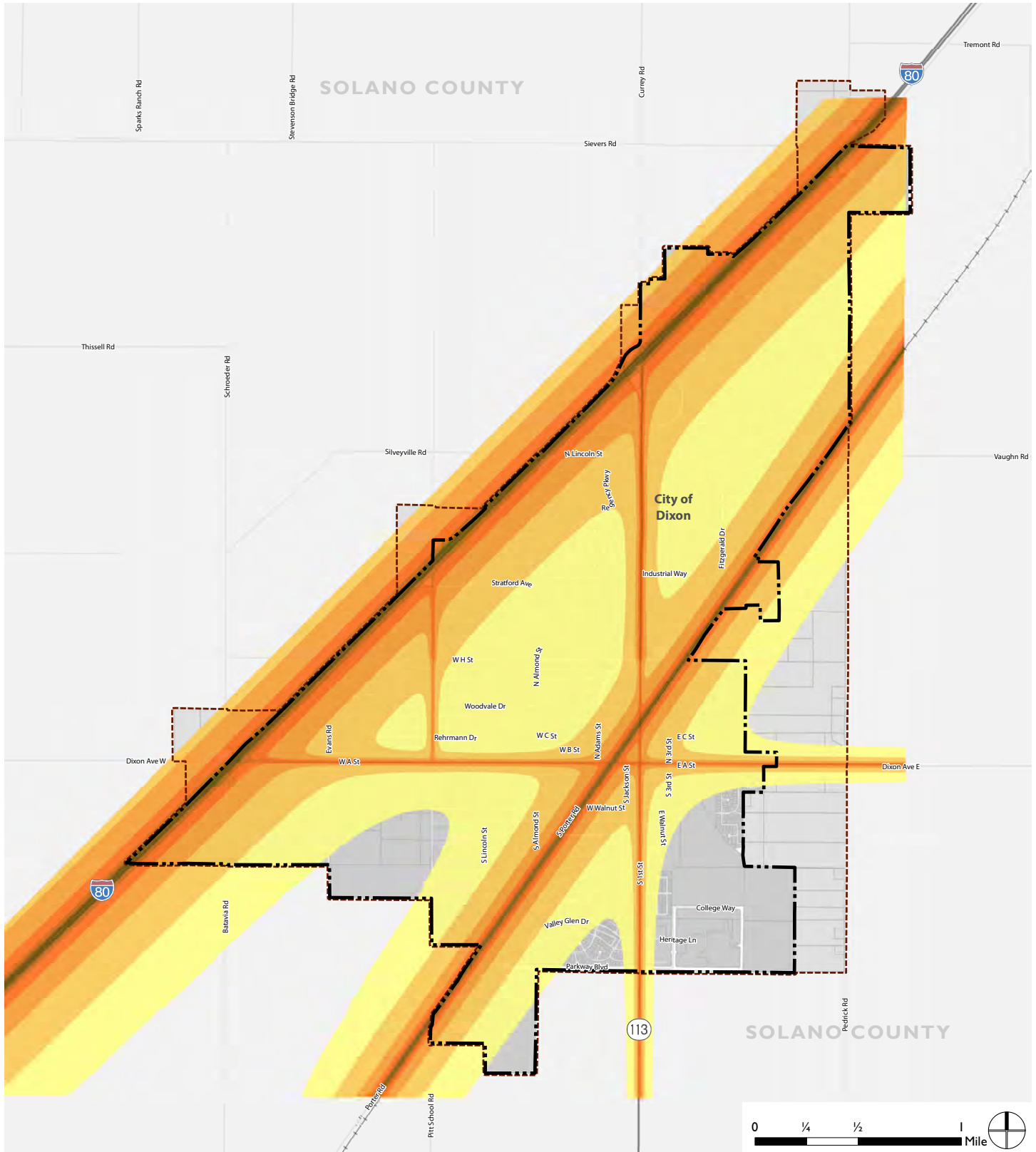
Notes:

1. Traffic volumes are per DKS Assoc. data received Aug 2019
2. Truck % assumed to be 2% for all roadways
3. Speeds are per DKS, as posted, and adjusted per site observation/measurement
4. The Day-Night-Average Sound Level (DNL) for the railway is impacted by nighttime train passbys generating noise levels above 90 dB

CL = Centerline (of roadway segments)

Sources: DKS; Salter, 2019.

Figure 3.1 I-2: Future Noise Contours (2040)



Data Source: CM Salter Associates, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Dixon Future Contours (2040) - Feet

- DNL 55 to 60 dB
- DNL 60 to 65 dB
- DNL 65 to 70 dB
- DNL 70 to 75 dB
- DNL 75 to 80 dB
- > DNL 80 dB

- Railroad
- Dixon City Limit
- Sphere of Influence

Railway Noise

The proposed General Plan includes a variety of land use designations along the railway, including agricultural, residential, government/institutional, industrial, mixed-use, and commercial. For all future developments within the Planning Area that fall within the required noise screening distances as specified in the FTA Noise and Vibration Manual, a detailed noise analysis would be required. The screening distance for commuter rail and freight trains are 750 feet with no obstruction between the rail line and receptor and 375 feet with intervening buildings.

Policies within the proposed General Plan update would minimize adverse noise impacts associated with the rail corridor. Furthermore, since the proposed General Plan update does not include any railway upgrades or improvement that would increase train volumes or number of tracks, the noise impacts would be less than significant.

Stationary Noise

As for mobile sources, new development associated with the proposed General Plan update could expose existing and new sensitive receptors to stationary noise sources, such as, rooftop heating, ventilation, and air conditioning units. Any new development under the proposed General Plan **update would be subject to the City's and County's municipal code and to the General Plan policies** aimed at reducing noise levels from adjacent properties. Compliance with the City and County municipal code and General Plan update policies would reduce noise to a less than significant level.

Mitigation Measures

None required.

Impact 3.11-2 Implementation of the Proposed Project would not result in generation of excessive groundborne vibration or groundborne noise levels. (*Less than Significant*)

Construction Vibration

Future development under the proposed General Plan would generate groundborne noise and vibration near construction sites and, if sensitive receptors or land uses are adjacent to construction, there could be significant impacts. Vibration attenuates quickly, but high impact equipment such as pile drivers could cause impacts depending on the distance from the receptor or land use to the construction activity. Most construction activity does not require high impact equipment and would generate vibration mostly from bulldozers and loaded trucks.

The use of large bulldozers and loaded trucks for construction would generate the highest groundborne vibration levels on a typical construction site. Based on the FTA Transit Noise and Vibration Impact Assessment (Federal Transit Authority, 2018), large bulldozers and loaded trucks would generate 0.089 in/sec PPV and 0.076 in/sec PPV, respectively, at a reference distance of 25 feet. Table 3.11-3, above, shows the damage threshold for Class I through IV structures ranging from reinforced concrete, steel, or timber (Class I) to buildings extremely susceptible to vibration (Class IV) (Federal Transit Authority, 2018). Table 3.11-10 shows the minimum distance that large

bulldozers and loaded trucks could operate at for Class I through IV structures without causing significant damage. Construction activities, such the use of a large bulldozer, would be required to not operate within the distances for each structure type shown in Table 3.11-10 to avoid exceeding the vibration structural damage criteria. Therefore, impacts would be less than significant.

Table 3.11-10 Distance within Vibration Damage Criteria

<i>Construction Equipment Type</i>	<i>Class I: Reinforced concrete, steel, or timber</i>	<i>Class II: Engineered concrete and masonry</i>	<i>Class III: Non-engineered timber and masonry buildings</i>	<i>Class IV: Buildings extremely susceptible to vibration</i>
	0.5 PPV (in/sec)	0.3 PPV (in/sec)	0.2 PPV (in/sec)	0.12 PPV (in/sec)
Large Bulldozer	8 feet	12 feet	15 feet	21 feet
Loaded Trucks	7 feet	10 feet	14 feet	19 feet

Source: FTA, 2018

Traffic Vibration

Vehicular traffic would generate groundborne vibration and under the proposed General Plan update, more land development would lead to more traffic volume. However, the vibration from vehicles is temporary and intermittent and generates up to 0.005 PPV in/sec (Federal Transit Authority, 2018). The vibration levels from traffic would be well below the threshold of perception for humans of 0.035 in/sec PPV, and impacts would be less than significant.

Rail Vibration

The operation of Union Pacific railway currently generate vibration in a path running northeast to southwest through the Planning Area. Although the existing line does generate vibration, the proposed General Plan update would not change vibration levels from the expansion of rail lines and contains policies to address the impacts of vibration. Furthermore, all future developments within the City are subject to the noise screening distances in the FTA Noise and Vibration Manual (Federal Transit Authority, 2018). The screening distance for commuter rail lines is 750 feet with no obstruction between the rail line and receptor and 375 feet with intervening buildings. At these distances, vibration levels would attenuate rapidly and any new developments would not be affected. Impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.11-3 Implementation of the Proposed Project would not result in development located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and could expose people residing or working in the project area to excessive noise levels. *(No Impact)*

The Planning Area is not located within an airport land use plan or within two miles of a public use airport or private airstrip. The closest airports to the Planning Area are the Sacramento International Airport and the Rio Vista Municipal Airport, both located about 26 miles from the Planning Area. The Sacramento International Airport Land Use Compatibility Plan and Rio Vista Municipal Airport Land Use Compatibility Plan set forth land use compatibility policies that are intended to ensure that future land uses in the surrounding area will be compatible with potential **long-range aircraft activities at the airport, and that the public's exposure to airport safety hazards** and noise impacts are minimized. The Proposed Project Area is not located within the Airport Influence Area of either airport, including not in proximity to airport noise contours. Therefore, the proposed General Plan update would not expose people residing or working in the project area to excessive noise levels related to the operation of a private airstrip or public airport. No impact would occur.

Mitigation Measures

None required.

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3.12 Public Services and Recreation

This section provides an evaluation of potential impacts on public services and facilities as a result of the Proposed Plan, including impacts related to fire, police, and school services and park and recreation facilities. This section describes existing public services and facilities in the Planning Area, as well as relevant federal, State, and local regulations and programs. There were no responses to the NOP regarding topics in this section.

Environmental Setting

PHYSICAL SETTING

Public Safety Services

Fire and Emergency Medical Services

The Dixon Fire Department provides fire protection services within Dixon City Limits and the surrounding 313 square mile unincorporated area known as the Dixon Fire Protection District as part of contractual agreement with Solano County. The City of Dixon and the surrounding area of the Dixon Fire Protection District are divided into sub-districts. The City consists of three sub-districts, and the Dixon Fire Protection District consists of seven sub-districts. Fire Department services include fire suppression, fire prevention, education, emergency medical and rescue services, and response to incidents involving hazardous materials.

Staffing

The Fire Department is based at 205 Ford Way in Dixon (Figure 3.12-1). The Dixon Fire Department is currently comprised of 36 people, both paid and volunteers. The combination department is manned by 21 career and 10 volunteer/reserve personnel working a 48/96-hour rotation schedule. The department's administration consists of 1 fire chief, 2 division chiefs, and 2 administrative personnel. Fire staffing consists of three shifts that work 24 hours a day, 7 days a week. Each shift works 2 days on and 4 days off (48/96 schedule), and is comprised of 7 personnel; 2 Captains, 2 Engineers, and 3 Firefighters or Firefighter/Paramedics, staffing two fire engines. Minimum staffing per day is 6; this is the lowest number of suppression staff on-duty each day without backfilling with overtime. There is also one Chief Officer on duty or on call 24 hours a day, 7 days a week. Staffing is supplemented with reserves when they are available.

Equipment

The City of Dixon operates ten pieces of firefighting equipment: four Type 1 engines, one truck, one Type 5 engine, one Type 3 engine, one rescue squad vehicle, and two water tenders. In addition, there are six utility vehicles. While most of the utility vehicles have been acquired within recent years, other equipment that the Department operates are nearing their life span or due for replacement, particularly the water tenders and one of the Type 1 engines.

Service Calls and Response Times

The Fire Department has not set a goal for maximum response time. Response times in 2016-2019 varied by sub-district but were lowest in the city center with an average response time of 4.7 minutes for one sub-district and 5.4 average response time for another. In 2019, the Fire Department responded to 2,514 911 emergencies, a 5 percent reduction from 2018. Of these, 1,786 incidents occurred in the City, while the remaining 728 incidents occurred in the Fire District. Rescues and medical emergencies comprised 40 percent of the total incidents. The remaining incidents were of all other types such as fire, hazardous material releases, and others.

Fire Insurance Rating

In 2018 the Insurance Services Office (ISO) gave the City of Dixon an ISO rating of 3, and the surrounding District an ISO rating of 3Y/10. The ISO organization analyzes and provides statistical information on risk, which heavily impacts residential and commercial insurance rates. The ISO Public Protection Classification (PPC) rating is from 10 to 1, with "1" being the best rating available. ISO evaluates cities and assesses a PPC based on a variety of technical and demographic factors for each individual city and their fire department. Some examples are the equipment a fire department owns or the distance between fire hydrants. The ISO also requests that fire departments conduct 20 hours of training per firefighter, each month, in order to maximize points for every training aid.

Police Service

The Dixon Police Department (DPD) services the City of Dixon and is comprised of the Field Operations Division that maintains 24-hour security patrol throughout the community and the Support Services Division that consists of Investigations, Property and Evidence, Records, Code Enforcement, Terrorism Liaison Officers, and Community Service Officers. The Department also runs a variety of community programs to promote education, training, and safety. Unincorporated **areas of Dixon's Sphere of Influence have general-service law enforcement provided by the Solano County Sheriff-Coroner.** (Dixon Police Department, 2019)

Staffing

The Police Department is based at 201 West A Street in Dixon (Figure 3.12-1). In 2019, the Police Department had 28 sworn police officers, two administrative staff, and three community service officers

The Dixon Police Department does operate a specialized Traffic program with two police motorcycles. All officers have the responsibility of carrying out traffic enforcement duties including

enforcement of vehicle code violations, driving under the influence enforcement, and collision investigations. There is also a civilian position within the Department known as the Community Service Officer (CSO) that does not require peace officer training but performs a variety of professional law enforcement functions including, crime prevention, property and evidence management, information gathering and report writing, and code enforcement. There were three CSOs within the department as of June 2020.

Other collateral assignments included a Terrorist Liaison Officer (TLO) who work with the Sacramento Regional Threat Assessment Center (SACRTAC). The department also has a policeK-9 unit independent of patrol operations to support the police mission. Dixon Police Officers also participate in collateral duty assignments within Solano County teams, including the regional SWAT team, crisis negotiation teams and the Solano County Mobile Field Force civil disturbance team.

Equipment

The Police Department maintains twenty-one police vehicles, one K9 unit, two police BMW motorcycles, a Polaris off-road utility vehicle and two distinctively marked police vehicles for Community Service Officers.

The requirements from the Corrections Standards Authority (CSA) for the operation, physical condition, and record keeping of persons processed and booked into the Department's Temporary Holding Facility have been met and remains in compliance with Title 15 and Section 17920.3 Health & Safety requirements, based on the Department's 2019 Year-End Report.

Service Calls and Response Times

Call-taking and dispatching functions are performed through a contractual relationship with the Solano County Sheriff's Office. In 2019, the patrol division handled approximately 19,170 calls for service, a 10.4 percent increase from the previous year, and included calls to handle criminal investigations, traffic collisions, burglary and robbery alarms at residential and commercial buildings, and calls to assist citizens with civil matters. These included 4,897 traffic stops, 1,874 follow up investigations, and 2,048 suspicious vehicles/persons checks.

The Department strives to have a response time of less than five minutes to Priority 1 calls which typically relate to incidents in which there is an immediate threat to life, danger of serious physical injury, or danger of major property damage. In 2019, the Department averaged 5.08 minutes in their response times to citizen-initiated calls for service.

Schools

Public Schools

The Dixon Unified School District (DUSD) provides educational services for students of all grades in elementary, junior, and high school in the Planning Area, as well as throughout nearby portions of Vacaville and unincorporated Solano County. As shown in Figure 3.12-1, all six schools in the district are within the Planning Area. The district maintains six schools in addition to operating the Dixon Adult School: three elementary schools, a middle school, and two high schools. Table 3.12-1 shows enrollment trends for each school level in DUSD to be slightly decreasing. (California Department of Education, 2019)

Table 3.12-1: Dixon Unified School District – Moderate Enrollment Projection

Grades Served	2014-2015 Enrollment	2015-2016 Enrollment	2016-2017 Enrollment	2017-2018 Enrollment
K to 6	1,601	1,587	1,529	1,493
7 to 8	545	528	523	527
9 to 12	1,237	1,199	1,196	1,216
Total	3,383	3,314	3,248	3,236

Sources: California Department of Education, 2019; Dyett & Bhatia, 2019.

However, as shown in Table 3.12-2, the District has projected a gradual increase in enrollment through 2020. Based on these enrollment projections, the District has determined that no schools in the District face a potential capacity challenge.

Table 3.12-2: Dixon Unified School District – Moderate Enrollment Projection

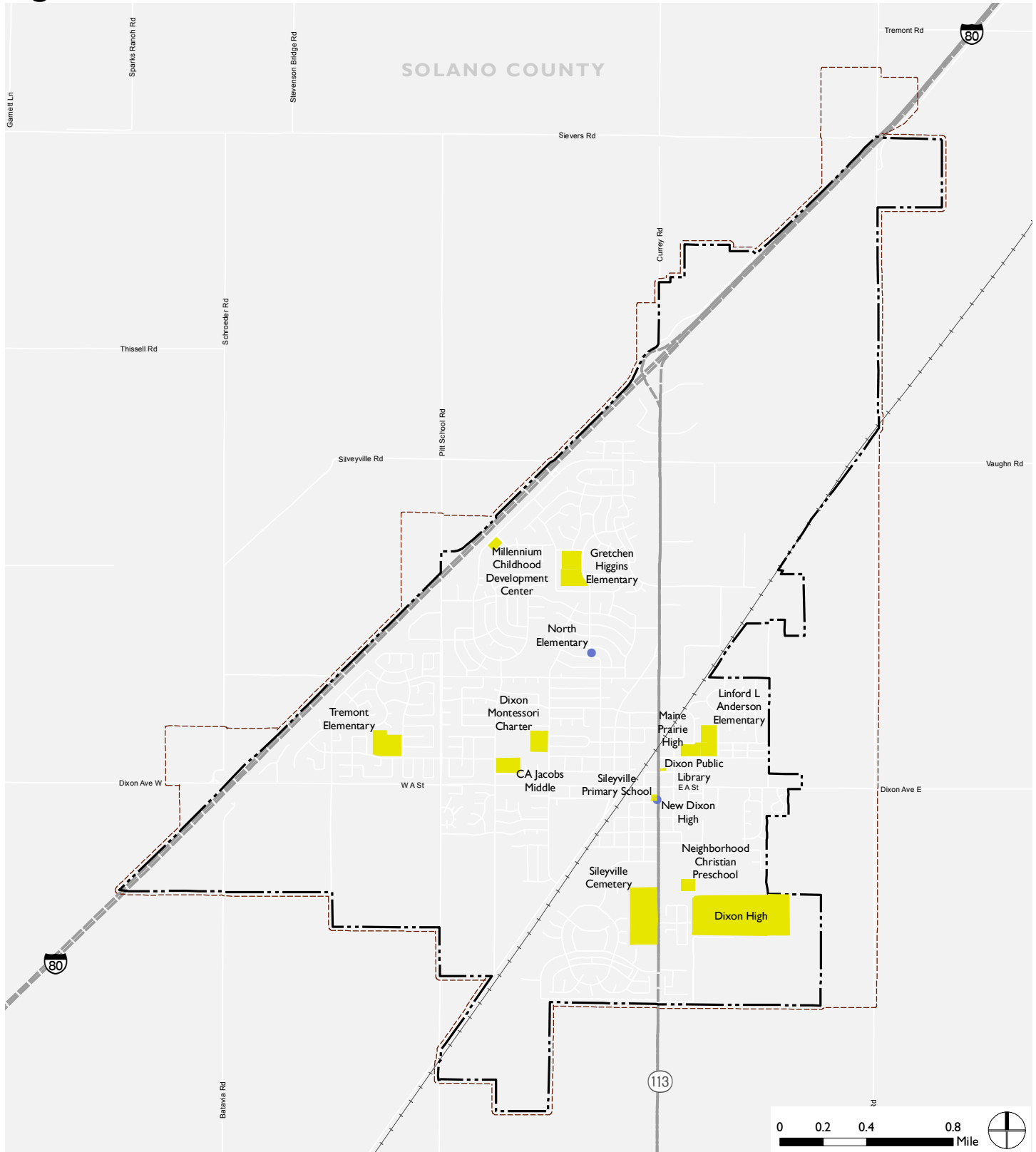
Grades	2015	2016	2017	2018	2019	2020
K to 6	1,505	1,515	1,565	1,577	1,660	1,704
7 to 8	528	529	528	566	545	487
9 to 12	1,239	1,282	1,284	1,281	1,261	1,292
Total	3,272	3,326	3,377	3,424	3,466	3,483

Note:

1. The moderate forecast assumes that student generation rates are typical of students enrolled from existing developments of similar housing types.

Source: Dixon Unified School District, 2015.

Figure 3.12-1: Educational Institutions and Public Facilities



Data Source: Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

- Educational or Public Facility
- New School Site
- Freeways
- Railroad
- Dixon City Limit
- Sphere of Influence

As of 2015, DUSD’s facilities capacity is 5,391 seats, well beyond current enrollment at all school levels, as seen in 3.12-3.

Table 3.12-3: Public School Enrollment and Capacity in Dixon

<i>School Name</i>	<i>Total Enrollment, 2017-2018</i>	<i>Enrollment Capacity</i>
Elementary Schools	1,493	2,583
Anderson Elementary	541	792
Gretchen Higgins Elementary	420	885
Tremont Elementary	532	906
Middle Schools	527	780
C.A. Jacobs	527	780
High Schools	1,216	2,028
Dixon High School	1,135	1,860
Maine Prairie (Continuation High School)	81	168
Total Enrollment	3,236	5,391

Source: California Department of Education, 2019; Dixon Unified School District, 2015.

Recent improvements and measures taken to support ongoing and future provision of educational services by the District are outlined by their Facilities Master Plan. In the most recent draft update, the District proposed multiple projects for its school buildings to meet facility needs, summarized in Table 3.12-4, including a new elementary school facility on part of the Old Dixon High School site, technology upgrades, and field replacements. DUSD also owns a 17.3-acre vacant site, planned to be used for an agricultural program or as a school farm. Additionally, to ensure adequate facilities are available to meet enrollment trends and accommodate potential future growth, the school district has impact fees set in place for residential and commercial/industrial development projects. Other proposed projects financed by Measure Q bond proceeds, passed in 2016, include the repair, renovation, and reopening of the Old Dixon High School as a Grade 6-8 middle school; repair and renovation of Anderson Elementary School; improvement of security/safety and Americans with Disabilities Act (ADA) compliance at all District school sites; and other associated miscellaneous bond projects, including temporary housing, appraisals, site analyses, risk assessments, and pre-construction studies.

Table 3.12-4: Dixon Unified School District Proposed Facility Improvements

<i>Project Name</i>	<i>Project Description</i>	<i>Estimated Completion Date</i>
Maine Prairie High School	Move Maine Prairie High School to a modernized wing of the old Dixon High School site.	August 2018
C.A. Jacobs Modernization	Build a new gymnasium that meets ADA requirements and has appropriate physical education equipment for the students. Move current foodservice facilities into the old gymnasium and replace the current boiler. Renovate and repair classrooms and replace portables.	August 2019
Tremont Modernization	Replace 20 portable classrooms with permanent buildings including state of the art technology and tile floors.	August 2020
Gretchen Higgins Modernization	Repair and upgrade various systems including classroom refurbishment, electrical repairs, blacktop, playground repairs, painting and other needs along with technology upgrades.	August 2022
New Anderson Elementary School	Build a new Anderson Elementary School across the street from its present location on the old Dixon High School Campus.	August 2025

Source: Dixon Unified School District, Parks and Recreation Master Plan 2015.

Of these projects, two are currently underway. In November 2019, the District announced that students and staff of C.A. Jacobs Middle School will be moving to the renovated Old Dixon High campus for the start of the 2020-2021 school year, coinciding with the completion of the School Farm on the new Dixon High campus. (Dixon Unified School District, 2019)

Other Schools

There are two private schools in Dixon: Neighborhood Christian School (655 South First Street), serving preschoolers up to eighth grade; and Dixon Montessori Charter School (355 N Almond Street), serving kindergarten through eighth grade. CEQA is mainly concerned with public schools, as increased enrollment could trigger the need to spend public funds on construction that could result in environmental impacts.

Libraries

The Dixon Carnegie Library, located at 230 North 1st Street, serves the Planning Area and is a community landmark. The 8,000-square-foot library building, first constructed in 1912 and rehabilitated in 1987, is on the National Register of Historic Places. The Library currently has a staff of 21 people, a collection of nearly 50,000 items, and eight computers available for public use and provides programming for both children and adults, including the Dixon Adult Literacy Program (DALP). The Dixon Library is also a member of the Solano Partner Libraries and St. Helena (SPLASH) Consortium which provides automated library services to patrons residing in Solano and Napa counties and promotes resource sharing. In June 2019, the Governing Library Board of Trustees voted to begin the process of entering the Solano County Library system. A possible

expansion into a vacant building that the library owns, which is adjacent to the existing library, is currently being studied.

Dixon voters approved a tax measure in 1911 to fund library services, supplemented by fundraising efforts of Friends of the Library. In 2012, Solano County residents reapproved Measure L, a sales tax that supports operation and rehabilitation of public libraries throughout the county, extended for 16 years. **This funding measure represents 55 percent of the library's operations budget.**

The Friends of the Library also provide financial support to the library to maintain services, programs, and events that promote the use of the Dixon Library. They also occasionally purchase books and equipment for the library, support the Dixon Literacy Program, host community events, and provide a \$1,000 scholarship to a high school senior every year.

Parks and Recreational Facilities

Existing and Planned Parks

The City of Dixon maintains five public parks, representing approximately 96.3 acres of parkland in the Planning Area, summarized in Table 3.12-5, including neighborhood and community parks. Neighborhood parks are intended to provide open space and basic recreational facilities for residents in the vicinity of the park, while community parks provide space for organized sports and major facilities for the broader community, including swimming pools, ball fields, and community centers. There are about 13.5 acres of neighborhood parks, 80.3 acres of community parks, and 2.4 acres of other parks in the Planning Area.

The City of Dixon adopted the Parks and Recreation Master Plan in 2015 and is scheduled to begin the five-year update in 2019. Based on the current 2015 Plan and assuming that there will not be changes to planned projects, there are two planned additions that will help the City expand its park service: Southwest Community Park will include areas and facilities designed to meet the **surrounding neighborhood's recreation needs** through major community-wide amenities, such as a swimming pool, as the principle features of this park; Southwest Neighborhood Park is planned as a neighborhood park to service the existing neighborhoods in the south-central area of the city that are currently underserved, with a walkshed of more than one-half mile from any park facility.

Table 3.12-5: Existing and Planned Parks

<i>Park Name</i>	<i>Acres</i>	<i>Amenities</i>
Existing Facilities		
Neighborhood Parks	13.54	
Patwin Park	4.93	Children's play area, group picnic area, fitness apparatus, basketball half course
Conejo Park	3.61	Children's play area, gazebo, picnic areas
Veterans Park	5.00	Children's play area, group picnic area, basketball court
Community Parks	80.33	
Hall Memorial Park	57.80	Picnic areas, two children's play areas , baseball and football fields, tennis courts, skate park, aquatic center, community center, open turf and play areas and walking paths
Northwest Park	22.53	Picnic areas, a basketball court, soccer fields, two children's play areas , walking paths, and barbecue pits
Other Parks	2.40	
Women's Improvement Club Park	0.65	Benches
Linear Path ¹	1.75	Turfed open space, benches
<i>Subtotal</i>	96.27	
<i>Current acres of park per 1,000 residents (2018)²</i>	4.80	
Planned Facilities		
Neighborhood Parks	7.60	
Southwest Neighborhood Park	3.00	
Southwest Community Park (portion)	4.60	
Community Parks	24.70	
Southwest Community Park (portion)	15.4	Swimming pool, community center, multi-purpose fields, tennis courts
New Park(s) required by 2015 Dixon Parks Master Plan (location(s) unspecified)	9.30	TBD
<i>Subtotal</i>	32.30	
Total existing and planned parks	128.60	
<i>Existing and planned acres of park per 1,000 residents (2040)³</i>	4.50	
Additional Parkland Needed		
Neighborhood and community parks	13.68	TBD
Total	142.25	
<i>Projected acres of park per 1,000 residents (2040)³</i>	5.0	

Table 3.12-5: Existing and Planned Parks

<i>Park Name</i>	<i>Acres</i>	<i>Amenities</i>
Notes:		
1. Acreage does not include the 3.5 acre pathway.		
2. Assumes a 2018 population of 20,100 people.		
3. Assumes a 2040 population of 28,450 people.		

Source: City of Dixon Parks Master Plan Update, October 2015; Dyett & Bhatia, 2019.

Compliance with Municipal Park Standards

The General Plan establishes standards for parkland acreage and access. The City has established a standard of 5.0 acres of community or neighborhood recreational or park facility per 1,000 residents to ensure adequate recreational open space for the enjoyment of the community. To ensure an appropriate balance of local and community-serving facilities, the General Plan and Parks Master Plan recommend a target of 1.2 acres of neighborhood park per 1,000 residents and 3.8 acres of and community park per 1,000 residents for a total of 5 acres per thousand resident although this is not a mandate. Dixon currently has 4.8 acres of parkland for every 1,000 residents, slightly below the established service ratio standard. At 4.0 acres per 1,000 residents, the community parks ratio meets the target of 3.8, but the neighborhood park ratio is just 0.7 acres per 1,000 residents as compared to a target of 1.2 acres per 1,000 residents. However, the City has joint use agreements with the Dixon Unified School District that allow residents to use school facilities, including the 12-acre Westside Park, adjacent to the Dixon Montessori Charter School.

The Parks Master Plan also lists the service area for a neighborhood park as a half-mile radius, typically translated to a 10-minute walking distance, or walkshed. The distribution of parkland throughout the community is relatively balanced; most residents live within a half-mile walk of a park or recreational facility. Development of new facilities in identified locations will ensure the access standard is maintained going forward. The Proposed Plan identifies an additional need for 13.86 acres of new parkland as well as potential sites in the vicinity of planned residential development. Additionally, parkland dedication requirements and parkland impact fees required in the Municipal Code provide mechanisms to ensure that new parks are built to satisfy future demand.

Recreational Facilities

The City of Dixon Recreation Division provides programming for youth, teens, adults, and seniors. The City offers a wide range of programming, including sports leagues, special interest recreation classes (e.g., Babysitting 101, lifeguard training, etc.), special events, and more. Spaces for active use include fields in public parks, as well as Dixon Unified School District (DUSD) Property, enabled by a Joint Facility Use Agreement with the school district to share recreational and community facilities, including gymnasiums, multi-use rooms, the track, and classrooms. A joint venture project with the DUSD also resulted in the construction of a 5,000-square-foot performing arts center at Dixon High School to meet the cultural arts needs of the community. Other recreational facilities that house these programs include the Pat Granucci Aquatic Center and the Senior/Multi-Use Center.

The City's 2015 Parks and Recreation Master Plan also recommends service levels for facilities to assist in setting rates for growth impact mitigation fees and meeting needs through 2010 as projected by the 1993 General Plan, summarized in Table 3.12-6. However, the five-year update is scheduled to begin in 2019 to allow for adoption by the City Council by 2021 and may result in changes to recommended service levels as well as reassessment of buildout population needs.

Table 3.12-6: Community Park Facilities Needs and Recommended Level of Service

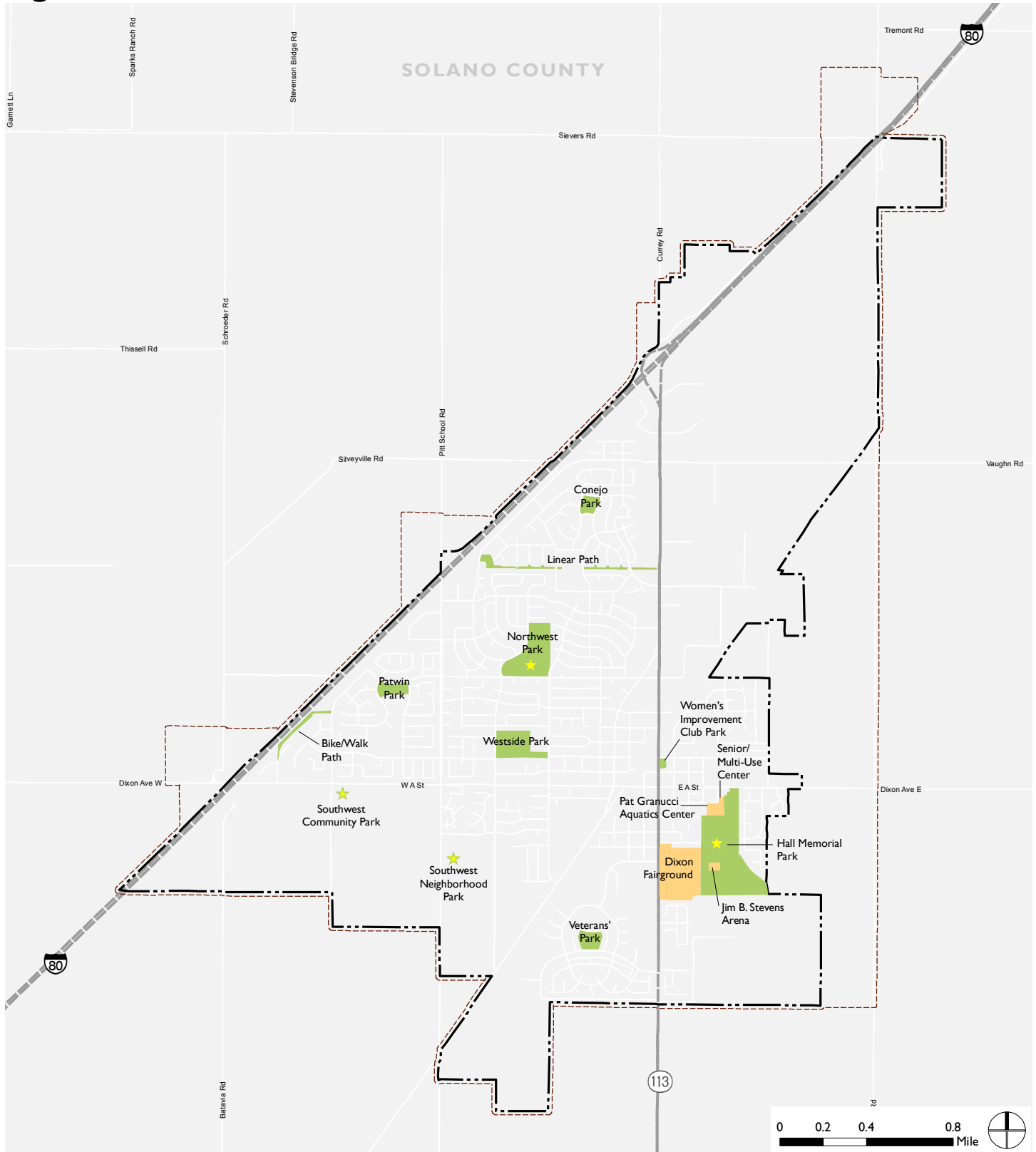
<i>Facility</i>	<i>Need</i>	<i>Recommended Service Level</i>
Soccer fields	Planned acreage provides adequate service	0.412 acres per 1,000 persons
Multi-purpose fields	Three planned multi-purpose fields; One additional lit multi-purpose field needed	0.593 acres per 1,000 persons
Indoor arena	Existing facility provides adequate service	0.02 acres per 1000 persons
Community Centers	Existing facilities provide adequate service	948 sq ft per 1,000 persons
Skate Park	Planned ½ acre skating area and second skate park to provide adequate service	875 sq ft per 1,000 persons
Youth Baseball	Two additional fields needed	0.906 acres per 1,000 persons
Swim Facilities	Existing and planned facilities provide adequate service	535 sq ft per 1,000 persons
Tennis Courts	Planned eight courts to provide adequate service	1 court per 3,000 persons

Notes:

1. Needs and adequacy of service determined by 1993 General Plan buildout projections for 2010.

Source: Dixon Parks and Recreation Master Plan, 2015.

Figure 3.12-2: Parks and Recreation Facilities



Data Source: Solano County GIS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

- ★ Planned Facility/Improvement
- Recreation Facility
- Park or Path
- Freeways
- +— Railroad
- ▬ Dixon City Limit
- ⋯ Sphere of Influence

REGULATORY SETTING

Federal Regulations

There are no relevant federal regulations that pertain to this topic.

State Regulations

California Fire Code, Code of Regulations Title 24, Part 9

The California Fire Code establishes regulations to safeguard against hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises. The provisions of the Fire Code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure throughout the State of California. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems, such as alarm and sprinkler systems, fire service features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas.

School Site Selection and Construction, California Education Code and California Public Resources Code

California Education Code Part 10.5, Chapter 1 School Sites

Sections 17210 to 17224 of the California Education Code governs the evaluation and selection of new sites and additions to existing sites for public schools, and for charter schools seeking state funding for school property acquisition or construction. Section 17211 requires the governing board of a school district to evaluate property proposed for a new school site or addition to an existing site at a public hearing prior to acquisition. Section 17212 requires the governing board of a school district to evaluate expert investigations into all factors affecting the public interest regarding a proposed school site prior to acquisition, including geological and soil engineering studies of such a nature as to preclude siting of a school in any location where the geological and site characteristics are such that the construction effort required to make the building safe for occupancy is economically infeasible. Under section 17212, the evaluation should also include the **site's location in respect to population, transportation, water supply, waste disposal, utilities, traffic hazards, and surface drainage conditions, and other factors affecting the costs of the project.** The chapter precludes the selection of a site where hazardous geological or soil conditions, hazardous substances, or proximity to an airport would pose a danger to public health or safety.

California Education Code Part 10.5, Chapter 3 Construction of Buildings

The California Department of Education (CDE) establishes standards for the selection of school sites pursuant to Education Code Section 17251. In 2000, the CDE School Facilities Planning Division (SFPD) updated the Guide to School Site Analysis and Development, which was originally published in 1966. The guide assists school districts in determining the amount of land needed to meet their educational purposes according to CDE recommendations.

California Education Code Part 10.5, Chapter 6 Development Fees, Charges, and Dedications

Pursuant to California Education Code Section 17620(a)(1), the governing board at any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. As provided in California Government Code Section 65996, the payment of such fees is deemed to fully mitigate the impacts of new development on school services. Pursuant to this provision, the school district has enacted a requirement for fees. On October 18, 2018, the Dixon Unified School District Board of Education updated the statutory fee amounts to \$3.79 per square foot for new residential development and \$0.61 per square foot for new commercial/industrial construction. (Dixon Unified School District Board of Education, 2018)

California Public Resources Code Section 21151.8

Public Resources Code Section 21151.8 requires that an EIR or negative declaration for a project involving the purchase of a school site or the construction of a new elementary or secondary school by a school district must include information on potential safety and health hazards to school occupants, including the presence of hazardous waste, hazardous substance release, pipelines, and air quality risks.

SB 50 (Statutes of 1998), State School Funding, Education Code Section 17620

California Education Code 17620 establishes the authority of any school district to levy a fee, charge, dedication, or other requirements against any development within the school district for the purposes of funding the construction of school facilities, as long as the district can show justification for the fees. Senate Bill 50 was adopted in 1998. The legislation limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also authorizes school districts to levy statutory developer fees at levels higher than previously allowed and according to new rules.

Quimby Act

The 1975 Quimby Act (California Government Code section 66477) authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. Under the Quimby Act, fees must be paid and land conveyed directly to the local public agencies that provide park and recreation services communitywide; however, revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The act states that the dedication requirement of parkland can be a minimum of three acres per thousand residents or more, and equal to the existing parkland provision (up to five acres per thousand residents) if the existing ratio is greater than the minimum standard. In 1982, the act was substantially amended. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must show a reasonable relationship to a project's impacts as identified through studies required by CEQA.

Local Regulations

Solano County Public Facilities Fees

Public Facilities Fees are used for the expansion of facilities to accommodate growth, not for operating or maintenance costs. Revenue will be used to maintain per capita facility standards for five major facility types. As of February 3, 2014, the public facilities fee includes the following components: Countywide Public Protections; Health and Social Services; Library; General Government; Regional Transportation. Library fee revenues are used to expand library buildings, book holdings, audiovisual and computer equipment; expand library technical capabilities; and automation systems. General Government fee revenue will be used for the purchase and development of parkland, expansion and construction of offices and warehouses, and administrative items such as computers and County general purpose vehicles.

Solano County General Plan

Public Facilities and Services Chapter

The Public Facilities and Services chapter of the Solano County General Plan was separated from **the County's Circulation Element in the General Plan to better address public facilities and services such as utilities, water services, sewer and wastewater, and law enforcement supporting existing and future development, as described in the County's General Plan Land Use chapter. The County's** aim is to provide these services in effort to achieve its vision, while maintaining its foundation in the environment, economy, and equity. The Solano County General Plan sets policy guidelines for providing adequate and accessible public services and facilities, particularly responsive fire and police protection as well as emergency response service.

City of Dixon Municipal Code

Chapter 4.07 Capital Facilities Fees

Section 4.07.040 mandates that the City of Dixon collect park and recreation facilities impact fees to pay for park, community, and recreation center improvements.

Section 4.07.060 mandate that the City of Dixon collect police facilities impact fees to pay for police facilities.

Section 4.07.070 mandates that the City of Dixon collect fire facilities impact fees to pay for fire facilities.

Chapter 17.16 Regulation for Dedication of Land, Payment

Section 17.16.010 mandates that subdivision require dedication of land, payment of a fee in lieu thereof, or both, at the option of the City, for park or recreational purposes at the time and according to the standards and formula contained in the chapter as a condition of approval of a final subdivision map or parcel map.

Section 17.16.020 requires five (5) net acres of property for each one thousand (1,000) persons residing within the City be devoted to local recreation and park purposes for the public interest, convenience, health, welfare and safety.

Dixon Unified School District Development Impact Fees

A Residential Development and Commercial/Industrial Development Impact Fee Justification study was conducted in 2018 by the Dixon Unified School District to mitigate the impact created **by new development on school facilities within the school district's** boundaries. The study found that costs associated with development exceed impacts, thereby enabling the District School Board to increase fees on development projects in Dixon to match the recently increased maximum school fee revenues for residential and commercial or industrial development authorized by the State Allocation Board (SAB) under AB 2926.

Dixon Unified School District Facilities Master Plan

The Ten Year Facilities Master Plan evaluates the status of Dixon Unified School District's facilities, projects future student enrollment growth, calculates additional facility requirements, and analyzes **revenue sources for future facility needs. Based on recommendations of the District's Facilities Task Force,** the Plan includes opening the new Dixon High School, converting the old Dixon High into a middle school, converting C.A. Jacobs Middle School into an elementary school, and relocating Maine Prairie Continuation School. Since adoption in 2007, a new Dixon High School campus has been constructed, and conversion of C.A. Jacobs is underway. An updated Facilities Master Plan is also being drafted.

Dixon Parks and Recreation Master Plan

The Dixon Parks and Recreation Master Plan emphasizes policies, standards, and projects that will mitigate the impact of growth on park and recreation services. The time period covered by the Master Plan corresponds with the 1993 General Plan as updated in 2010. In 2015, the Master Plan was updated and adopted to reflect annexations, new population projections, park acreage calculations, and other issues based on public input. The five-year update is scheduled to begin in 2019 to allow for adoption by the City Council in 2020.

Southwest Dixon Specific Plan

To accommodate growth in the City of Dixon, the 2014 Municipal Service Review **divided the City's** proposed growth into four areas for development, of which Southwest Dixon is one. Previously used predominantly for agriculture, the Specific Plan for this area provides for a new community park, a neighborhood park, and a fire station, with residential, commercial, and employment center uses balanced throughout the site. Environmental impacts due to adoption of the Specific Plan and **recommended measures to reduce impacts were analyzed in the Specific Plan's EIR, certified by the City Council in 2004.** No impacts related to Fire Protection and Emergency Medical Response, Police Services, Parks and Recreation, or Schools were found to be significant after mitigation.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
- a) Fire protection,
 - b) Police protection,
 - c) Schools,
 - d) Parks, or
 - e) Other public facilities;
- Criterion 2: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Criterion 3: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

METHODOLOGY AND ASSUMPTIONS

Schools

Demand for school facilities at buildout is based on the projected change in the number of housing units resulting from buildout of the Proposed Plan and factors representing the estimated number of students by grade level associated with the number of housing units in the city, or student **generation rates**. **The student generation rates are estimated based on the district's student enrollment data and residential data from the County Assessor and adjusted for land use and to account for inter-district transfers.** 1.9 percent of the student body was found to be inter-district/District of Choice transfers from outside of the city, based on information from a 2018 study on district enrollment. (Dixon Unified School District, 2018) The resulting student generation rates and associated student population projections for 2040 are shown in Table 3.12-8. The rates reflect a projected overall increase in the school-aged population in Solano County of about 6.4 percent between 2018 and 2040.

Table 3.12-8: Projected Student Population (2040)

School Level	Student Generation Rate		Projected Number of Students		
	SFR ¹	MFR ²	SFR	MFR	Total
Elementary	0.1679	0.2223	1,254	422	1,676
Middle	0.0817	0.0683	610	129	739
High	0.1708	0.1035	1,275	196	1,471
Total			3,139	747	3,886

Notes:

1. SFR = Single-Family Residential

2. MFR = Multi-Family Residential

Source: Dixon Unified School District Residential Development School Fee Justification Study, 2018; Dyett & Bhatia, 2019.

RELEVANT POLICIES AND IMPLEMENTING ACTIONS

Natural Environment

- NE.1-C Collaborate with landowners, neighbors, the school district, and others, to create a program that establishes and maintains landscaping, school gardens, or community gardens on vacant or idle sites within the City.
- NE.3-A Provide recycling receptacles in parks and public spaces, in addition to trash receptacles.
- NE.4-C Establish a Community Emergency Response Team (CERT) program to educate volunteers about disaster preparedness and train them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations.

Land Use

- LCC-1.3 Promote a contiguous **development pattern and limit “leap frog” development** in order to support efficient delivery of public services and infrastructure, conserve agricultural and open space lands, reduce vehicle trips, and improve air quality.
- LCC.1-8 Plan comprehensively for the annexation of any new areas and approve annexation only after City approval of an appropriate area-wide plan (e.g., master plan, specific plan) that addresses land use, circulation, housing, infrastructure, and public facilities and services. Exceptions to this requirement for area-wide plans include annexations of:
- Existing developed areas;
 - Areas of less than five acres; and
 - Housing developments for very-low and low-income households.

- LCC-1.9 Prior to the provision of City services to unincorporated areas, require those unincorporated properties to be annexed into the City, or require a conditional service agreement to be executed agreeing to annex when deemed appropriate by the City.
- LCC.1-C **Regularly update the City's Municipal Services Review** to ensure that development does not outpace the provision of public facilities in the Planning Area.
- LCC.1-E Require fiscal impact analyses, as appropriate, for development proposals in order to evaluate public facility needs and costs, and the revenue likely to be generated by that development.
- LCC.1-F Continue to use Community Facility Districts and other financing tools to fund and maintain public facility improvements.
- LCC.5-B Implement a "Play Streets" program for residential neighborhoods, whereby neighbors can obtain a permit to temporarily close streets to traffic to provide a safe place for children, their families, and neighbors to come together and play outside.
- LCC.5-6 Encourage new development to incorporate greenery, including climate appropriate trees and plants as well as rain gardens, and as new development occurs, acquire easements or development rights for open space, planting street trees, and landscaping adjacent to public rights-of-way.
- LCC.6-3 Ensure all neighborhood centers provide centrally located common spaces for regular events, festivals and informal gatherings that build a sense of community. Encourage public amenities such as benches, street trees, kiosks, restrooms and public art.

Economic Development

- E.3-1 Work with educators (e.g., UC Davis; community colleges; Dixon Unified School District), Solano Workforce Development Board, Solano EDC, and other resource providers to foster development and implementation of applicable training programs and to identify opportunities to jointly spur growth in strategic industry sectors.
- E.2-B Establish a dashboard that reports economic, educational, and occupational indicators that can be tracked over time and used to assess the city's progress and competitiveness, as well as to rank it in comparison to selected similar cities in California and the U.S.
- E.6-5 Partner with the Downtown Dixon Business Association, the Dixon Library, and other groups to promote Downtown Dixon as a focal point for arts, culture, and entertainment in the community.

E.6-C Work with local property owners, the Downtown Dixon Business Association, the Dixon Chamber of Commerce, the Dixon Library, and other downtown stakeholders to establish passenger rail service to Downtown Dixon.

Public Services and Facilities

PSF.1-1 Provide responsive, efficient, and effective police services that promote a high level of public safety.

PSF.1-2 Provide fire prevention and emergency response services that minimize fire risks and protect life and property.

PSF.1-3 Maintain police and fire equipment, facilities and staffing at levels that allow for effective service delivery.

PSF.1-4 Maintain mutual aid agreements that allow for supplemental aid from other police and fire departments in the event of emergencies.

PSF.1-5 Continue to require that new development make a fair share funding contribution to ensure the provision of adequate police and fire services.

PSF.1-6 Continue to engage the Police and Fire departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.

PSF.1-7 Encourage the use of Crime Prevention through Environmental Design (CPTED) principles in the design of private development projects and public facilities in order to enhance public safety and reduce calls for service.

PSF.1-9 Support construction of improvements that facilitate emergency access across the rail line, such as over- and underpasses at one or more strategic locations.

PSF.1-A Increase fire fighter staffing levels consistent with National Fire Protection Association (NFPA) guidance and expand the reserve firefighter program.

PSF.1-B Explore the cost/benefit of an incentive program to encourage owners of historic buildings with "non-fire stopped" framing construction to retrofit their properties with fire sprinklers, particularly in the downtown area.

PSF.1-C Continue youth engagement initiatives to promote positive relationships between police officers and young people, combat crime, and improve public safety.

PSF.1-D Continue fire education and prevention outreach programs and activities.

PSF.3-1 Provide community centers, arts/cultural facilities, senior centers and other public facilities, ensuring they are distributed equitably and conveniently throughout Dixon.

- PSF.3-2 Whenever feasible, co-locate City facilities with other public facilities (schools, post offices, hospitals/clinics) so that multiple services may be delivered from a single location.
- PSF.3-3 Collaborate with DUSD to facilitate the shared use of sports and recreational facilities through a continued/expanded Joint Use Agreement or other vehicles.
- PSF.3-4 Work with DUSD and other local schools to plan for school locations that meet school needs while minimizing traffic and other neighborhood impacts.
- PSF.3-B Study the feasibility of developing a marquee recreational facility in Dixon such as an aquatic center.
- PSF.4-1 Expand the network of parks and public spaces and ensure they are equitably distributed throughout the city so that every Dixon resident can access one within one half mile of their home.
- PSF.4-2 Achieve a ratio of at least 5 acres of park land for each 1,000 Dixon residents, with at least 1.2 acres of neighborhood park land and at least 3.8 acres of community park land.
- PSF.4-3 Require that proponents of new development projects contribute to the acquisition and development of adequate parks and recreational facilities within the community, either through the dedication of park land or in-lieu fees.
- PSF.4-4 Design and construct parks, public spaces and recreational facilities for flexible use, adaptability over time, and ease of maintenance.
- PSF.4-6 Prioritize the maintenance and, where feasible, improvement of parks and recreational facilities to ensure safe, attractive facilities that are responsive to community needs.
- PSF.4-A Use the Parks Master Plan as the primary tool for planning specific capital improvements and parks and recreation programming in Dixon.
- PSF.4-B Leverage available funding and financing mechanisms to fund energy-efficient park and recreational facility design and refurbishment.
- PSF.4-D Continue to encourage existing volunteer, service club and community group efforts to maintain and improve parks, such as "Friends of the Parks" organizations.
- PSF.4-E Maintain and promote the Recreation Scholarship Fund so that low income children may have the opportunity to participate in recreation programs.
- PSF.4-F Consider developing park design standards based on best practices for accessibility, flexible use, adaptability, energy efficiency and ease of maintenance.

- PSF.5-2 Partner with the school district and all segments of the community to provide activities for children, youth, and seniors and an environment in which they flourish and become contributing members of the community.
- PSF.5-3 Promote lifelong learning opportunities for community members of all ages and abilities, with a focus on arts, culture, and training.
- PSF.5-4 Support public agencies and local community organizations in the provision of social services to Dixon residents in need, including independent living support services for seniors, people with disabilities, and those facing physical or mental challenges.
- PSF.5-B Explore establishing a Police Activities League (PAL) chapter in Dixon.
- PSF.5-C Collaborate with DUSD and local community groups to develop a youth theatre program.
- PSF.5-D Continue to partner with the Dixon Public Library and Dixon Teen Center to provide after school, weekend, and summer activities for young people, such as homework help, sports and arts activities, reading programs, games, workshops, clubs, and other programming.
- PSF.5-E Support programs that provide students with academic and technical skills, knowledge, and training, such as Career Technical Education (CTE), Science, Technology, Engineering, Arts, and Mathematics (STEAM), and the California STEM Learning Network.
- PSF.5-F Expand the range and number of programs offered through the City's Recreation Division and Senior/Multi-Use Center.
- PSF.5-G Support the Dixon Public Library in providing a range of support programs and services to the community, such as adult literacy classes, English as a second language classes, job training, resume writing support, and computer skills workshops.
- PSF.5-I Explore the feasibility of providing free WiFi in public spaces including City buildings, parks, and community centers.
- PSF.6-C Explore the feasibility of establishing a community garden and a community garden teaching program together with DUSD and other community partners.
- PSF.7-4 In with community organizations, encourage and support residents as volunteers to supplement City and agency staff in the delivery of community services, including recreation, youth, and senior programs. Focus efforts on underrepresented populations in particular.

- PSF.7-B Expand the use of technology and digital engagement tools such as online surveys and applications to provide public information and obtain input from community members.
- PSF.10-2 Encourage community festivals and events and public art installations that celebrate diversity and build connections in the community, such as the Dixon May Fair, Lambtown Festival, farmer's markets, tree planting events, arts and cultural gatherings, and neighborhood clean up days.
- PSF.10-B Work with community groups and local businesses to identify public and private spaces, such as plazas, streets, and parking lots, that may be used for cultural awareness activities such as festivals, and art exhibitions.

Mobility and Transportation

- MT.1-7 Coordinate transportation planning with emergency service providers to ensure continued emergency service operation and service levels.
- MT.2-6 Employ strategies to effectively coordinate, manage, and reduce traffic, particularly during peak periods and at major destinations such as employment hubs, schools, and Downtown Dixon.
- MT.2-10 Ensure adequate emergency vehicle access in all areas of Dixon by continuing to involve the Police and Fire Departments in the development review process.
- MT.2-B Establish performance standards for each street type that include adequate emergency vehicle use. Include the following considerations in establishing performance metrics:
- quality and connectivity of pedestrian facilities, based on best practice design guidelines including the California Manual on Uniform Traffic Control Devices (MUTCD) and the National Association of City Transportation Officials (NACTO) Urban Street Design Guide;
 - quality and connectivity of the bicycle facilities, based on best practice design guidelines including the California MUTCD, Caltrans Highway Design Manual Chapter 1000, and the NACTO Urban Bikeway Design Guide;
 - quality of the transit facilities and service, based on best practice design guidelines, including the NACTO Transit Street Design Guide, as well as on the service capacity and frequency as compared to measured or projected demand;
 - adequacy of emergency access provided, as measured by the efficiency of emergency access routes and the presence or absence of barriers along primary routes.

- MT.2-E Work with the Dixon Unified School District to ensure that decisions regarding school assignments are analyzed to reduce peak period motor vehicle trips to and from school sites.
- MT.2-F Work with the Dixon Unified School District (DUSD) to resolve traffic congestion issues associated with student drop-off and pick-up.
- MT.3-1 Enhance pedestrian, bicycle and transit connections to, from and between parks, community centers, neighborhoods, recreation facilities, libraries, schools, commercial centers and other community destinations in Dixon for all users.
- MT.5-D Provide secure bicycle racks along First Street and in key locations throughout the downtown, such as the train station and Dixon Public Library.
- MT.6-4 Improve safety and minimize adverse noise, vibrations and visual impacts of operations in the Amtrak rail corridor and truck routes on adjacent public facilities, schools and neighborhoods.

IMPACTS

- Impact 3.12-1 Implementation of the Proposed Plan would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, police protection, schools, parks, or other public facilities. (Less than significant)

Fire and Emergency Services

Despite a steady increase in calls for service, the Dixon Fire Department's staffing has largely remained the same since 2006 (Dixon Fire Department, 2018). Current staffing and equipment levels provide an adequate number of firefighters for smaller fires and common medical or rescue situations, supplemented by mutual aid agreements with other local municipalities. However, projected buildout population and housing numbers correspond to an increase in need for Fire and Emergency services.

Policies and implementing actions in the Proposed Plan would meet this need by increasing Firefighter staffing levels and expanding Reserve units, as well as maintaining mutual and supplemental aid agreements (Policy PSF.1-4 and Implementing Action PSF.1-A). While an increase in staffing could potentially correspond with the need for an additional or expanded facility, the Southwest Dixon Specific Plan stipulates the addition of a new fire station within the new development to serve new residents and help meet service demands as the City grows. Environmental impacts associated with the construction of the planned station are subject to State Fire Code as well as policies in the Proposed and Specific Plans that address potential

environmental impacts as discussed throughout this EIR and the Specific Plan's EIR. The Specific Plan's EIR found that impacts could be potentially significant, but after mitigation measures ensuring that the new on-site fire station is constructed, staffed, and equipped based on City policy, impacts would be less than significant.

Other policies and implementing actions included in the Proposed Plan also ensure the adequacy of service by monitoring service areas, encouraging development patterns that facilitate efficient delivery of service, and improving emergency access by removing significant barriers and enforcing design standards, all of which would help minimize increases in service needs (Policies LCC.1-3, LCC.1-8, LCC.1-9, PSF.1-2, PSF.1-3, and PSF.1-9). Furthermore, individual development projects would be subject to Fire Department review and approval and would be required to pay the City's standard public safety impact fees (Policies PSF.1-5 and PSF.1-6). These proactive measures help mitigate fire risk and lessen service demand and are further augmented by other policies that incentivize the retrofit of historic buildings to include fire sprinklers and modern fire-stopping construction techniques, establish a volunteer-based Community Emergency Response Team, and educate the community through various outreach programs about fire safety and disaster preparedness (Implementing Actions NE.4-C, PSF.1-B, and PSF.1-D).

Therefore, overall, the Proposed Plan maintains acceptable service ratios, response times, and other performative objectives related to fire protection and ensures that impacts resulting from implementation of the Plan would be less than significant.

Police Service

In 2016, the Dixon Police Department experienced a significant level of police officer turnover largely driven by salaries that were not competitive with other police departments in the region, in addition to several retirements, resulting in reduced staffing levels that affected patrol and investigations operations (Dixon Police Department, 2016). Nevertheless, they maintained response times that met their service goals.

The Proposed Plan would increase service population, which would exacerbate lowered service levels, assuming minimal changes to levels from 2016. However, in correspondence with the Solano County General Plan Public Facilities and Services Chapter, the Proposed Plan would support objectives and function of the Dixon Police Department by encouraging regular updates of the **City's Municipal Services Review and requiring fiscal impact analyses as well as other financing tools to fund and maintain facility improvements that help to provide services adequate for development and growth (Policy PSF.1-5 and Implementing Actions LCC.1-C, LCC.1-E, and LCC.1-F).**

Service needs could also be alleviated by policies that emphasize a high level of public safety and effective service delivery enabled by safe transportation that could potentially reduce traffic-related police activities and also allow for more efficient emergency access (Policies LCC.1-3, PSF.1-1, MT.1-7, MT.2-6, and MT.2-10). Additionally, the Plan may minimize increasing service need by fostering public awareness and involvement through neighborhood watch programs, community groups, and youth engagement initiatives (Policies NE.4-6, LCC.5-8, and PSF.1-8 and Implementing Actions NE.4-C, PSF.1-C, and PSF.5-B). Other policies explore the use of design standards to enhance public safety and reduce calls for service (Policy PSF.1-7 and Implementing

Action MT.2-B). The Department would also continue to receive aid from other police departments such as those from adjacent municipalities in event of emergencies to meet additional need (Policy PSF.1-4).

Adoption of the Proposed Plan would thus not require provision of new or physically altered facilities in order to maintain acceptable police service ratios and response times, making overall impact less than significant.

Schools

With buildout of the Proposed Plan, enrollment in public schools is expected to increase. Yet, with facilities capacity exceeding enrollment due to projects enabled by Measure Q bond proceeds and **the District's Facilities Master Plan, there is no need for further expansion** or construction of new facilities to serve the District. Specifically, the conversion of the Old Dixon High School into a middle school and construction of the School Farm on the new Dixon High campus are underway and nearing completion.

However, there may be a future increase in usage of school facilities due to various programs and activities that may be implemented per the Proposed Plan such as student training, workshops, and a youth theater program (Policy PSF.5-2 and Implementing Actions NE.1-C, E.3-I, PSF.5-C, PSF.5-E, and PSF.6-C). Additionally, the Proposed Plan would allow the City to continue to collaborate with DUSD in a Joint Use Agreement to co-locate or otherwise share facilities, particularly for youth sport activities and recreational use (Policies PSF.3-2 and PSF.3-3). Considering that such collaboration would be a continuation of agreements already in place, though, and that projects **proposed under the District's Facilities Master Plan will enhance its existing facilities, it is unlikely** that the increased usage would require further provision or alteration of facilities.

Adequacy of Dixon schools is also assured through polices and implementing actions that monitor the progress and competitiveness of education in Dixon, ensuring that any economic development or transportation changes allowed by the Proposed Plan do not detract from school functions and, in some cases, work to provide better accessibility and safety for students (Policies PSF.3-4, MT.2-6, MT.3-1, and MT.6-4 and Implementing Actions E.2-B, MT.2-E, and MT.2-F).

Developer payment of standard school impact fees would also cover a fair share of any need for new or altered school facilities, and as provided by California Government Code Section 65996, the payment of such fees is deemed to fully mitigate the impacts of new development on school services. As such, the effect of the General Plan Update on school services would be considered a less-than-significant impact.

Libraries

As a historical landmark located in Downtown Dixon, the Dixon Carnegie Library is an important resource and community center for the City of Dixon. The Proposed Plan includes policies and **implementing actions that would expand the Library's services and further establish it as a community destination** for the city. The historic importance of the library would be bolstered by Implementing Actions LCC.7-C and LCC.7-E which would provide incentive for restoration of historic properties or landmarks and partner with such destinations to identify attractions and

develop a historic tour of the City. The library would also be a stakeholder in the establishment Downtown Dixon as a center of arts and culture, potentially housing programs that would augment **this effort as well as other programs that serve the community's** interests and needs (Policies E.6-5, PSF.3-1, PSF.7-4 and Implementing Actions E.6-C, PSF.5-D, PSF.5-F, and PSF.5-G). It is noted, however, that some of these programs already exist and would not necessarily correspond with an increased burden on existing facilities. While other endeavors may increase usage and need of library services, policies in the Proposed Plan ensure adequacy of the facility by encouraging expansion of resources including technology and digital engagement tools in addition to the provision of wireless internet connection (Implementing Actions PSF.5-I and PSF.7-B). The financial impact of such changes is mitigated through Solano County Public Facilities Fees, and as these additions do not necessitate physical alteration of the facility, they do not generate environmental impacts.

The Library's prominence as a community destination would further be bolstered by the installation of bicycle racks as proposed in the Plan (Policy MT.3-1 and Implementing Action MT.5-D). Environmental impacts associated with this action are subject to policies in the Proposed Plan that address potential environmental impacts as discussed throughout this EIR, but this project is not anticipated to constitute any major construction or alteration that would require mitigation measures. Consequently, the Library remains sufficient to serve the needs of the growing City and any changes to the facility due to the Proposed Plan would be considered less than significant impact.

Parks and Recreational Facilities

The Proposed Plan maintains current City parkland standards as outlined in the City's Municipal Code and the Parks Master Plan (i.e., 5.0 acres of overall parkland, 1.2 acres of neighborhood parkland, and 3.8 acres of community parkland per 1,000 Dixon residents, upheld by Policies PSF.4-1 and PSF.4-2 and Implementing Action PSF.4-A). As shown in Table 3.12-5, Dixon currently has 4.8 acres of parkland for every 1,000 residents, slightly below the established service ratio standard. At 4.0 acres per 1,000 residents, the community parks ratio meets the target of 3.8, but the neighborhood park ratio is just 0.7 acres per 1,000 residents as compared to a target of 1.2 acres per 1,000 residents.

The Proposed Plan provides an overarching framework for the provision of parks and recreational facilities in the community. The Parks Master Plan acts as Dixon's primary implementing tool, bridging the City's General Plan and Capital Improvements Plan. The Parks Master Plan provides a detailed inventory of Dixon's existing parks and recreational facilities and future needs, as well as guidelines for the development of future facilities. Dixon's parkland ordinance, operates under the umbrella of the State of California's 1975 Quimby Act, which allows cities to require developers to contribute to local parks, requires developers in Dixon to dedicate parkland, pay an in lieu fee, or both to ensure that the parkland standard is met for new residents. Dixon's two Specific Plans contain implementation policies that ensure park dedication in new planned communities meets these standards.

The Proposed Plan identifies a need for 13.86 acres of new parkland as well as potential sites in the vicinity of planned residential development. The Southwest Dixon Specific Plan calls for the construction of 23-acres of new parks to meet future demand in the area - a 3-acre neighborhood

park and a 20-acre combined community and neighborhood park. Additionally, the Parks Master Plan identifies the need for 9.3 acres of additional parkland to satisfy future community demand. Action PSF.4-B prioritizes the development of neighborhood parks in Southwest Dixon to ensure facilities are available with each phase of residential development.

Assuming construction of these new park facilities, implementation of the General Plan Update would result in an overall parkland ratio of 5.0 acres per 1,000 residents. Additionally, most Dixon residents have access to a park within a half mile of home. Development of new facilities in identified locations will ensure the access standard is maintained going forward. Therefore, implementation of the Proposed Plan would increase access to parkland in the Planning Area and would allow the City to meet current parkland standards.

Policies and implementing actions in the General Plan Update could also support park and recreational needs of the community. For example, development occurring after adoption of the Proposed Plan would be encouraged to include greenery and acquire easements or development rights for open space, street trees, and landscaping adjacent to public right-of-way and would also be required to contribute to acquisition or development of adequate parks and recreational facilities through dedication of parkland or pay in-lieu fees (Policies LCC.5-6 and PSF.4-3). These requirements, in addition to other sources of funding as proposed in Implementing Actions PSF.4-B and PSF.4-C, could provide alternatives that help alleviate need for additional parkland while simultaneously making it more financially feasible. Similarly, improved pedestrian, bicycle, and **transit connections, programs such as “Play Streets”** that take advantage of flexible use of spaces, conversion of vacant sites into gardens and landscaping, and encouraged development patterns that create complete residential neighborhoods with services and amenities within walking or biking distance to foster social interaction all could provide recreational outlets for the City that do not require dedicated parkland or facilities (Policies LCC.5-1 and MT.3-1 and Implementing Actions NE.1-C, LCC.5-B, and PSF.4-F).

As such, increase in park and recreational needs associated with the Proposed Plan would be met and thus do not constitute construction of new facilities or physical alteration of existing ones, making environmental impacts less than significant.

Mitigation Measures

None required.

Impact 3.12-2 Implementation of the Proposed Plan would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant)

Implementation of the Proposed Plan could lead to increased usage of parks and recreational facilities through new or expanded programming, including community festivals and events such as **farmers' markets (Policy PSF.10-2)**, as well as by servicing a broader community by improving access for youth, elderly, and individuals with disabilities, providing a range of facilities and programs to serve diverse age groups and interests, and supporting low-income children to allow them to participate in recreational programs (Policies PSF.4-5, PSF.4-7, PSF.5-1, PSF.5-2, PSF.5-3, and PSF.5-4 and Implementing Actions PSF.4-E, PSF.5-F, and PSF.5-I). However, Policy PSF.10-2 would also provide mitigation of impact through actions such as tree-planting and neighborhood cleanup days. Furthermore, identification of viable venues for such programs and co-location or sharing of public or private facilities through Joint Use Agreements could better allocate use of facilities to prevent substantial physical deterioration (Policy PSF.3-1, PSF.3-2, and PSF.3-3 and Implementing Action PSF.10-B). Policy PSF.6-3 would also centrally locate facilities so that each space would have an effective service area and reflect the needs of the community, as informed through community engagement to identify and prioritize needs, ultimately ensuring services and facilities remain adequate and responsive to actual use (Policy PSF.4-6). Other ways the Proposed Plan would prevent deterioration include fostering organizations such as "Friends of the Park" or residential volunteer groups to contribute to the maintenance and improvement of facilities and delivery of recreational services, as well as by emphasizing thoughtful design and construction of parks, public spaces, and recreational facilities for flexible use, adaptability over time, and ease of maintenance (Policy PSF.4-4 and PSF.7-4 and Implementing Action PSF.4-D). Moreover, the City's current Parks Master Plan guides the maintenance of park facilities and prioritizes areas of high intensity use in a Level of Service Schedule, funded accordingly, to enable ongoing public use. As discussed in Impact 3.12-1, implementation of the Proposed Plan would increase access to parkland in the Planning Area and would allow the City to achieve its overall parkland standard.

Therefore, usage due to the Proposed Plan would not substantially deteriorate or accelerate the deterioration of existing parks and recreational facilities, resulting in less-than-significant impacts.

Mitigation Measures

None required.

Impact 3.12-3 Implementation of the Proposed Plan would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Less than Significant)

With population expected to increase to 28,879 residents in 2040, need for recreational facilities would also increase and may require an additional facility to service the increased population as a result of the Proposed Plan. However, the Southwest Dixon Specific Plan, the 2015 Parks Master Plan, and corresponding Hall Park Master Plan and Northwest Park Master Plan already have proposed projects that plan to construct or expand recreational facilities. These projects are subject to City policies as well as the General Plan and Specific Plan policies and EIR mitigations that have been previously analyzed and adopted, and in the scope of this EIR, such changes would be considered less than significant.

Other policies proposing changes to existing parks and recreational facilities include superficial or insignificant additions such as the installation of recycling and trash receptacles, provision of wireless internet access, or the conversion of an existing recreational facility into a marquee recreational facility and do not result in a significant environmental impact (Implementing Actions NE.3-A, PSF.3-B, and PSF.4-I). Likewise, potential additions of public amenities such as benches, trees, kiosks, restrooms, and public art installations as outlined in Policy LCC.6-3 do not constitute construction or expansion of recreational facilities which may have an adverse physical effect on the environment, and overall, are less-than-significant impacts.

Mitigation Measures

None required.

3.13 Transportation

This section assesses potential environmental impacts on the transportation system from future development anticipated by the Proposed Project, including those related to vehicle miles traveled (VMT), Level of Service (LOS) as per the City of Dixon's policy, roadway hazards, emergency access, public transit, bicycle, and pedestrian facilities. This section describes the existing transportation system, characteristics, and operations in the Planning Area, as well as relevant federal, State, and local regulations and programs.

Environmental Setting

PHYSICAL SETTING

Located on the Interstate 80 (I-80) corridor, the City of Dixon enjoys access to the San Francisco Bay Area, Sacramento, and the Central Valley as well as proximity to the University of California, Davis. A regional transit operator, Fairfield and Suisun Transit (FAST), operates an express intercity transit route along I-80 with a stop in Dixon. Dixon is also located on a major freight rail corridor, which presents opportunities as well as challenges. Although the Union Pacific Railroad (UPRR) provides freight rail service, there is currently no passenger rail stop in Dixon. The Sacramento International Airport (SMF) is about 26 miles from Dixon, making major air routes accessible to Dixon as well. The transportation elements within the City are discussed in greater detail below.

Travel Characteristics

An analysis of American Community Survey (ACS) data available from the US Census Bureau provides information related to the travel behavior amongst workers in Dixon and surrounding areas. According to the ACS 2016 5-Year estimates, 81 percent of commuters drive alone in Dixon, compared to 77 percent in Solano County (Table 3.13-1: Commuter Mode Share in Dixon). Comparatively, 13 percent of workers in Dixon carpool, which is approximately consistent with the County average. Transit, walking, and biking constitute less than 2 percent of commute trips, reflecting the limited transit options available to residents of Dixon. Approximately 4 percent of workers work from home, which is comparable to the Solano County rate.

Table 3.13-1: Commuter Mode Split in Dixon and Solano County

<i>Commute Mode Choice</i>	<i>Dixon</i>	<i>Solano County</i>
Single Occupant Auto	81.0%	76.8%
Carpool	13.3%	13.5%
Public Transit	0.3%	2.3%
Bicycling/Walking	1.6%	2.0%
Other Means	0.8%	1.0%
Work at Home	3.6%	3.8%

Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates. Special Tabulation: Census Transportation Planning Products Program

Another key characteristic of travel patterns in Dixon is the tendency to commute out of the city for work. Table 3.13-2 shows that more than 35 percent of Dixon residents commute to jobs outside of Solano County. Of those working in Solano County, about half travel to jobs outside of Dixon.

Table 3.13-2: County of Workplace for Dixon Residents

<i>County of Workplace</i>	<i>Percent Workers, 16 years and Over</i>
Alameda County, California	1.5
Contra Costa County, California	5.8
Marin County, California	0.5
Napa County, California	1.7
Sacramento County, California	9.7
San Francisco County, California	0.7
Santa Clara County, California	0.5
Solano County, California	64.2
Yolo County, California	15.4

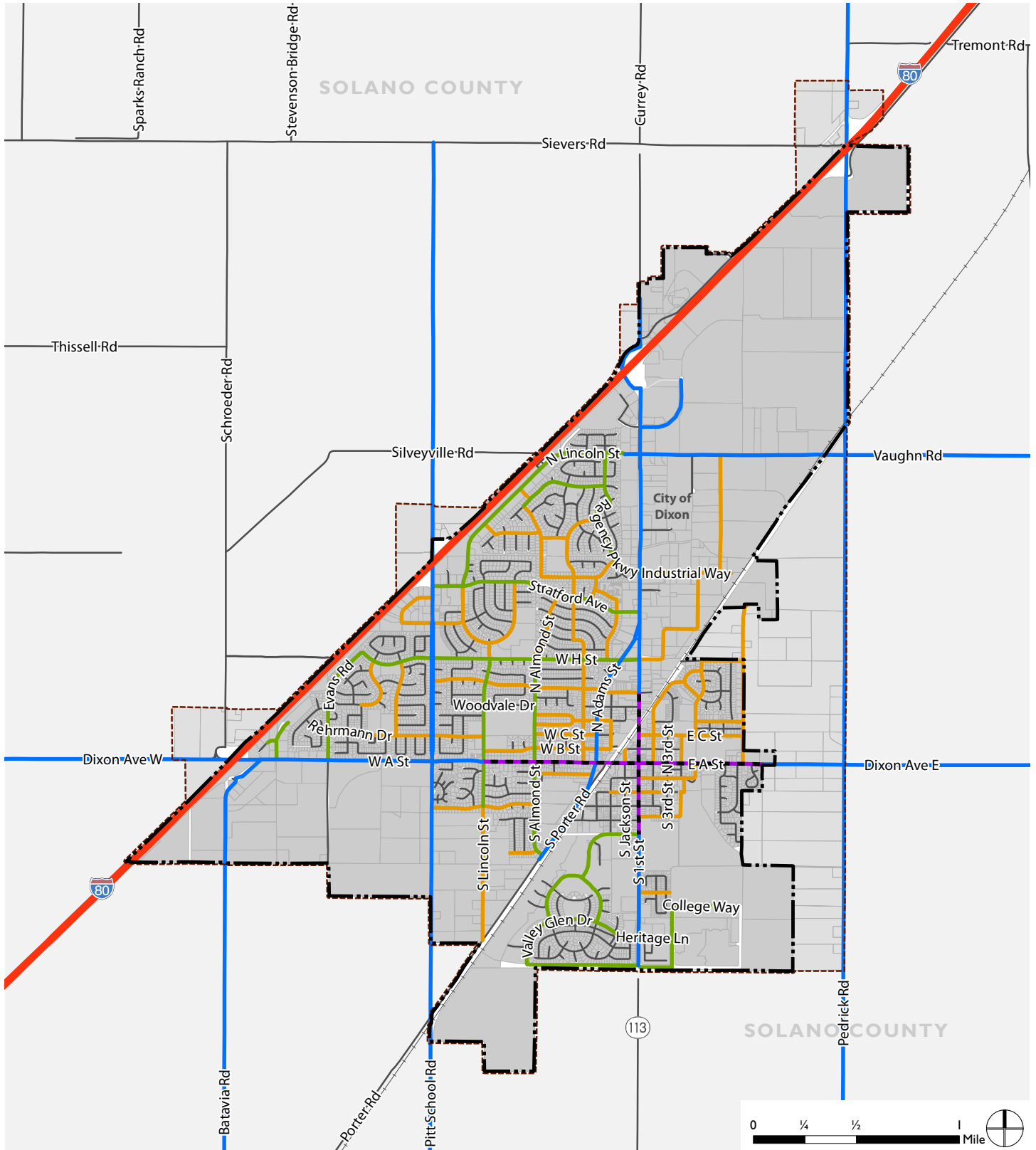
Source: U.S. Census Bureau, American Community Survey 2012-2016 5-year estimates. Special Tabulation: Census Transportation Planning Products Program

Roadway Network

Figure 3.12-1 shows the City of Dixon roadway network by functional classification, as defined in the Proposed Plan. Functional classification reflects the extent to which priority is given to vehicle throughput versus access to individual properties and the expected levels of traffic carried by each facility. Functional classification also reflects typical physical characteristics such as number of lanes, width of travel lanes, and presence of bicycle facilities. Functional classifications defined in the Circulation Element of the Proposed Plan are shown in Table 3.13-3.

In addition to the facility types described in the table, a freeway, Interstate 80, runs southwest to northeast along the northern edge of the Planning Area. Also note that First Street, as part of State Route 113 (SR 113) is planned and maintained by Caltrans.

Figure 3.13-1: Existing Roadway Network



Data Source: DKS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019










- | | | |
|--|--|---|
|  Freeway |  Minor Arterial/Major Collector |  Railroad |
|  Historic Main Street |  Collector |  Dixon City Limit |
|  Arterial |  Local |  Sphere of Influence |

Table 3.13-3: Dixon General Plan Functional Classifications

<i>Category</i>	<i>Function</i>	<i>Typical Design Features</i>
Arterial	Provides mobility and carries higher vehicular traffic volumes	One to two lanes each direction with left turn pockets or center left turn lane and bicycle lanes
Historic Dixon Main Street	Provides mobility and carries higher vehicular traffic volumes but also provides access to historic residential properties and downtown businesses	One lane each direction with on-street parking and street trees, planting strip, and/or distinctive street lighting
Minor Arterial/Major Collector	Connects principal arterials and provides access to individual neighborhoods and some individual properties	One lane each direction, bicycle lanes, limited on-street parking
Collector	Provides route through neighborhoods, connecting arterials as well as access to individual properties. Lower volumes and speeds suitable for bicycle routes.	One lane each direction, on-street parking
Local Streets	Provides access to individual properties. Lower volumes and speeds suitable for bicycle routes. Should receive less than 1000 vehicles in daily traffic.	One lane each direction with on-street parking

Dixon is divided into quadrants by two key arterials, First Street and A Street. Streets are designated north, south, east, or west of the intersection of A Street and First Street in the downtown area and follow a north-south/east-west grid system in the older sections of the city. More recently developed neighborhoods follow a less contiguous, more typically suburban street pattern. Key roadways are described in the sections below and listed by classification in Table 3.13-4.

Freeways

Interstate 80 – I-80 runs in a southwest-to-northeast direction in the Dixon area with most of the city lying to its southeast. The Dixon area is served by interchanges at Pedrick Road, SR 113/First Street, Pitt School Road, and West A Street/Dixon Avenue West, as well as by a westbound off ramp at Milk Farm Road. South of the city limits, an interchange at Midway Road also provides access to I-80.

Arterials

State Route (SR) 113/First Street – SR 113 is the second regional highway facility serving Dixon. Known as First Street within the Dixon city limits, this state route runs in a north-to-south direction between State Route 12 in Solano County to State Highway 99 in Sutter County. This primary through-traffic carrying roadway serves many different users including regional travelers, commercial vehicles, intercity travelers, commuters, recreational users, and agricultural trucks. First Street is configured as a two-lane arterial through downtown and central Dixon. Four-lane sections are found between I-80 and H Street and between Valley Glen Drive and Parkway Boulevard. South of Parkway Boulevard, SR 113 again narrows to a two-lane rural highway.

Pedrick Road – Pedrick Road runs along the eastern edge of the Planning Area. This facility is a two-lane rural highway with a posted speed limit of 55 mph. The surrounding land uses are mainly agricultural and light industrial. A short, 1.4-mile segment of Pedrick Road is currently within the City of Dixon limits.

A Street – This east-west arterial roadway provides one travel lane in each direction along most of its length. Between Pitt School Road and Lincoln Street the roadway transitions to two lanes in each direction separated by raised median. The speed limit west of Pitt School Road is 40 mph. The speed limit transitions from 35 mph to 30 mph east of Lincoln Street and remains at 30 mph throughout the historic residential and downtown areas. On-street parking is provided along this section. The speed limit transitions to 35 mph east of 8th Street and this 35 mph zone ends around the city limits.

Vaughn Road – East of First Street, Vaughn Road is an arterial with one travel lane in each direction separated with a center turn lane and a speed limit of 35 mph. Adjacent land uses are primarily highway commercial and light industrial.

Pitt School Road – This arterial roadway runs north-south within the city limits. South of West A Street it is undivided with one travel lane in each direction with a speed limit of 40 mph. North of West A Street, it provides two lanes in each direction divided by either median or a center turning lane with a speed limit of 25 mph. The surrounding land uses are mostly residential.

N. Adams Street – Running between West A Street and First Street, Adams Street is an arterial roadway with one lane in each direction and a speed limit of 30 mph. Bicycle lanes and on-street parking are present for almost the entire length of this facility. Adams Street serves both commercial and residential uses. North of West H Street, a center turning lane is present and the surrounding land uses are largely commercial.

Dorset Drive – East of SR 113/First Street, Dorset Drive is classified as an arterial. It provides one lane in each direction, separated by raised median. The speed limit for this stretch of roadway which serves commercial land uses is 35 mph.

Other Roadway Types

Numerous roadways are designated as either minor arterial/major collector or collector streets in Dixon. These are listed below in Table 3.12-4 along with other classified facilities within the city. Any street not designated as arterial or collector is considered a local street.

Historic Dixon Main Street Classification

Portions of SR 113/First Street and A Street, while serving the traffic carrying function of arterials also traverse historic residential areas and downtown Dixon. While these will continue to be important traffic facilities under the Proposed Plan, these segments will continue to be characterized by on-street parking, slower speeds, and limited travel lanes, consistent with Plan policies for Downtown Dixon as a place where it is safe and easy to walk, drive, and park.

Table 3.13-4: Dixon Roadways

<i>Classifications</i>	<i>Roadways</i>	
Freeways	I-80	
Arterial Streets	A Street Batavia Road E. Dorset Drive First Street/SR-113 N. Adams Street	Pedrick Road Pitt School Road S. Porter Road Vaughn Road
Minor Arterial/Major Collectors	N. Lincoln Street Wiegand Way Regency Parkway Stratford Avenue W. H Street N. Lincoln Street (W. A Street to W. H Street) S. Lincoln Street (Hillview Drive to W. A Street)	N. Almond Street (W. A Street to W. H Street) S. Almond Street Evans Road Gateway Drive W. Cherry Street Folsom Fair Circle Valley Glen Drive Harvard Drive College Way
Collector Streets	Alexander Drive Ary Lane Austin Drive Bell Drive Bell Drive Brians Way Business Park Drive Doyle Lane E Mayes Street E. Broadway Street E. C Street E. Chestnut Street E. H Street E. H Street Ellesmere Drive Fitzgerald Drive Fountain Way Hall Park Drive Industrial Way Little Lane Market Lane	N. 2 nd Street N. 4 th Street N. 5 th Street N. Almond Street (north of W. H Street) N. Jackson Street N. Jefferson Street N. Lincoln Street N. Washington Street Newgate Way Parkgreen Drive Pembroke Way Pheasant Run Drive Rehrmann Drive Russell Lane S. 5 th Street W. B Street W. Creekside Circle W. D Street W. F Street Watson Ranch Way
Local Streets	All others	

Source: Dixon General Plan Circulation Element 2019

Bicycle Facilities

The California Department of Transportation's (Caltrans) *Highway Design Manual* (HDM) (Chapter 1000: Bikeway Planning and Design) and California Assembly Bill 1193 codify four distinct classifications of bikeways. Bikeways offer various levels of separation from traffic based on traffic volume and speed, among other factors. Bikeway classifications and existing facilities of each type are described below. These existing facilities and those proposed in the Proposed Plan are shown in Figure 3.13-2.

Class I Bikeway (Bike Path)

Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a completely separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

Existing Class I bike paths in the City are limited to short segments. These include a path between North Lincoln Street and First Street which passes through a residential neighborhood and the Gretchen Higgins Elementary School site. In addition, there are short bike paths adjacent to the Dixon Shopping Center from Gateway Drive to Evans Road, and through Hall Memorial Park and Northwest Park.

Class II Bikeway (Bike Lane)

Class II bicycle facilities are striped lanes that accommodate bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. A striped buffered area may also be included between the bike lane and the vehicular travel lane to create further separation between the two travel modes. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.

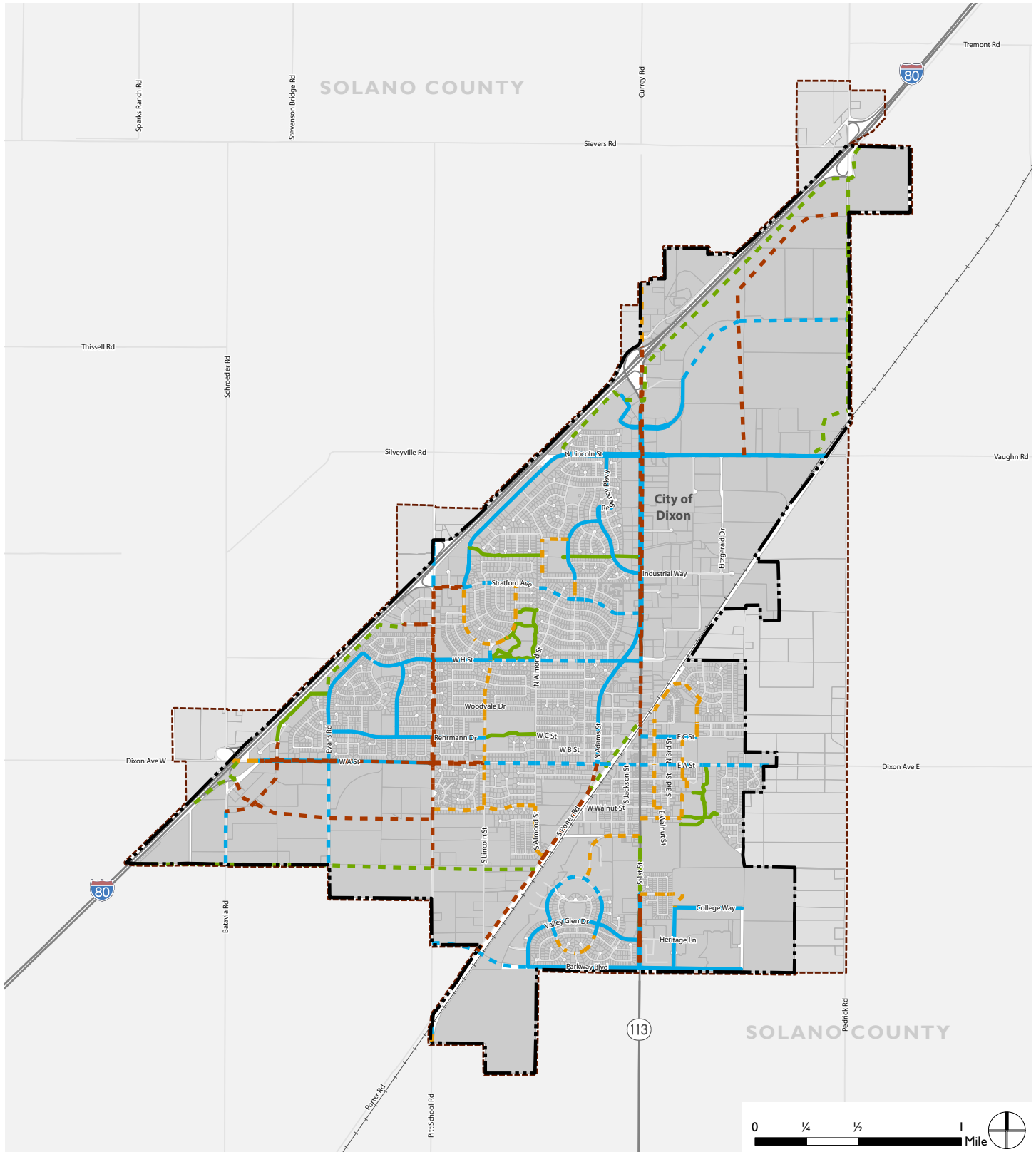
A Class II bike lane runs along North Lincoln Street north of Stratford Avenue, continuing along Vaughn Road to connect with the existing Dixon/Davis Bikeway. Class II bike lanes may also be found on portions of SR 113, North Adams Street, West H Street, and West A Street among other locations within both the Valley Glen and Park Lane subdivisions.

Class III Bikeway (Bike Route)

Class III bicycle facilities are streets that provide for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.

Class III bike routes exist along Stratford Avenue, Industrial Way, Fitzgerald Drive, and sections of West H Street, SR 113/First Street, and East A Street among other locations.

Figure 3.13-2: Existing and Proposed Bicycle Facilities



Data Source: DKS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019

Existing Bicycle Facilities

- Class I Multi-Use Path
- Class II Bicycle Lane
- Class III Bicycle Routes
- Class IV Separated Bikeway

Proposed Bicycle Facilities

- - - Class I Multi-Use Path
- - - Class II Bicycle Lane
- - - Class III Bicycle Route
- - - Class IV Separated Bikeway



Railroad



Dixon City Limit



Sphere of Influence



Class IV Bikeway (Separated Bikeway)

Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) legalized and established design standards for Class IV bikeways in 2015. There are currently no Class IV separated bikeways in Dixon, but some have been planned as part of the Proposed Plan.

Pedestrian Facilities

In general, streets and roadways in Dixon are served by sidewalks on both sides, although there are some gap closure needs at the following locations:

- South side of Parkway Boulevard between South First Street and Harvard Drive
- Northwest side of Porter Road
- South side of West A Street west of Pitt School Road
- Short segment on southeast side of N Adams Street between W F Street and W H Street
- East and west side of Pitt School Road from Stratford Avenue north to just after highway crossing
- North Lincoln Street
- Southeast side of N Adams Street near N First Street
- North side of Vaughn Road east of First Street

A key pedestrian facility is the West B Street pedestrian undercrossing, which connects the future intermodal station area to the downtown area east of the railroad tracks. Existing Class I multiuse paths as shown in Figure 13.3-2 facilitate pedestrian as well as bicycle travel.

Public Transportation System

Public transit in Dixon is composed of two elements: fixed-route, regional public transit in the City which is provided through Fairfield and Suisun Transit (FAST) agency and an on-demand, dial-a-ride service called Read-Ride. These services are summarized in Table 3.13-5.

Fixed Route

FAST Blue Line – FAST currently operates an express intercity route that serves Dixon with a stop at the Dixon Park-and-Ride, located on Market Lane between Pitt School Road and Ary Lane. The Blue Line provides commute-period service between the Sacramento Valley Station and Pleasant Hill BART with several stops along the way, including at the UC Davis Campus as well as the transportation centers in Fairfield and Vacaville. This fixed route service travels along I-80 and does not serve central or downtown Dixon.

On Demand

Readi-Ride – Within Dixon, the City operates a public dial-a-ride system called Readi-Ride. Readi-Ride provides curb-to-curb service within city limits and adjacent unincorporated areas. Service hours are Monday through Friday, 7:00 AM to 5:00 PM.

Transit Facilities

Transit facilities in Dixon consist of the Dixon Park-and-Ride, located on Market Lane as depicted in Figure 3.13-3. The lot is positioned near the I-80/Pitt School Road ramps, providing access to the freeway for intercity bus routes and carpool/vanpool loading. Parking is free at this lot.

Figure 3.13-3: Dixon Park-and-Ride Map



Table 3.13-5: Summary of Transit Services in Dixon

<i>Operator</i>	<i>Line</i>	<i>Characteristics</i>
FAST	<i>Blue Line</i>	Schedule: Monday through Friday, 4:00 AM to 8:30 PM; Saturdays from 8:00 AM to 8:00 PM Headway: mainly 30 min during Mon-Fri AM and PM peak periods, 60 min on Sat
Readi-Ride	On demand service	Trips within City of Dixon and adjacent areas Service: Monday through Friday, 7:00 AM to 5:00 PM

Goods Movement

The City of Dixon municipal code designates the following streets as through truck routes for trucks not making deliveries within the city:

- First Street (SR 113) - South city limits to the north city limits;
- Porter Road – **South city limits to West “A” Street;**
- North Adams Street – **West “A” Street to North First Street;**
- West F Street – North Adams Street to North First Street; and
- Pedrick Road – South city limits to the north city limits.

The municipal code also designates routes for trucks making deliveries within the city:

- East H Street – North First Street to Business Park Drive;
- Business Park Drive – East H Street to Industrial Way;
- Industrial Way – North First Street to its eastern terminus;
- Fitzgerald Drive – Industrial Way to Vaughn Road;
- Kids Way – Vaughn Road to its southern terminus;
- Vaughn Road – North First Street to the east city limits;
- West A Street – West city limits to Gateway Drive;
- Gateway Drive – **West “A” Street to Plaza Court;**
- Gateway Court – Plaza Court to its northern terminus;
- Plaza Court – Gateway Drive to its western terminus;
- Pitt School Road – Market Lane to the north city limits;
- Ary Lane – Pitt School Road to Market Lane;
- Market Lane – Ary Lane to Pitt School Road;
- Stratford Avenue – Pitt School Road to Commercial Street; and

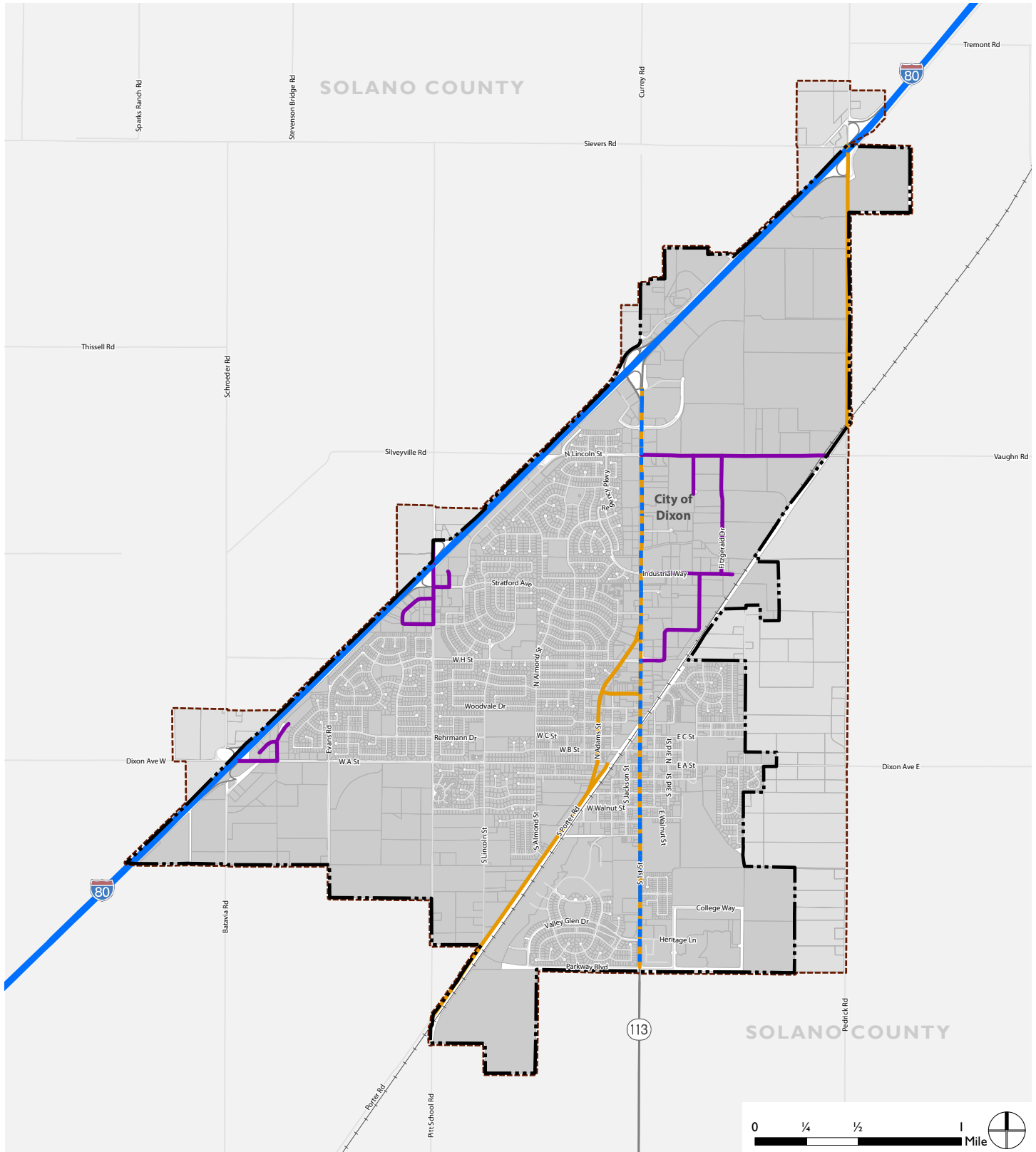
- Commercial Street – Pitt School Road to its northern terminus.

Overnight truck parking is permitted by permit along Commercial Street, Ary Lane, Market Lane, Gateway Court and Plaza Court.

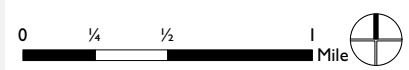
In addition to local regulations on where trucks may travel, the state and federal governments regulate large truck routes. The Surface Transportation Assistance Act (STAA) of 1982 allows large trucks to operate on routes that are part of a national network. In the Dixon area, Interstate 80 is on the STAA truck network and SR 113/First Street is an STAA terminal access route.

Consideration of the routes used by large trucks in goods movement is vital to the functioning of the transportation network. Truck routes impact roadway geometry, pedestrian safety, and parking among other factors. Existing truck routes, as designated by state, federal, and local authorities are shown in Figure 13.3-4.

Figure 3.13-4: Designated Truck Routes



Data Source: DKS, 2019; City of Dixon, 2019; Dyett & Bhatia, 2019



- Through Truck Route
- Delivery Truck Route
- STAA Route
- STAA Access Route
- Railroad
- Dixon City Limit
- Sphere of Influence

Air Transportation

There are no aviation facilities within the City of Dixon boundaries; however, there are several public airports in the vicinity of the City. The closest facilities are the UC Davis University Airport approximately 4 miles northeast, Yolo County Airport approximately 7 miles north, and Nut Tree Airport approximately 7 miles southwest. The nearest major commercial airport is Sacramento International, approximately 27 miles northeast.

Planned Improvements

Infrastructure improvements are planned for construction within the Planning Area over the **planning horizon (through 2040)**. Some of the projects include funding in the City's five-year Capital Improvement Program (CIP) while others are unfunded or beyond the five-year CIP horizon.

Roadway Improvements

Parkway Boulevard Overcrossing and Extension Project - This project will extend Parkway Boulevard from Valley Glen Drive west to Pitt School Road, with an overcrossing of Porter Road and the Union Pacific Railroad (UPRR) tracks. The Parkway Boulevard project is intended to relieve traffic congestion on West A Street and to provide an east-west connection between the Southwest Dixon Specific Plan area, the Valley Glen development and Dixon High School. In addition, East Parkway Boulevard will be extended to Pedrick Road.

West A Street Undercrossing Project- The City has studied the feasibility of grade separating West A Street at its existing crossing with the UPRR tracks. The undercrossing would accommodate new station tracks and a passenger platform overhead while maintaining the street's existing right of way underneath. This project is related to the City's goal of bringing passenger rail service to Dixon.

Vaughn Road Realignment Project -This project will construct a four-lane bypass route to connect Vaughn Road with Pedrick Road while avoiding the Union Pacific Railroad tracks.

Pedrick Road Widening -This project will widen Pedrick Road from Midway Road to the northbound I-80 ramps to two lanes in each direction and a standard arterial cross section.

East H Street Extension -This project will connect H Street over the UPRR.

New roadways in Northeast Quadrant Specific Plan Area -New arterial roadways will be constructed per this specific plan.

New roadways in Southwest Dixon Specific Plan Area -New arterial roadways will be constructed per this specific plan.

SR 113 Route Redesignation Project -The SR 113 Major Investment and Corridor Study (MIS) proposes short-, medium-, and long-range safety improvements along the SR 113 Corridor and identifies three major alternatives for redesignating the route of SR 113 away from the downtown Dixon area. Alternative routes considered for SR 113 through the Dixon area include sections of

Pedrick, Midway and Robben Roads. If implemented, the redesignation of the SR 113 route would likely improve traffic conditions, safety, and level of service in the downtown area.

Bicycle Improvements

Additional Class I multiuse paths, Class II bike lanes, and Class III bicycle routes are planned as shown in Figure 13.3-2. Bicycle facilities are planned for new roads in the Northeast Quadrant and Southwest Dixon specific plan areas of the City, including proposed Class I paths adjacent to the I-80 freeway, along Pedrick Road, between the I-80 path and Porter Road, and along First Street between Cherry Street and north of Valley Glen Drive. Class II Bicycle lanes will be extended along A Street among other roadways and a system of Class II bicycle routes will provide connectivity.

Policies for Improvements Needed to Meet Level of Service Standard

Capacity analysis at intersections and roadway segments throughout the City was conducted to **determine which locations would require improvements in order to operate above the City's peak hour Level of Service (LOS) D standard.** The following intersections were identified as needing improvements by the year 2040:

- West A Street and Jackson Street
- 1st Street and B Street
- 1st Street and Cherry Street

However, signalization (which would improve the minor street delay at these locations) was found to be infeasible due to **the intersections' proximity to adjacent intersections and railroad crossings.**

REGULATORY SETTING

Federal Regulations

Surface Transportation Assistance Act (STAA)

In 1982, the federal government passed the STAA. This act requires states to allow larger trucks on the **"national network," which is composed of the interstate system plus the non-interstate federal-aid primary system.** **"Larger trucks" includes (1) doubles with 28.5-foot trailers, (2) singles with 48-foot semi-trailers and unlimited kingpin-to-rear axle distance, (3) unlimited length for both vehicle combinations, and (4) widths up to 102 inches.** SR 113 is defined as an STAA terminal access route.

State Regulations

California Department of Transportation (Caltrans)

Caltrans is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system. Caltrans has established standards for street traffic flow and has developed procedures to determine if intersections require improvements. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that

would not physically affect facilities but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

California Transportation Commission (CTC)

The CTC consists of nine members appointed by the California Governor. CTC is responsible for the programming and allocating of funds for the construction of highway, passenger rail, and transit improvements throughout the state. CTC is responsible for adopting the State Transportation Improvement Program and the State Highway Operation and Protection Program.

Assembly Bill (AB) 32

With AB 32, the Global Warming Solutions Act of 2006, the State of California committed itself to reducing greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board (CARB) is coordinating the response to comply with AB 32.

In 2007, CARB adopted a list of early action programs that could be put in place by January 1, 2010. In 2008, CARB defined its 1990 baseline level of emissions, and by 2011 it completed its major rule making for reducing GHG emissions. Rules on emissions, as well as market-based mechanisms like the cap-and-trade program, took effect in 2012.

On December 11, 2008, CARB adopted its Proposed Scoping Plan for AB 32. This scoping plan included the approval of Senate Bill (SB) 375 as the means for achieving regional transportation related GHG targets. SB 375 provides guidance on how curbing emissions from cars and light trucks can help the state comply with AB 32.

California Complete Streets Act

The California Complete Streets Act (Assembly Bill [AB] 1358) of 2008 was signed into law on September 30, 2008. Beginning January 1, 2011, AB 1358 requires circulation element updates to address the transportation system from a multi-modal perspective. The act states that streets, roads, and highways must “meet the needs of all users in a manner suitable to the rural, suburban, or urban context of the general plan.” The act requires a circulation element to plan for all modes of transportation where appropriate, including walking, biking, car travel, and transit.

The Complete Streets Act also requires circulation elements to consider the multiple users of the transportation system, including children, adults, seniors, and the disabled. AB 1358 tasks the Governor’s Office of Planning and Research (OPR) to release guidelines for compliance which are so far undeveloped.

Sustainable Communities and Climate Protection Act

The Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, provides incentives for cities and developers to bring housing and jobs closer together and to improve public transit. The goal is to reduce the number and length of automobile commuting trips, helping to meet the statewide targets for reducing greenhouse gas emissions set by AB 32.

SB 375 requires each Metropolitan Planning Organization (MPO) to add a broader vision for growth, called a Sustainable Communities Strategy (SCS), to its transportation plan. The SCS must **lay out a plan to meet the region’s transportation, housing, economic, and environmental needs in** a way that enables the area to meet greenhouse gas emissions reduction targets. The SCS should integrate transportation, land use, and housing policies to plan for achievement of the emissions target for the region. The most recent Regional Transportation Plan (RTP) and SCS, was adopted by the Metropolitan Transportation Commission (MTC) in 2017.

Senate Bill (SB) 743

This bill creates a new process for analyzing transportation impacts under the California Environmental Quality Act (CEQA). The Office of Planning and Research (OPR) finalized the proposed guidelines in December 2018. Jurisdictions have until July 1, 2020 to adopt thresholds of significance in accordance with SB 743. The required metric for determining transportation impacts is of vehicle miles traveled (VMT) rather than vehicle delay (level of service, or LOS).

Local Regulations

Solano Transportation Authority

The Solano Transportation Authority (STA) is a joint powers agency created by agreement among Solano County cities, including Dixon, and the County itself. STA serves as the Congestion Management Agency (CMA) and is responsible for countywide transportation planning, programming transportation funds, providing transportation services, and delivering projects. STA publishes long-range transportation planning documents by mode, including the Arterials and Highway Element, last updated in June 2018 and Bicycle and Pedestrian plans. The Bicycle and Pedestrian Plans are currently being updated and combined into an Active Transportation Plan (ATP). Bicycle improvement projects assumed in the Proposed Plan have been coordinated with this effort.

City of Dixon Municipal Code

The City of Dixon Municipal Code provides a compilation of the City laws on various subject matters, arranged by title, chapter, and section. In terms of traffic regulations, the Code includes general traffic provisions, rules for stopping, standing, and parking, private streets and parking lot traffic regulation, trucks and truck routes within the City limits, and pedestrian and passengers.

Priority Development Area

According to MTC, Priority Development Areas (PDAs) are “**areas within the existing communities that local city or county governments have identified and approved for future growth.**” The City of Dixon downtown area was designated in 2011 as a Transit Town Center PDA due to its potential connection to the Capitol Corridor passenger rail service.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Conflict with applicable circulation plans, ordinances, or policies and applicable congestion management programs
- Criterion 2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b);
- Criterion 3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Criterion 4: Result in inadequate emergency access.

METHODOLOGY AND ASSUMPTIONS

Traffic Operations

The City of Dixon has adopted LOS D as the threshold of significance for traffic operations. To determine existing LOS, traffic conditions for the Proposed Plan study intersections were evaluated using the methodologies provided in the 2010 Highway Capacity Manual (HCM). The Dixon Travel Model was used to forecast future volumes at these intersections based on buildout of the Proposed Plan based on projected demand for new housing and non-residential space, as summarized in the Land Use chapter.

Vehicle Miles of Travel (VMT) Analysis

The City of Dixon does not have adopted thresholds of significance related to SB 743 which requires VMT to be the metric to designate significant transportation impacts related to CEQA. The Office of Planning and Research (OPR) published the *Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018)* which provides recommendations for conducting VMT analysis and thresholds of significance. The methodology below is consistent with the Technical Advisory and uses recommendations within to disclose transportation related impacts. For the purposes of this study, the cumulative condition was analyzed to determine if the proposed project would increase residential VMT per person or commuter VMT per person as detailed below, consistent with the Technical Advisory.

The Dixon Travel Model was used to estimate the VMT generated by land uses in the Planning Area at buildout. To assess the VMT generated in Dixon, origin-destination trip tables were multiplied by the associated shortest path distances in the model network. VMT from trips with **origins and destinations external to the planning area was included but “through” traffic** (traffic neither originating nor ending within the Planning Area) was not included in the calculation. Note

that the actual trip distance of trips beginning or ending outside the Planning Area is accounted for in the Dixon Travel Model.

The total resulting VMT for each scenario was then divided by the expected population and number of jobs (combined “service population”) in the Existing Condition, future Proposed Plan and future No Build scenarios to arrive at VMT per service population for each scenario. The threshold of significance is based on the Existing Condition VMT per service population. Any future VMT per service population higher than 15 percent below the Existing Condition would constitute a significant impact.

IMPACTS

Impact 3.13-1 Implementation of the Proposed Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. (Significant and Unavoidable)

a) Traffic Operations

The City of Dixon has defined a level of service threshold for acceptable traffic operations of LOS D to evaluate intersection deficiencies. For this evaluation, the Proposed Plan is considered to have an impact on an intersection if it would cause an intersection that is currently operating at LOS D or better to operate at LOS E or LOS F.

Level of service calculations were performed at ten study intersections for the weekday AM and PM peak hours. As shown in Table 13.3-6, five of the intersections are reported as operating at a deficient level of service during either Existing Conditions or future conditions under the Proposed Plan:

- Jackson Street & W A Street (Existing Conditions – AM, PM; Future Conditions – AM, PM)
- First Street & B Street (Future Conditions – PM)
- First Street & Chestnut Street (Existing Conditions – AM, PM)
- First Street & W Cherry Street (Future Conditions – AM)
- First Street & Valley Glen Drive (Existing Conditions – PM)

Of these five intersections, there is a less than significant impact on the three intersections with deficient operations during Existing Conditions, as no significance criteria has been defined for intersections that are already deficient. The intersection of First Street and Valley Glen Drive is planned for signalization, which will eliminate the operational deficiency. However, the intersections of First Street & B Street and First Street & West Cherry Street do become deficient under the future Proposed Plan resulting in a potentially significant impact.

Table 3.13-6: Peak-Hour Intersection Operations Summary – Existing and Future Conditions

Intersection	Control ³	Peak Hour	Existing		Future (2040)	
			Delay ¹	LOS ²	Delay ¹	LOS ²
1 S 2 nd Street/N 2 nd Street & E A Street	TWSC	AM	15.9	C	18.4	C
		PM	15.8	C	18.1	C
2 S Jackson Street/N Jackson Street & W A Street	TWSC	AM	16.6	F	143.3	F
		PM	72.6	F	272.3	F
3 First Street & W B Street/E B Street	TWSC	AM	20.4	C	18.3	C
		PM	27.1	D	50.0	F
4 First Street & E C Street	TWSC	AM	40.6	C	20.7	C
		PM	20.6	C	23.6	C
5 First Street & W Chestnut Street/E Chestnut Street	TWSC	AM	32.6	E	4.0	A
		PM	63.1	F	4.8	A
6 First Street & W Cherry Street	TWSC	AM	23.2	D	37.1	E
		PM	25.0	D	26.6	D
7 First Street & W A Street/E A Street	Signalized	AM	27.7	C	34.0	C
		PM	24.9	C	41.1	D
8 Porter Street & M Adams Street/W A Street	Signalized	AM	21.8	C	38.7	D
		PM	16.0	B	34.5	C
9 First Street & Valley Glen Drive	TWSC ⁴	AM	21.8	C	13.5	B
		PM	35.1	E	7.1	A
10 First Street & Parkway Boulevard/E Park Boulevard	Signalized	AM	17.0	B	24.9	C
		PM	16.9	B	23.9	C

¹ Delay is in seconds per vehicle. For signalized intersections, delay is based on average stopped delay. For unsignalized intersections, delay is based at the worst approach for two-way stop-controlled intersection.

² LOS = Level of Service

³ TWSC = Two-way stop control

⁴ Planned for signalization

Sources: DKS Associates, 2019

RELEVANT POLICIES AND ACTIONS

Mobility and Transportation

- MT.1.8 **To the extent allowed by law, continue to utilize the City’s Traffic Impact Fee to fund bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.**
- MT.1.11 Coordinate roadway improvements with other transportation and utility infrastructure improvements such as sewer and water.
- MT.2.3 Maintain a street classification system that establishes user mode priorities and associated performance standards for each type of street.
- MT.2.4 Maintain a level of service of "D" citywide.
- MT.2.6 Employ strategies to effectively coordinate, manage, and reduce traffic, particularly during peak periods and at major destinations such as employment hubs, schools, and Downtown Dixon.
- MT.2.7 Decrease dependence on single-occupant vehicles by increasing the attractiveness of other modes of transportation.
- MT.2.8 Require traffic studies for new development to include analysis of intersections, roadway segments, and alternative modes of transportation and facilities that may be affected by development proposals.
- MT.2.A Identify, study and fund appropriate roadway and intersection improvements and other transportation improvement projects so as to maintain a level of service of "D" citywide.
- MT.2.D **Install a “queue-cutter” signal at the A Street railway crossing as an interim solution to address eastbound queuing and improve safety at this location.**
- MT.2.E Work with the Dixon Unified School District to ensure that decisions regarding school assignments are analyzed to reduce peak period motor vehicle trips to and from school sites.
- MT.2.F Work with the Dixon Unified School District (DUSD) to resolve traffic congestion issues associated with student drop-off and pick-up.
- MT.3.6 Participate in and contribute to regional programs to improve commute alternatives and efficiency.

Mitigation Measures

Minor street movement delays at the two-way stop-controlled intersections of First Street & B Street and First Street & Cherry Street can be addressed through signalization. Significant improvement in side street control delay is observed after signalization of the above intersections. However, the projected volumes for these intersections do not meet signal warrants. While volume signal warrants are not met, there are other potential justifications for signalization including safety, pedestrian crossing opportunities, and vehicle progression. At the same time, the spacing of these signals to existing or planned signals is closer than the recommended minimum 500 feet between signalized intersections.

The intersection of First Street & B Street is in a central location downtown and signalization would require coordination with a closely spaced intersection at First Street & A Street. Only nine percent of traffic is affected by the deficient approach. The location is along a potentially important east-west pedestrian route, one block east of the pedestrian tunnel under the railroad tracks connecting to the Dixon train station site. In addition to addressing delays for eastbound left-turning vehicles, installing a signal would improve pedestrian safety and ease of crossing. However, the signalized crossing at 1st Street and A Street is only a short block away. Based upon the low volume of traffic experiencing delays at this location, the failure to meet a peak hour signal warrant, and nearby signalized intersections providing an alternative route, signalization of First Street & B Street is not recommended, resulting in this impact being *significant and unavoidable*.

A signal could be justified at First Street & Cherry Street to improve vehicular and pedestrian access to the school at this location. However, this intersection is only approximately 360 feet from the next intersection and would need to be coordinated with the proposed signal at West and East Chestnut Streets. Only 13 percent of traffic is affected by the deficient approach. Alternatively, drivers can access First Street via Jackson Street and West Chestnut Street. Based upon the low volume of traffic experiencing delays at this location, the failure to meet a peak hour signal warrant, and nearby signalized intersections providing an alternative route, signalization of First Street & Cherry Street is not recommended, resulting in this impact being *significant and unavoidable*.

b) Bicycle and Pedestrian Circulation

The City of Dixon does not have a standardized metric by which to evaluate the effectiveness of the bicycle circulation system nor the pedestrian circulation system. For this evaluation, the Proposed Plan is considered to have an impact on bicycle and/or pedestrian facilities if it would adversely affect an existing bicycle or pedestrian facility or preclude the construction of planned facilities.

From a policy perspective, implementation of the Proposed Project would enable the City to improve bicycling programs and infrastructure throughout the City, providing connections to the existing and planned regional bicycle network, resulting in a less than significant impact. Implementation of the Proposed Plan would also enable the City to improve pedestrian programs and infrastructure throughout the City, providing connections to existing and planned pedestrian facilities, resulting in a less than significant impact.

RELEVANT POLICIES AND ACTIONS

Land Use

- LGC.3.7 Use the Downtown PDA Plan to create inviting gateways and improve access for people walking, biking, and driving to the train station and downtown core.
- LGC.3.B Update the Zoning Code with a pedestrian overlay applicable in the Downtown Commercial District to promote active, pedestrian-oriented street life by regulating building orientation, accessory parking facilities and the design of buildings and public spaces.
- LCG.3.E Prioritize implementation of public realm and streetscape improvements downtown, including curb extensions and accent paving at pedestrian crossings; new street furniture, and directional signage to parking areas.
- LGC.6.4 Enhance links between the neighborhood centers and surrounding residential neighborhoods by providing walkable and bikeable connections.

Mobility and Transportation

- MT.1.1 Maintain a transportation network that is efficient and safe, that removes barriers (e.g. accessibility near freeways and rail lines), and that optimizes travel by all modes.
- MT.1.3 **Design, construct, operate, and maintain city streets based on a “complete streets”** concept that enables safe, comfortable, and attractive access and travel for pedestrians, bicyclists, motorists, and transit users of all ages and abilities.
- MT.1.4 Make safety the first priority of citywide transportation planning. Prioritize pedestrian, bicycle and automobile safety over motor vehicle level of service and motor vehicle parking.
- MT.1.5 Increase accessibility for and use of streets by pedestrians, bicyclists, and transit riders through appropriate roadway modifications and improvements.
- MT.1.6 Ensure that improvements to the transportation network support a land use pattern that connects the community, integrates neighborhoods, provides multi-modal access and facilitates travel among Dixon’s neighborhoods.
- MT.1.8 **To the extent allowed by law, continue to utilize the City’s Traffic Impact Fee** to fund bicycle, pedestrian, transit, and road improvements so that development pays its fair share toward a circulation system that optimizes travel by all modes.
- MT.1.C Pursue funding for the construction of grade separated rail crossings at Parkway Boulevard and West A Street and a bypass route at Vaughn Road to increase connectivity across the rail tracks and promote safety.

- MT.1.D Provide new connections for vehicles, bicycles, and pedestrians across the railroad.
- MT.1.E Consider adopting the National Association of City Transportation Officials (NACTO) Urban Street Design Guide and Urban Bikeway Design Guide to direct future improvement projects.
- MT.2.1 Ensure that the street network functions for the automobile, yet is easily accessible, safe, and convenient for other modes of travel and for users of all ages, abilities, and income levels.
- MT.2.2 Prioritize pedestrian, bicycle, and automobile safety over traffic flow.
- MT.2.B Establish performance standards for each street type that include adequate emergency vehicle use. Include the following considerations in establishing performance metrics:
- quality and connectivity of pedestrian facilities, based on best practice design guidelines including the California Manual on Uniform Traffic Control Devices (MUTCD) and the National Association of City Transportation Officials (NACTO) Urban Street Design Guide;
 - quality and connectivity of the bicycle facilities, based on best practice design guidelines including the California MUTCD, Caltrans Highway Design Manual Chapter 1000, and the NACTO Urban Bikeway Design Guide;
 - quality of the transit facilities and service, based on best practice design guidelines, including the NACTO Transit Street Design Guide, as well as on the service capacity and frequency as compared to measured or projected demand;
 - adequacy of emergency access provided, as measured by the efficiency of emergency access routes and the presence or absence of barriers along primary routes.
- MT.3.1 Enhance pedestrian, bicycle and transit connections to, from and between parks, community centers, neighborhoods, recreation facilities, libraries, schools, commercial centers and other community destinations in Dixon for all users.
- MT.3.3 Foster an integrated multi-use trail system that provides universally accessible, safe, pleasant and convenient links within the city and to destinations beyond.
- MT.3.4 Expand the regional bicycle and pedestrian trail network, in collaboration with the Solano Transportation Authority, surrounding communities, and other partners.
- MT.3.C Collaborate with the Rails to Trails Conservancy, UC Davis, Solano County Transportation Authority and other partners to explore the possibility of creating a "rail with trail," or multiuse path adjacent to the railroad in Dixon.

- MT.3.D Work with Caltrans, Solano County, Fairfield and Suisun Transit, and the Solano Transportation Authority to identify and seek funding for improvements that make intra-city travel easier, including for transit, bicycles, and pedestrians.
- MT.3.F Consider assessing through a study or survey the need for local bicycle and walking trail improvements that complement those included in the Countywide Bicycle Master Plan.
- MT.4.1 Promote cycling and walking as healthy, affordable and viable transportation options in Dixon for all residents through education, incentives, citywide events such as Sunday Streets events, and programs such as Safe Routes to School and Safe Routes for Seniors programs.
- MT.4.3 Increase bicycle ridership for work, errands and leisure trips.
- MT.4.4 Regularly maintain bicycle and pedestrian paths and trails, including sweeping, weed abatement and surface maintenance.
- MT.4.5 Encourage pedestrian-friendly design features in new development such as sidewalks, street trees, on-street parking, gathering spaces, gardens, outdoor furniture, art and interesting architectural details.
- MT.4.6 Enhance the existing bicycle/pedestrian network by adding planting pockets with street trees to provide shade, calm traffic and enhance the pedestrian realm, prioritizing routes that link destinations such as employment centers, commercial centers, schools and downtown Dixon.
- MT.4.7 Continue to implement traffic calming measures to slow traffic on local and collector residential streets and contribute to the safety of non-motorized road users.
- MT.4.8 Require new or redesigned parking lots to optimize pedestrian and bicycle safety and provide green infrastructure for aesthetic and stormwater management purposes.
- MT.4.A Work with bicycle advocacy groups, Solano Transportation Authority and other partners to identify obstacles and impediments to cycling and develop strategies to address them. The assessment could involve a survey and should consider safety, infrastructure availability, network maintenance, and ease of getting around.
- MT.4.B Collaborate with senior advocacy organizations to develop a “safe routes for seniors” program that provides pedestrian improvements tailored to residents with limited mobility near senior living centers and destinations such as the Dixon Senior Center.

- MT.5.1 Plan for a multi-modal downtown where the transportation network accommodates and balances the needs of pedestrians, cyclists, drivers, and rail, shuttle, and transit passengers.
- MT.5.2 Promote a walkable downtown and enhance the pedestrian environment with improvements for safety and amenities such as planters, street furniture, and public art.
- MT.5.3 Increase bicycle accessibility downtown by providing bike paths and bicycle parking infrastructure.
- MT.5.A Seek funding for mobility improvements downtown, including pedestrian and bicycle improvements and a grade-separated rail crossing at A Street.
- MT.5.C Install buffered bicycle lanes along First Street to the High School and along A Street to the Civic Center, or a bicycle boulevard on residential streets parallel to current bicycle routes such as on Hall Park Drive to the High School and Mayes Street to the Civic Center.
- MT.5.D Provide secure bicycle racks along First Street and in key locations throughout the downtown, such as the train station and Dixon Public Library.
- MT.6.B Prioritize sidewalk and pedestrian improvements to improve safety at the First Street/SR 113 grade crossing of the rail line, where the tracks separate a school from a mainly residential area.

Mitigation Measures

None required.

c) Public Transit System

The City of Dixon has no standardized metric to evaluate transit service citywide. The Proposed Plan is expected to increase the demand for travel in the Planning Area through development resulting in new residential and employment uses. This could increase the market for public transportation, resulting in increased ridership. Increased overall travel demand is expected to worsen the levels of service on some roadways increasing vehicle delays that could reduce the reliability of transit service.

The Proposed Project provides transit supportive policies that are cognizant of the financial constraints of providing fixed-route and dial-a-ride transit service in a rural setting, and is supportive of providing an environment that is attractive to bringing rail service to the City of Dixon, in addition to other supporting transit facilities, resulting in a less than significant impact.

RELEVANT POLICIES AND ACTIONS

Economic Development

- E.1.A Work with the Solano Transportation Authority, the Solano Economic Development Corporation (EDC), Solano County, and other partners to explore strategies for a viable new rail served business site south of Tremont Road immediately northeast of the Dixon City limit.

Land Use

- LGC.3.6 Foster transit-oriented development within one-half mile of the train station in anticipation of future passenger rail service.
- LGC.3.H Prepare for passenger rail service in Dixon by developing a land value capture program to generate funding for streetscape improvements, affordable housing, or other public benefits in the downtown area. Consider value capture strategies such as special assessment districts, impact fees, land value tax, and tax-increment financing.

Mobility and Transportation

- MT.3.5 Increase regional transit ridership to and from Dixon and expand shuttle service to Amtrak.
- MT.3.7 Prioritize the transit needs of senior, disabled, minority, low-income, and transit-dependent persons in making decisions regarding transit services and in compliance with the Americans with Disabilities Act.
- MT.3.A Work with the Solano Transportation Authority to study the feasibility of expanding express bus routes and frequency to Davis and UC Davis, and Amtrak stations from a central location in Dixon.
- MT.3.B Conduct a mobility needs assessment and identify solutions to improve transit service for Dixon residents and employees. The study should assess park and ride facilities, shuttle service to Amtrak, multi-modal connectivity, and safety among other issues and opportunities.
- MT.3.E In partnership with transit providers, explore the expansion of Read-Ride services as funding allows, to offer greater connectivity within Dixon.
- MT.5.4 Support efforts to bring passenger rail to Downtown Dixon.

Mitigation Measures

None required.

Impact 3.13-2 Implementation of the Proposed Plan would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (Significant and Unavoidable)

For the purposes of this EIR, the following thresholds of significance are used to determine if the Proposed Plan has an impact under the terms of Criteria 2:

(a) Vehicle Miles Traveled:

1. A significant impact would occur if the proposed General Plan Update results in a VMT per service population higher than the identified threshold which is set as 15 percent below existing conditions.

As shown in Table 3.13-7, the VMT per service population for existing conditions is 34.4. In order to maintain a less than significant impact, VMT per service population would need to drop to 29.2 under the Proposed plan. While the Proposed Plan will reduce the VMT per service population to 30.4, an almost 12 percent reduction over existing conditions, and shows greater VMT reduction than the No Build condition, it does not achieve 15 percent reduction required to avoid a potentially significant impact.

Table 3.13-7: Future Year Conditions VMT Summary in Planning Area

	<i>Dixon 2018 Baseline</i>	<i>Dixon Future (2040) No Build</i>	<i>Dixon Future (2040) Proposed Plan</i>
<i>Population</i>	20,147	26,181	28,879
<i>Employment</i>	5,742	6,891	8,494
<i>Daily VMT</i>	891,090	1,048,095	1,134,739
<i>Daily VMT per Resident/Employee</i>	34.4	31.7	30.4

Notes: Planning Area includes City limits and SOI.

Sources: DKS Associates, 2019

RELEVANT POLICIES AND ACTIONS

As previously noted, the proposed plan will affect VMT in the area. Note that the VMT information presented is produced from the Dixon Travel Model and only accounts for the built environment variables to which the model is sensitive (i.e. number of housing units and employment). Additional policies in the Proposed Plan Circulation Element supporting elements the model is not sensitive to (such as presence of bicycle and pedestrian facilities) are not reflected in these estimates. Thus, the VMT estimates in this analysis are conservatively high.

The following proposed policies would reduce potential impacts by supporting TDM (Travel Demand Management) measures and requiring that new developments prepare transportation impact assessments to determine project specific impacts of new development under the proposed

General Plan such that impacts can be appropriately mitigated. Additionally, City goals and policies strive to develop a multi-modal transportation network that would provide transportation alternatives to the single-occupant vehicle and encourage complete street design.

Policies in MT.2.6, MT.2.7, MT.2.8, MT.2.E, MT.3.5, and MT.3.6, as well as the following policies

Mobility and Transportation

MT.3.2 Ensure that new development provides physical connections to surrounding neighborhoods.

MT.5.7 Encourage drivers to park once and then walk between destinations in downtown Dixon.

Mitigation Measures

Mitigation of VMT is required because levels of VMT per service population is not expected to fall below the threshold of significance without additional measures. Two measures have been proposed:

MM-TRANS-1 *Addition of fixed route transit service serving school sites.* The proposed fixed-route service would complement the existing Dial-a-Ride on demand service. Such service would reduce vehicular trips to and from schools, reducing school related VMT and peak period congestion. A reasonable assumption regarding the reduction in VMT that could result from this measure is estimated at five percent. This figure corresponds to the bus and transit mode-share recorded for school sites in Alameda County where a Safe Routes to School program is in place. The new school transit service should be implemented in conjunction with a similar Safe Routes to School program to promote mode shift. Note that the extensive bicycle and pedestrian improvements in the Proposed Plan will also tend to support mode shift away from personal vehicles for school trips.

MM-TRANS-2 *Implementation of Commute Travel Demand Management (TDM) program.* Research published by the California Air Pollution Control Officers Association (CAPCOA, 2010) suggests that mandatory commute TDM programs with monitoring and reporting requirements can reduce VMT by between 4 and 21 percent. Voluntary TDM programs have reported VMT reduction range of one to six percent. However, the CAPCOA research cautions that TDM programs show limited effectiveness in rural areas unless large employers are present and TDM measures appropriate to the setting are implemented. Dixon has few large employers where TDM programs could be monitored and reported on. Therefore, a more realistic assumption of 5 percent was selected from the range reported for voluntary TDM programs.

Voluntary TDM programs draw from the same range of trip reduction strategies as mandatory but without reporting and monitoring requirements. Strategies that would be appropriate for Dixon would include support for carpools and vanpools, and guaranteed ride home programs.

Table 13.3-8 shows the effect of reducing school related VMT by 5 percent and commute VMT by 5 percent. If these levels of VMT reduction were achieved, the VMT per service population associated with the Proposed Plan would drop to 30.0, representing a level almost 13 percent below the baseline, still constituting a significant impact.

Given the large contribution that travel into and out of Dixon makes to the expected VMT, effective mitigation would likely involve provision of robust intercity transit service. However, while provision of passenger rail service is a key policy objective of the Proposed Plan, its implementation is not reasonably foreseeable at this time and therefore this impact will remain significant and unavoidable.

Table 3.13-8: Effect of VMT Mitigations

	<i>Dixon 2018 Baseline</i>	<i>Dixon Future (2040) Proposed Plan</i>
Population	20,147	28,879
Employment	5,742	8,494
Daily VMT	891,090	1,134,739
5% Reduction in School Trip VMT		206
5% Reduction in Commute VMT		14,129
Reduced Daily VMT		1,120,405
Daily VMT per Resident/Employee	34.4	30.0

Notes: Planning Area includes City limits and SOI.

Sources: DKS Associates, 2019

Impact 3.13-3 Implementation of the Proposed Plan would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)

The Proposed Plan does not include specific geometric designs for the transportation system in the Planning Area and would thus not substantially increase hazards due to a design feature.

In general, the Proposed Plan land use diagram and policies emphasize defining land uses of varying intensities, prioritizing safety, moving truck routes away from the City center, and improving of safety rail crossings, all of which would serve to reduce potential conflicts between users of the transportation system associated with each land use, including rail, commercial and industrial truck traffic, commute traffic, pedestrians, and cyclists. The specific design and operations of individual future development projects cannot be known at this time; however, policies included in the Proposed Plan would serve to reduce potential impacts from future development. The Proposed Plan has been developed with an emphasis on Complete Streets, which by their nature, would improve compatibility between different transportation modes as well as between the transportation system and adjacent land uses. Proposed policies that promote bicycle and pedestrian safety as well as the development of safe routes to school, and that require mitigation

of traffic-related impacts would help to identify and address potential safety concerns. Therefore, with adherence to policies included in the Proposed Plan, impacts increasing hazards due to a design feature or incompatible uses would be less than significant.

RELEVANT POLICIES AND ACTIONS

Policies LGC.3.7, LGC.3.B, LGC.3.E, LGC.6.4, MT.1.1, MT.1.3, MT.1.4, MT.1.C, MT.1.D, MT.1.E, MT.2.1, MT.2.2, MT.2.3, MT.2.6, MT.2.B, MT.3.1, MT.3.2, MT.3.3, MT.3.B, MT.4.1, MT.4.5, MT.4.6, MT.4.7, MT.4.8, MT.4.A, MT.4.B, MT.5.1, MT.5.2, MT.5.A, and MT.6.B as listed above, as well as the following policies.

Economic Development

E.5.C Develop and implement design guidelines and highway signage standards for Dixon's freeway interchanges and commercial corridors.

Land Use

LGC.5.3 Provide and maintain liveable residential neighborhoods by reducing noise and air pollution, discouraging pass-through traffic, minimizing traffic accidents, and promoting lower speeds.

LGC.5.B Implement a "Play Streets" program for residential neighborhoods, whereby neighbors can obtain a permit to temporarily close streets to traffic to provide a safe place for children, their families, and neighbors to come together and play outside.

LGC.5.C Continue to use the Neighborhood Traffic Management Program to define the procedures to identify the need and guide implementation of neighborhood traffic calming techniques.

Mobility and Transportation

MT.1.2 Maintain a hierarchy of streets that includes arterials, collectors, and local streets, balancing the needs of all users in a safe and appropriate manner, including youth, seniors, persons with disabilities, and low-income households.

MT.1.9 Require new residential development projects to implement best practices for street design, stormwater management and green infrastructure.

MT.1.A Pursue the relocation of State Route 113 from First Street to a route outside the Downtown area.

MT.1.B Until State Route 113 is relocated outside of the Downtown area, encourage the designation of alternative routes for through truck traffic to avoid conflicts within Downtown Dixon.

- MT.2.5 Improve east-west circulation in Dixon, with a particular focus on A Street, First Street and Pedrick Road grade crossings of the rail line.
- MT.2.C Secure additional funding necessary to complete transportation improvement projects designed to improve east-west connections in Dixon including the Parkway Boulevard Overcrossing, Vaughn Road realignment, the West "A" Street undercrossing, and redesignation of SR-113.
- MT.3.9 Increase safety at train crossings with improved gate technology and signal coordination, in partnership with Solano Transportation Authority, Union Pacific Railroad, and Amtrak.
- MT.4.2 Promote roadway safety for all road users through education and awareness programs and campaigns.
- MT.5.5 Improve connections to the Dixon Train Station and provide safe, easy, attractive access across the railway tracks for all roadway users.
- MT.5.6 Provide a sufficient amount of convenient parking to serve existing and new development while balancing economic development, livability, sustainability and public safety.
- MT.6.4 Improve safety and minimize adverse noise, vibrations and visual impacts of operations in the Amtrak rail corridor and truck routes on adjacent public facilities, schools and neighborhoods.
- MT.6.A Work with Caltrans to study options for re-rerouting SR 113 away from Downtown Dixon.
- MT.6.C Monitor the rail crossing at Pedrick Road, particularly during the harvest months, and identify actions needed to ensure safe and efficient truck crossings at this location.

Mitigation Measures

None required.

Impact 3.13-4 Implementation of the Proposed Plan would not result in inadequate emergency access. (Less than Significant)

The Proposed Plan is presented at a programmatic level. Emergency accessibility typically is assessed at a project level. Project level review required by the City includes site access review for emergency vehicles and traffic control plans as needed that account for emergency vehicles. Implementation of the following proposed General Plan policies will however improve connections between communities, providing addition access routes, and ensure that inadequate emergency access does not occur and will result in a less-than-significant impact.

RELEVANT POLICIES AND ACTIONS

Policies MT.1.C, MT.1.D, MT.2.4, MT.2.A, MT.2.B, MT.2.D, MT.2.F and MT.3.2 as listed above, as well as the following policies.

Mobility and Transportation

- MT.1.7 Coordinate transportation planning with emergency service providers to ensure continued emergency service operation and service levels.
- MT.2.10 Ensure adequate emergency vehicle access in all areas of Dixon by continuing to involve the Police and Fire Departments in the development review process.

Natural Environment, Safety and Hazards

- NESH.1.9 Continue to maintain the City's Emergency Operations Plan to effectively prepare for, respond to, recover from, and mitigate the effects of natural or human caused disasters that require the planned, coordinated response of multiple agencies or jurisdictions.
- NESH.1.12 Require areas subject to fires, flooding, dam inundation and other hazards to have emergency access and evacuation routes that are clearly marked with consistent signage. Make evacuation and rescue maps available to the public.
- NESH.1.B Annually review and revise the City's Emergency Operations Plan. Modify the EOP, as needed, following post-incident analyses, post-exercise critiques, and changes in policy.

Public Facilities and Services

- PSF.1.9 Support construction of improvements that facilitate emergency access across the rail line, such as over-and underpasses at one or more strategic locations.

Mitigation Measures

None required.

3.14 Utilities and Service Systems

This section assesses potential environmental impacts from future development under the Proposed Plan as related to public utilities, including water, wastewater, and stormwater systems, and solid waste services. This section describes existing water, wastewater, stormwater, and solid waste infrastructure and services in the Planning Area, as well as relevant federal, State, and local regulations and programs.

There were two comments on the Notice of Preparation (NOP) regarding topics covered in this section.

- The Solano Irrigation District submitted a comment that the General Plan should consider the increasing strains upon the reliability and economic cost of the groundwater supply, that new land development should not assume an inexhaustible supply of groundwater, and that new land development should only assume availability of groundwater sources if new investment in groundwater and surface water management occurs. This comment is addressed in 3.14-2 and in Chapter 3.9: Hydrology.
- The Central Valley Regional Water Quality Control Board, addresses State and local requirements regarding stormwater systems and is addressed in Impact 3.14-1. The remainder of the comment is addressed in Chapter 3.9: Hydrology.

Environmental Setting

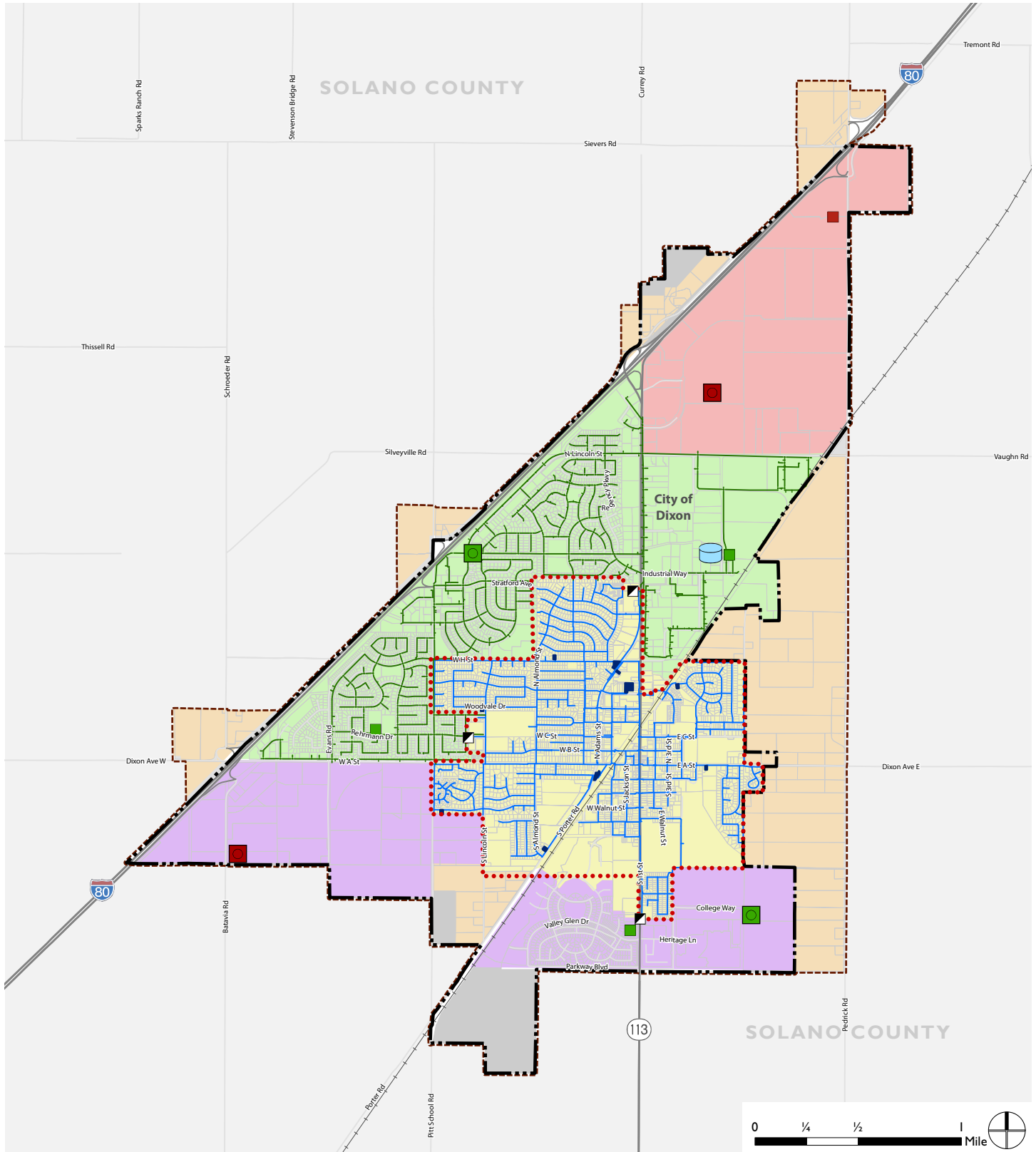
PHYSICAL SETTING

Water System

Water Infrastructure

The City of Dixon is served by two water suppliers: the City and the California Water Service Company (Cal Water). The City's water service area includes approximately 2,700 service connections (2015) serving a population of approximately 8,400 (2015). The remaining residences and businesses within the City limits are served by Cal Water, approximately 9,891 customers. Outside of City limits, The City's water service area and Cal Water's service area boundary are shown in Figure 3.14-1.

Figure 3.14-1: Existing Water System



Data Source: West Yost, 2016; City of Dixon, 2019; Dyett & Bhatia, 2019

Existing Dixon Facilities

- Intertie
- Well
- Well, Tank, and Booster Pump Station
- Tank and Booster Pump Station
- Pipeline

Proposed Dixon Facilities

- Well
- Well, Tank, and Booster Pump Station

Existing California Water Company Facilities

- Pressurized Water Main
- Facility Station

California Water Company Service Area

- California Water Company Service Area
- Core Zone
- North Zone
- South Zone
- No Existing Service Zone
- California Water Company

- Railroad
- Dixon City Limit
- Sphere of Influence



The City's water service area is divided into three sub-areas: North Zone, Core Zone, and South Zone, and includes predominantly residential (single family and multi-family) customers (comprising approximately 93 percent of the City's connections), with additional commercial, industrial, government, and landscape customers. There are no existing City-owned pipelines that connect the South Zone with the North and Core Zones. The City provides potable water to the residences and businesses within its water service area.

The City has four water storage tanks, three booster pump stations and a water distribution network consisting of approximately 40 miles (211,000 lineal feet) of pipeline ranging from 4 to 14 inches in diameter. In addition, the City has three interties with Cal Water's Dixon District water distribution system that are used for the mutual benefit of increased supply reliability and emergency use (City of Dixon, 2016).

Cal Water operates in central Dixon, with a service area roughly bounded by Stratford Avenue to the north, Pitt School Road to the west, Doyle Lane to the east, and the northern boundary of Dixon High School to the south. It has two storage facilities serving Dixon, a 75,000-gallon elevated steel storage tank and a 500,000-gallon ground-level pumped storage facility, and 32 miles of pipes (California Water Service, 2016).

Existing and Planned Water Supply

Dixon relies exclusively on groundwater for water supply. Dixon overlays the Solano Subbasin of the Sacramento Valley Groundwater Basin, and both the City water supplier and Cal Water pump the entirety of Dixon's water supply from this subbasin.

The City currently operates a total of five groundwater wells, which have a total capacity of about 8,500 gpm (12.2 million gallons per day (MGD)). The City's Core and North Zones are hydraulically connected and operate as a single distribution system and are served by the Watson Ranch Well (DW-37), Industrial Well (DW-44) and the School Well (DW-48), all of which are located in the Core Zone; there are no wells in the North Zone. The South Zone is a smaller area, which operates as a hydraulically independent distribution system, and is served by the Valley Glen Well (DW-52) and the Park Lane Well (DW-54); however, water pumped from the Valley Glen Well is high in nitrates and is only used as a back-up supply. Additional new wells are proposed within the City's water service area to meet projected future water demands (City of Dixon, 2016).

As discussed in more detail in Chapter 3.9: Hydrology, water quality standard exceedances in the Solano Subbasin were limited to trace inorganic elements, boron and iron, found in 1 of 13 wells from the Solano Subbasin sites. This well is not in the Planning Area. The groundwater meets all federal and state standards, except the newest standard: hexavalent chromium (or Chrome 6). Hexavalent chromium can occur naturally in the environment from the erosion of chromium deposits at levels of 20 ppb. It also is produced through industrial processes and then used in electroplating, pigments manufacture, corrosion control and other manufacturing activities. Long-term exposure to hexavalent chromium can cause cancer and damage the liver, kidney, and nerve tissues.

CalWater’s supply for the Dixon District comes from eight Cal Water-owned wells, also pumping from the Solano Subbasin. Cal Water supplied 1,151 acre feet (AF) in 2015, and draws only enough to satisfy customer demand in a given year (California Water Service, 2016).

The City routinely monitors its wells for the presence of drinking water contaminants and has found hexavalent chromium levels between 7.8 and 27 parts per billion in all five city wells between 2015 and 2017. (City of Dixon, 2016) California became the first state in the nation in 2014 to issue a drinking water standard for hexavalent chromium, setting a maximum concentration of 10 parts per billion. While this regulation was revoked due to financial infeasibility, the state maximum for total chromium (including hexavalent chromium and the nontoxic trivalent chromium) remains in place at 50 parts per billion (Kasler & Sabalow, 2017). The State Water Board will establish a new MCL standard for hexavalent chromium after comprehensive review, which could be at the same level as the invalidated MCL. In response to this issue, Cal Water has installed ion exchange wellhead treatment at affected well sites in order to ensure a continuous and reliable supply of water that meets all primary and secondary water quality standards. Dixon is the first of ten water districts in California affected by hexavalent chromium contamination to have this project completed.

The City of Dixon does not have any water recycling programs.

Table 3.9-1: Water Consumption and Production, 2015

	<i>Population Served</i>	<i>Well Design Capacity</i>	<i>Water Produced</i>	<i>Water Consumption</i>	<i>Average Daily Water Demand</i>
City of Dixon Water Service	8,431	12.2 MGD	1,781 AF	1,502 AF	1.34 MGD
CalWater Water Service	9,891	7.34 MGD	1,151 AF	1,151 AF	1.03 MGD
Total	18,322	19.54	2,932	2,653 AF	2.37 MGD

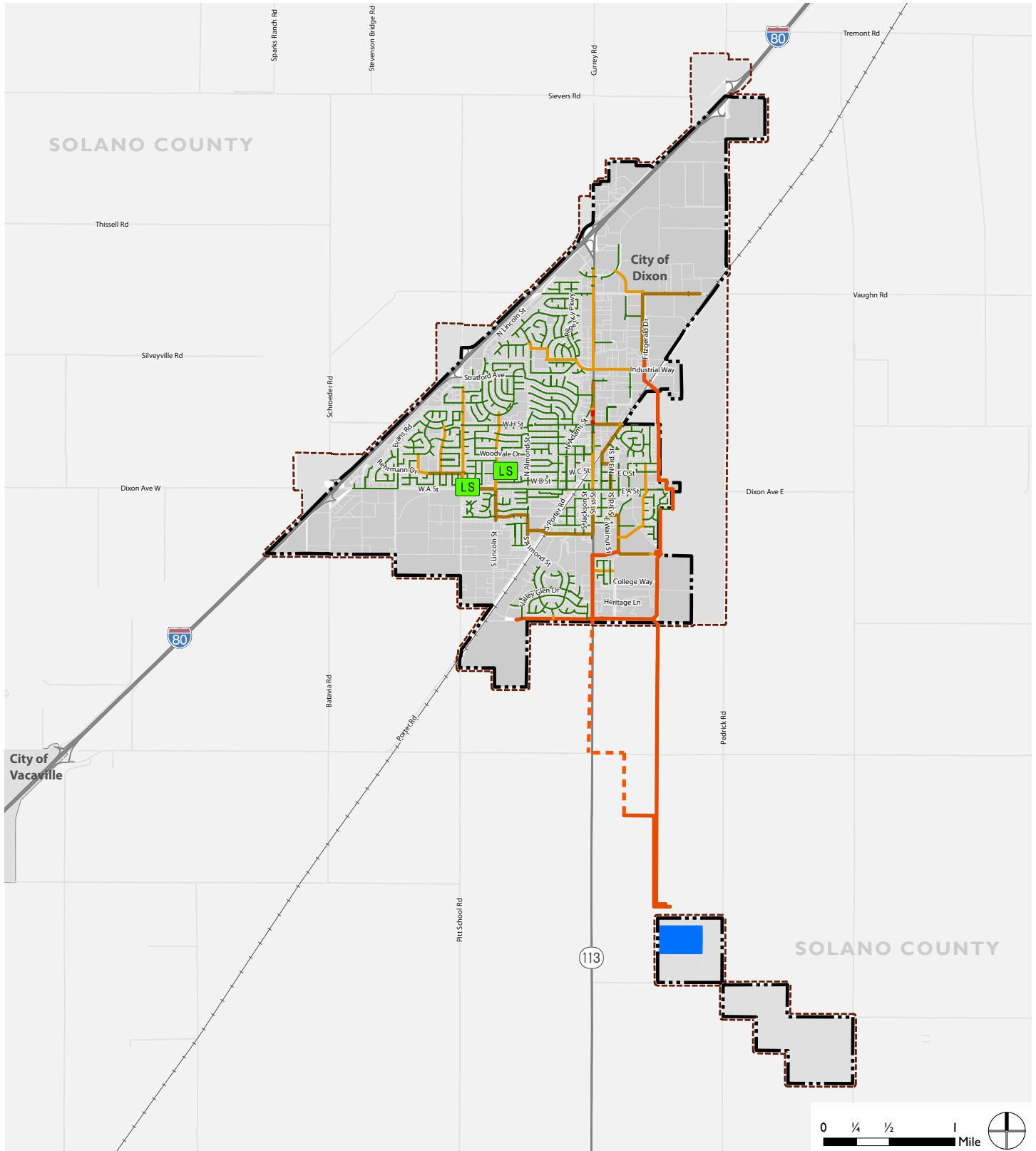
Sources: California Water Service Urban Water Management Plan, Dixon District, 2015, City of Dixon Water System Master Plan and Strategic Asset Management Plan, 2016.

Wastewater System



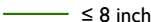

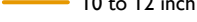




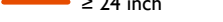
The City of Dixon owns and operates its sewer system and **wastewater treatment facility**. Dixon’s Public Works Department is responsible for providing sewer services in the City; homeowners are responsible for laterals connecting their homes to the public pipes.

Primary services provided by the City for the wastewater system are collection, treatment, disposal, and maintenance. The sewer system generally flows from the north and west to the south and east, with pipes sized starting at six inches adjacent to I-80, **eventually connecting to the 42” trunk line** at the south edge of town, which transports the influent to the wastewater treatment plant. The system also has two lift stations (see Figure 3.14-2). There are approximately 5,000 connections to the sewer system (California Regional Water Quality Control Board, Central Valley Region, 2014).

Figure 3.14-2: Existing Wastewater Collection System



Data Source: West Yost, 2016; City of Dixon, 2019; Dyett & Bhatia, 2019

- | | | |
|--|--|--|
| Sewer Facilities | Sewer Main (Diameter) |  Dixon Wastewater Ponds |
|  Lift Station |  ≤ 8 inch |  Railroad |
| |  10 to 12 inch |  Dixon City Limit |
| |  14 to 24 inch |  Sphere of Influence |
| |  ≥ 24 inch | |
| |  Abandoned Line | |

In 2016, Dixon completed an upgrade to its wastewater treatment facility (WWTF), replacing 130-acre treatment ponds with an oxidation ditch design. The upgrade implemented an activated sludge treatment process that required much less land than the original aerated pond process. Phase 1 of the WWTF upgrade increased the Average Annual Flow (AAF) capacity of the WWTF to 1.9 million gallons per day (MGD) and was constructed on four acres in a 14-acre site at the north edge of the original WWTF, which covered 430 acres. The Phase 1 upgrade/expansion was designed so that the WWTF can be further expanded to an AAF capacity of 2.5 MGD. As of 2014, the flows to the WWTF were approximately 1.2 MGD (City of Dixon, 2014).

The City still owns the 430 acres of the original WWTF site. Treated effluent that is generated at the WWTF is disposed of through land application and there is no discharge to any of the open channels or creeks near the WWTF. The City has additional land (in the 14-acre site) that could be used to further expand the WWTF beyond 2.5 MGD without reducing the area used for land application. Additionally, the City collects wastewater rates and impact fees to fund the operation, maintenance, and expansion of the collection system and WWTF.

Table 3.14-2: Wastewater Treatment Plant Design Capacity

<i>Description</i>	<i>Capacity</i>
Total Annual Flow	701 mg
Average Annual Flow	1.92 MGD
Maximum Monthly Average Flow	2.0 MGD

Source: Central Valley Regional Water Quality Control Board, ORDER R5-2014-0098, 2014.

Stormwater System

Regional stormwater drainage is provided by several agencies, including the City, Dixon Resource Conservation District (DRCD), Reclamation District 2068 (RD2068), and the Maine Prairie Water District. In 2004, these agencies established the Dixon Regional Watershed Joint Powers Agreement (DRWJPA) to cooperatively resolve several long-term, regional drainage problems, including establishing discharge limits from the City into the agricultural DRCD drainage channels and identifying and preliminarily sizing the detention ponds needed to achieve the discharge limits.

The City’s drainage facilities and regional watersheds draining the city are shown on Figure 3.9-3. **The City’s storm drain system includes 63 miles of storm drain piping ranging in size from 12 inches to 84 inches in diameter.** The storm water system also includes three major detention basins (Ponds A, B, and C). There are two pump stations, one pumps water out of Basin B, and the other pumps water from the Valley Glen development into Basin A. Additionally, there are several smaller basins within the city that serve individual residential, commercial, or industrial development projects.

The City’s major detention ponds (Ponds A, B, and C) were designed to hold runoff for extended time periods and to provide runoff water quality treatment. Ponds A and C have wet pools that allow sediment to settle out and remove nutrients with constructed wetlands. Pond B allows sediment to settle out by holding the runoff for an extended time period, but Pond B does not have a treatment wetland (although Pond B flows to Pond C which does have a treatment wetland). The NEQ Detention Pond will also be designed and constructed to provide water quality treatment. By

designing the ponds to provide sediment removal and wetland treatment, the City has precluded the need for individual development projects to construct on-site water quality treatment facilities.

Stormwater system facilities are provided through development and the City's Capital Improvement Program. Improvements required for development are included in development agreements, and are paid for by and installed concurrently with development as needed. There are several Capital Improvement Projects proposed by the City to accommodate planned growth and eliminate system deficiencies within each of the drainage basins.

See Chapter 3.9: Hydrology and Figure 3.9-3 for more information about storm drainage systems.

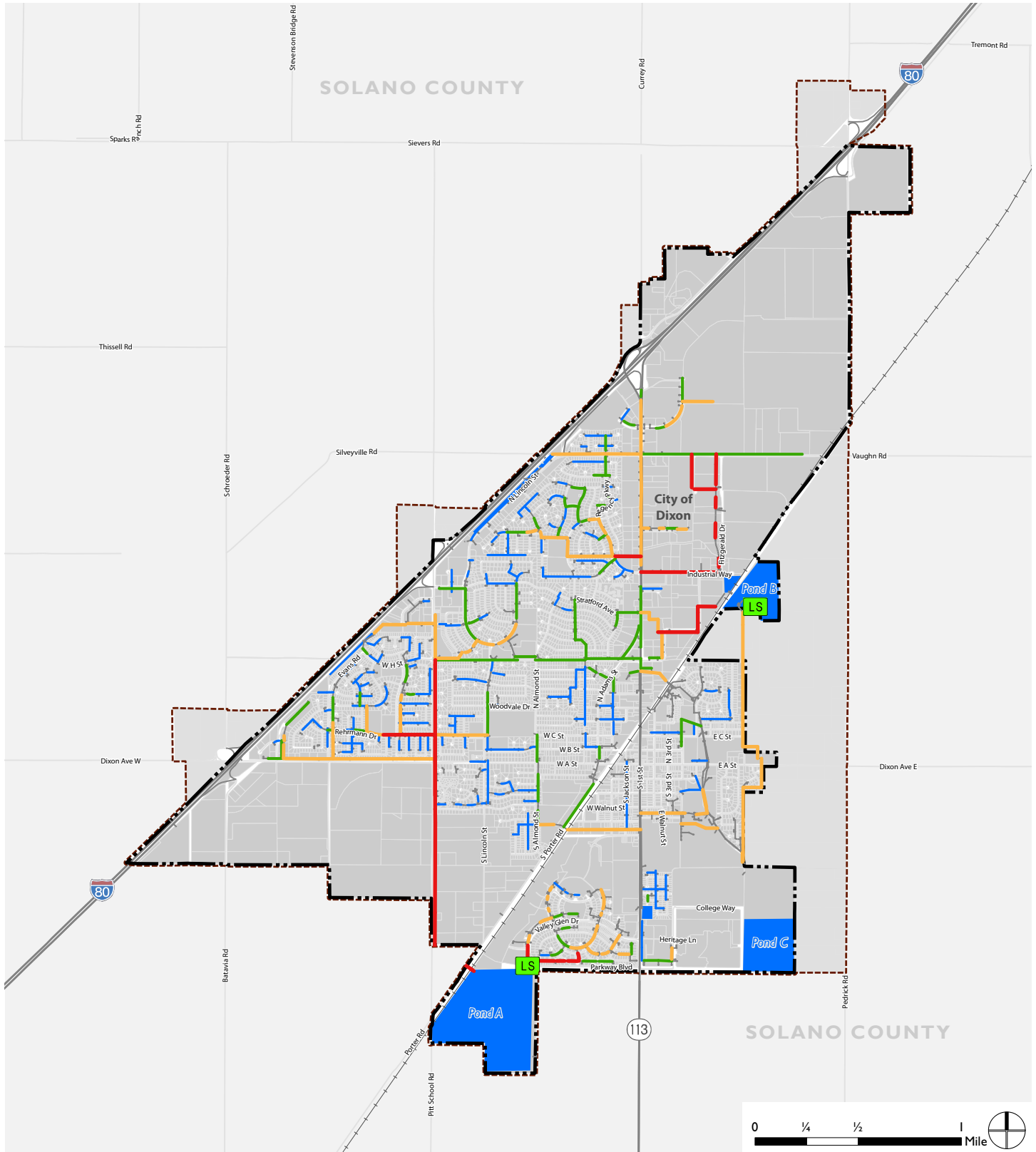
Solid Waste

Solid waste disposal services are provided in the Planning Area by Recology, a private company under contract with the City. Recology provides weekly curbside collection of garbage, recycling, and yard waste, and operates the Dixon Recycle Center, located in the city. Household hazardous waste disposal services are provided by Recology at the Household Hazardous Waste Facility in Vacaville.

Solid waste collected in the Planning Area is transported to the Hay Road Landfill located eight miles south of the city, operated by Recology. In 2017, the City of Dixon sent 17,834 tons of waste to the landfill (Cal Recycle, 2019). The landfill has a permitted capacity of 2,400 tons per day, with an estimated total permitted capacity of 34,697,000 cubic yards. The total estimated capacity used, as of April 2013, was 6,559,000 cubic yards (18.9% of total permitted capacity). The estimated closure date of the currently permitted facility is 2068 (City of Dixon, 2014). In 2018, Recology applied to expand the Hay Road Landfill by 8,800,000 cubic yards and extend the estimated life of the landfill by approximately nine years (CEQA, 2019).

Each Dixon residential household generates on average 2,206 pounds (lbs) of garbage, 484 pounds (lbs) of single stream recycling and 1,241 lbs of yard waste annually. There is one collection per week of garbage and yard waste for residential areas. Recyclables accepted at the Dixon Recycle Center include newspaper, plastics, glass, aluminum, tin cans, milk jugs, cardboard, office paper, and motor oil. Electronic waste can be recycled every Saturday from 10 a.m. to 2 p.m. The recycling center, located at First Street and C Street, is operated by Recology Dixon. Hazardous waste materials can be recycled at the Recology Center located at 855½ Davis Street, Vacaville, CA, on the first and third Saturdays of each month from 10 a.m. to 2 p.m. The City of Dixon, as all the jurisdictions in the State of California, has been mandated to reduce its overall waste stream going to the landfill by 75 percent by the year 2020. The City now completes an annual waste diversion evaluation, and was shown to be in compliance with all applicable State standards in 2013. This was achieved primarily through implementation of the separated yard waste program started in 1995 and curbside recycling started in 2008 (City of Dixon, 2014).

Figure 3.14-3: Existing Storm Facilities



Data Source: West Yost, 2016; City of Dixon, 2019; Dyett & Bhatia, 2019

Storm Facilities

- LS Lift Station
- Detention Basin

Storm Drains

— No Diameter Information

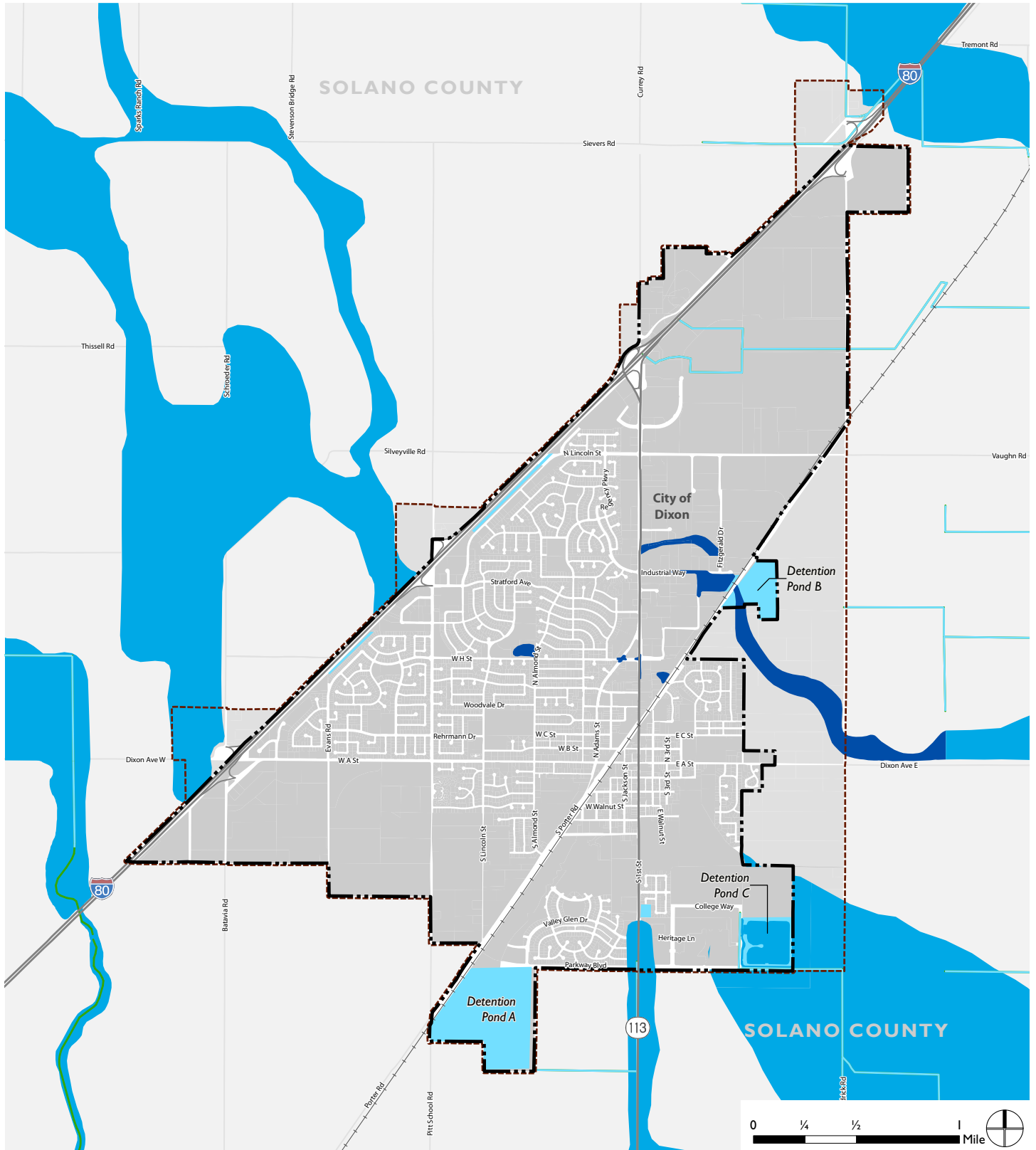
PIPE

- ≤ 21 inch
- 24 to 33 inch
- 36 to 54 Inch
- ≥ 60 inch

Railroad

- Dixon City Limit
- Sphere of Influence

Figure 3.14-4: Flood Zones



Data Source: FEMA, 2012; City of Dixon, 2019; Dyett & Bhatia, 2019

2012 FEMA Floodplain Mapping

- 100 Year
- 500 Year Floodplain, 100 Year Floodplain with Water Depth less than 1 Foot, or 100 Year Floodplain Protected by Levees

- Railroad
- Dixon City Limit
- Sphere of Influence

Table 3.9-5: Dixon Landfill Disposal, 2008-2017

Year	Landfill Disposal (tons)	Per Capita Disposal: Population (pounds per day)	Per Capita Disposal: Employment (pounds per day)
2008	14,274	4.5	11.2
2009	13,712	4.3	12.4
2010	13,153	3.9	14.0
2011	12,358	3.7	13.1
2012	12,807	3.8	13.8
2013	13,971	4.1	13.7
2014	14,692	4.0	13.6
2015	14,181	4.1	14.6
2016	19,802	5.7	20.6
2017	17,834	5.0	17.2

Source: Cal Recycle, 2019.

Electricity and Gas Facilities

Electricity and gas power in Dixon are provided by PG&E. The PG&E Dixon Substation, which transforms high-voltage electricity down to usable levels for Dixon customers, is located at A Street and Porter Street. Dixon’s electrical lines are located underground through most of the city, but above ground in the older downtown core.

There are two underground natural gas storage facilities in Solano County, but they are located several miles south of Dixon’s city limits (California Department of Conservation, 2019).

Electricity and gas usage are discussed in greater detail in Chapter 3.6: Energy, Climate Change, and Greenhouse Gases.

REGULATORY SETTING

Federal Regulations

Federal Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the U.S. EPA in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, the EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Department of Public Health administers the regulations contained in the SDWA in the State of California.

United States Environmental Protection Agency

The 1986 amendments to the Safe Drinking Water Act and the 1987 amendments to the Clean Water Act established the Environmental Protection Agency (EPA) as the primary authority for water programs. The EPA is the federal agency responsible for providing clean and safe surface water, groundwater, and drinking water, and protecting and restoring aquatic ecosystems. The planning area is in EPA Region 9 (Pacific Southwest), which includes Arizona, California, Hawaii, Nevada, Pacific Islands, and Tribal Nations.

Federal Water Pollution Control Act of 1972 (Clean Water Act)

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into “waters of the United States.” The Act specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Some of these tools include Total Maximum Daily Loads (TMDLs), water quality certification, and regulations on discharge of dredge or fill material. For more details, see Section 3.9: Hydrology and Water Quality.

National Pollutant Discharge Elimination System

The Clean Water Act was amended in 1987 to include urban and stormwater runoff, which required many cities to obtain a National Pollution Discharge Elimination System (NPDES) permit for stormwater conveyance system discharges. Section 402(p) of the Clean Water Act prohibits discharges of pollutants contained in stormwater runoff, except in compliance with a NPDES permit.

State Regulations

California Department of Public Health

The Drinking Water Program, which regulates public water supply systems, is a major component of the State Department of Public Health Division of Drinking Water and Environmental Management. Regulatory responsibilities include the enforcement of the federal and State Safe Drinking Water Acts, the regulatory oversight of public water systems, issuance of water treatment permits, and certification of drinking water treatment and distribution operators. State regulations for potable water are contained primarily within the Food and Agricultural Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the California Code of Regulations.

The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations. Issues related to treatment and distribution of recycled water are generally under the influence of the SWRCB.

California Porter–Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the State Water Resources Control Board (SWRCB) and nine regional water quality control boards address water quality and rights regulation. The five-member SWRCB protects water quality by setting statewide policy, coordinating and supporting the Regional Water Quality Control Board (RWQCB) efforts, and reviewing petitions that contest RWQCB actions. The SWRCB is also solely responsible for allocating surface water rights.

Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions. The Planning Area lies within the jurisdiction of the San Francisco Regional Water Quality Control Board.

The Act authorizes the SWRCB to enact state policies regarding water quality in accordance with CWA 303. In addition, the Act authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge to State waters. SWRCB Order No. 2006-0003 provides a consistent statewide approach to reducing sanitary sewer overflows (SSOs) by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a sewer system management plan.

The Porter-Cologne Water Quality Control Act further requires that the SWRCB or the RWQCBs adopt water quality control plans (basin plans) for the protection of water quality. Basin plans also provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals.

California Department of Water Resources

The California DWR is responsible for the operation and maintenance of the California SWP. DWR is also responsible for overseeing the statewide process of developing and updating the California Water Plan (Bulletin 160 series); protecting and restoring the Sacramento–San Joaquin Delta; regulating dams, providing flood protection, and assisting in emergency management; educating the public about the importance of water and its proper use; and providing technical assistance to service local water needs.

Senate Bills 610 and 221

Enacted in 2002, SB 610, which was codified in the State Water Code beginning with section 10910, requires the preparation of a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain large development projects is required, the water agency that is to serve the development must complete a WSA to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with a proposed project.

Enacted in 2001, SB 221, which was codified in the State Water Code beginning with section 10910, requires that the legislative body of a city or county, which is empowered to approve, disapprove, or conditionally approve a subdivision map, must condition such approval upon proof of sufficient water supply. **The term “sufficient water supply” is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision.** The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including agricultural and industrial uses.

The Water Conservation Act of 2009 (SB X7-7)

California legislation enacted in 2009 as SB 7 of the 7th Special Legislative Session (SB X7-7) **instituted a new set of urban water conservation requirements known as “20 Percent By 2020.”** These requirements stipulate that urban water agencies reduce per-capita water use within their service areas by 20 percent relative to their use over the previous 10 to 15 years.

California Green Building Standards Code

In January 2010, the California Building Standards Commission adopted the statewide mandatory Green Building Standards Code (CALGreen Code) that requires the installation of water-efficient indoor infrastructure for all new projects beginning after January 1, 2011. CALGreen Code was incorporated as Part 11 into Title 24 of the California Code of Regulations. The CALGreen Code applies to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure. All development projects must satisfy the indoor water use infrastructure standards necessary to meet the CALGreen Code. The CALGreen Code requires residential and nonresidential water efficiency and conservation measures for new buildings and structures that will reduce the overall potable water use inside the building by 20 percent. The 20 percent water savings can be achieved in one of the following ways: (1) installation of plumbing fixtures and fittings that meet the 20 percent reduced flow rate specified in the CALGreen Code, or **(2) by demonstrating a 20 percent reduction in water use from the building “water use baseline.”** The CALGreen Code also requires diversion of at least 65 percent of the construction waste generated during most new construction projects. Agencies currently enforcing building codes are responsible for enforcement of the CAL Green Code.

State Updated Model Landscape Ordinance (Assembly Bill 1881 (2006))

The State’s updated Model Water Efficient Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by July 15, 2015.

California Urban Water Management Planning Act

The California Legislature enacted the Urban Water Management Planning Act of 1983 (California Water Code Sections 10610 through 10656) to support conservation and efficient use of urban water supplies at the local level. The act requires that every urban water supplier that provides water to 3,000 or more customers, or over 3,000 AF of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The act requires that total projected water use be compared to water

supply sources over the next 20 years in five-year increments, that planning occur for single- and multiple-dry water years, and that plans include a water recycling analysis that incorporates a **description of the wastewater collection and treatment system within the agency's service area along with current and potential recycled water uses.**

Applicable urban water suppliers within California are required by the Water Code to prepare and adopt a UWMP and update it every five years. A UWMP is required in order for a water supplier to be eligible for the DWR-administered state grants, loans, and drought assistance. A UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices (BMPs), and water shortage contingency planning for a specified service area or territory. The City of Dixon did not need to prepare a UWMP as it has fewer than 3,000 customers. With more than 3,000 customers, Cal Water is required to prepare a UWMP; Cal Water's most recent UWMP dates to 2016.

California Assembly Bill 1739 (201)/ California Senate Bills 1168 & 1319 (2014)

These three bills are collectively known as the Sustainable Groundwater Management Act (SGMA). They designate the Solano Subbasin as a medium-priority water basin, making it subject to SGMA regulations. In response to the 2014 SGMA, the City of Dixon joined the Solano Subbasin Groundwater Sustainability Agency in 2017. Under the 2014 SGMA, the Agency must adopt a Groundwater Sustainability Plan (GSP) by January 31, 2022. For more details, see Chapter 3.9: Hydrology and Water Quality.

California Emergency Graywater Regulations

In 2009, as part of the Governor's declared State of Emergency, Chapter 16A "Nonpotable Water Reuse Systems" was incorporated into the 2007 California Plumbing Code. Chapter 16A establishes minimum requirements for the installation of graywater systems in residential occupancies regulated by the California Department of Housing and Community Development, providing guidance and flexibility designed to encourage the use of graywater. The standards allow small graywater systems to be installed in homes without a construction permit, substantially reducing the barriers to installing small residential graywater systems in California. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of discharge for irrigation and/or indoor use; to reduce the number of noncompliant graywater systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates electric and natural gas utility service statewide. The CPUC oversees environmental documentation of distribution infrastructure, and permits interconnections, reliability systems, and electric and communications infrastructure. The CPUC has jurisdiction over natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering, and billing.

California's Department of Resources Recycling and Recovery

California Department of Resources Recycling and Recovery (CalRecycle) is the State's leading authority on recycling, waste reduction, and product reuse. CalRecycle plays an important role in the stewardship of California's vast resources and promotes innovation in technology to encourage **economic and environmental sustainability**. CalRecycle **brings together the State's recycling and waste management programs** and continues a tradition of environmental stewardship. Mandated responsibilities of CalRecycle are to reduce waste, promote the management of all materials to their highest and best use, and protect public health and safety and the environment.

California Integrated Waste Management Act (AB 939)

AB 939, California's Integrated Waste Management Act of 1989, mandates that 50 percent of solid waste be diverted by the year 2000 through source reduction, recycling, and composting. AB 939 also establishes a goal for all California counties to provide at least 15 years of ongoing landfill capacity. This requires each region to prepare a source reduction and recycling element to be **submitted to CalRecycle, which administers programs formerly managed by the state's Integrated Waste Management Board and Division of Recycling**. The City of Dixon participates in the Upper Valley Waste Management Agency to achieve compliance with AB 939.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327)

AB 1327 was established in 1991, which required CalRecycle to develop a model ordinance for the adoption of recyclable materials in development projects. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects.

Disposal Measurement System Act of 2008 (SB 1016)

SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, while establishing revised calculations for those entities who did not meet the 50 percent diversion rate. SB 1016 also established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal-based indicator—the per capita disposal rate—uses **only two factors: a jurisdiction's population** (or in some cases employment) and its disposal as reported by disposal facilities.

Mandatory Commercial Recycling (AB 341)

Effective July 1, 2012, AB 341 requires that commercial enterprises that generate four cubic yards or more of solid waste weekly participate in recycling programs. This requirement also includes multifamily housing complexes of five units or more, regardless of the amount of solid waste generated each week.

Mandatory Commercial Organics Recycling (AB 1826)

AB 1826 requires that commercial enterprises that generate certain amounts of organic and solid waste weekly participate in composting programs. The law includes escalating thresholds to ease businesses into commercial organic recycling.

State Climate Change Scoping Plan

In accordance with the California Global Solutions Act of 2006 (AB 32), the California Air Resources Board prepared the 2008 Climate Change Scoping Plan (first updated in 2014 and a second update is pending for 2017), which includes a series of recommendations regarding recycling and waste. Key recommendations include reducing methane emissions at landfills; increasing waste diversion, composting, and other beneficial uses of organic materials; and mandating commercial recycling (Cal Air Board, 2008 & 2017).

Local Regulations

City of Dixon Municipal Code

Chapter 13.06: Underground Utilities

This chapter requires the supplying utility to perform any necessary underground construction work in compliance with established construction standards and in compliance with rules and regulations of the California Public Utilities Commission.

Chapter 14.01: Sewers

This chapter sets forth uniform requirements for users of the publicly owned treatment works (POTW) for the City of Dixon and enables the City of Dixon to comply with all applicable State and Federal laws, including the Clean Water Act and the Porter-Cologne Water Quality Control Act. This chapter authorizes the issuance of wastewater discharge permits; provides for monitoring, compliance, and enforcement activities; establishes administrative review procedures; requires user reporting; and provides for the setting of fees for the equitable distribution of costs resulting from the program established in this chapter.

Chapter 14.02: Water

This chapter is the Water Code of the City of Dixon. The provisions of this chapter apply to water **supplies and services operated by the city, systems connecting to the City's distribution system, the issuance of permits, the collection of fees for services and improvements to the City's water facilities, and the provision of penalties for violations of any of the provisions of this chapter.** This chapter establishes general water use requirements, water conservation methods, permits, fees, and rates. This chapter also addresses the protection of drinking water in order to protect the public potable water supply from the possibility of contamination or pollution by isolating, within each **customer's internal distribution** system or private water system, such contaminants or pollutants which could backflow into the public water systems; promoting the elimination or control of existing cross-connections, actual or potential, between in-plant potable water systems and

nonpotable water systems, plumbing fixtures and industrial piping systems; and providing for the maintenance of a continuing program of protection of drinking water, or cross-connection control program, that will systematically and effectively prevent the contamination or pollution of all potable water systems.

Chapter 18.47: Telecommunications Facilities

In accordance with Municipal Code Section 18.47, the City of Dixon regulates the design, placement, permitting, maintenance, and monitoring of telecommunications facilities to ensure public safety and to reduce adverse visual and operational impacts. It requires any telecommunications facilities located in vacant parcels to be relocated upon development of the parcel, and provides for design oversight and the ability of the City to revoke, suspend, or modify permits.

Chapter 9.06: Garbage and Refuse

This chapter specifies locations, care of, and disposal for solid waste collection. It requires containment of rubbish to prevent scattering and use of the City-mandated contractor to collect all refuse.

Solano County Code

Chapter 6.4: Sewage Standards

This chapter requires all new development in unincorporated County parcels to connect to sewer systems if they are available, defined as a) within 200 feet of the property; b) if the structure is within 1,000 feet of the property line and c) if the agency in control of the sewer permits connection. Septic systems may be permitted if there is no available sewer connection.

Chapter 13.10: Well Standards

This chapter sets standards for new wells in unincorporated County parcels, regulating the construction of wells, including setbacks, and the beneficial use of water from them.

2016 Water System Master Plan and Strategic Asset Management Plan

The Water System Master Plan (WSMP) for the City of Dixon identifies existing potable water system deficiencies and required potable water system improvements, based on updated demand estimates and system evaluations, and formulates a comprehensive Capital Improvement Program (CIP) which meets the needs of the City's existing and future water customers. The WSMP was completed based on information for the City's water distribution system at the end of 2016, but does not include updates to the system and operational changes for 2017. The resulting WSMP provides the City with a comprehensive and prioritized road map to improve the capacity, operational flexibility, and reliability of the potable water distribution system to meet existing and projected future water demands. The WSMP develops a Strategic Asset Management Plan for the City's existing water system facilities to provide guidance for the City's preventative maintenance and rehabilitation and replacement programs. A comprehensive Capital Improvement Program

identifying the size and location of required improvements is also developed to address existing potable water system deficiencies and future potable water system needs.

Based on the evaluations performed for this WSMP, several improvement projects have been recommended for the City's existing, 2030 and buildout water system. Suggested improvements include constructing new pipelines throughout the Planning Area, adding storage within the Northeast Quadrant Specific Plan area at buildout, and the Fitzgerald Drive booster pump station. The WSMP also recommends construction of two new wells to increase supply within the Southwest Dixon Specific Plan and Northeast Quadrant Specific Plan #1 Planning Areas by 2030, and two new wells at buildout within the East development area and Northeast Quadrant Specific Plan #2 area (City of Dixon, 2016).

California Water Service 2015 Urban Water Management Plan, Dixon District

Cal Water's Dixon District was formed in 1927 with the purchase of the water system from Pacific Gas and Electric Company. Cal Water began operating the water system owned by the Rural North Vacaville Water District in 2003. The District operates eight groundwater wells, two storage tanks, and 32 miles of pipeline. Cal Water is one of two water purveyors operating within the City of Dixon. The second water purveyor, Dixon-Solano Municipal Water Service (DSMWS), was formed in 1984 by a Joint Exercise of Powers between Solano Irrigation District and the City of Dixon. This joint service water system is being operated and maintained by Solano Irrigation District for the DSMWS. The City of Dixon water system is now operated under contract with Severn Trent Services, as of 2014.

The UWMP is a foundational document and source of information about the Dixon District's historical and projected water demands, water supplies, supply reliability and vulnerabilities, water shortage contingency planning, and demand management programs. The UWMP is used as a long-range planning document by Cal Water for water supply and system planning. It also provides source data on population, housing, water demands, water supplies, and capital improvement projects used in regional water resource management plans prepared by wholesale water suppliers and other regional planning authorities and General Plans prepared by cities and counties, like the Proposed Plan. (California Water Service, 2016)

The 2010 UWMP established 2020 targets for water consumption in the Dixon District, subsequently modified in the 2015 UWMP using updated population estimates. The revised population estimates decreased the District's 2020 water use target from 164 to 161 gallons per capita daily. The 2015 UWMP also provides water consumption estimates for retail and residential uses, and recommends water conservation methods supporting the regulations discussed above.

Impact Analysis

SIGNIFICANCE CRITERIA

For the purposes of this EIR, a significant adverse impact would occur if implementation of the Proposed Plan would:

- Criterion 1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Criterion 2: Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- Criterion 3: Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the **project's projected demand in addition to the provider's existing commitments**;
- Criterion 4: Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Criterion 5: Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

METHODOLOGY AND ASSUMPTIONS

The analysis for this section addresses impacts on public utilities and city infrastructure due to projected growth arising from the Proposed Plan. Subsequent California Environmental Quality Act (CEQA) review at the project level may be required to determine whether significant environmental effects would result from the construction of water distribution lines, wastewater collection system components, storm drainage conveyance pipes or facilities, and any onsite storage or pumping facilities on development sites, or other utilities improvements. Project-level review will occur when proposed development plans are prepared. This analysis is based on a review of relevant local and regional plans and background information, and consultation with relevant utilities.

RELEVANT POLICIES AND ACTIONS

Economic Development

- E-1.4 Coordinate economic development activities with infrastructure planning efforts to ensure that to the extent possible, appropriately-sized utilities are available to support development of the most feasible, top-priority opportunity sites.

Land Use

- LG-C.1.9 Prior to the provision of City services to unincorporated areas, require those unincorporated properties to be annexed into the City, or require a conditional service agreement to be executed agreeing to annex when deemed appropriate by the City.
- LG-C.5.6 Encourage new development to incorporate greenery, including climate appropriate trees and plants as well as rain gardens, and as new development occurs, acquire easements or development rights for open space, planting street trees, and landscaping adjacent to public rights-of-way.

Mobility and Transportation

- MT.4.8 Require new or redesigned parking lots to optimize pedestrian and bicycle safety and provide green infrastructure for aesthetic and stormwater management purposes.

Natural Environment, Safety and Hazards

- NE-1.6 Recognize the Sacramento Valley - Solano Groundwater Subbasin as a critical resource for Dixon and proactively promote sustainable groundwater management practices.
- NE-1.7 Continue to work with the Solano Subbasin Groundwater Sustainability Agency Collaborative to develop and implement strategies for the long-term health and viability of the Solano Groundwater Subbasin.
- NE-1.9 Ensure that drainage ditches which discharge directly to or are located within open space.
- NE-1.D Pursue funding from the Sustainable Groundwater Management Grant Program and other sources for investments in groundwater recharge and implementation of the Solano Basin Groundwater Sustainability Plan.
- NE-2.4 Encourage the retention and reuse of rainwater onsite and promote the use of rain barrels or other rainwater reuse systems throughout the community.
- NE-2.5 Encourage new development to incorporate as many water-wise practices as possible in their design and construction.

- NE-2.6 Conserve water through the provision of water-efficient infrastructure, drought tolerant plantings, greywater usage to support public parks and landscaped areas.
- NE-2.7 Conserve water through the planting and maintenance of trees, which will provide for the capture of precipitation and runoff to recharge groundwater, in addition to providing shading for other landscaping to reduce irrigation requirements. Ensure **that any 'community greening' projects utilize water-efficient landscape.**
- NE-2.B Explore establishing a rebate program to promote the installation of renewable energy production systems including photovoltaics and other appropriate technologies.
- NE-2.C Continue to provide water customers with information on conservation techniques, services, devices, and rebates by publishing information on the City's website and distributing flyers.
- NE-2.D Update the Municipal Code to allow the use of greywater and rainwater catchment systems for all structures.
- NE-3.1 Promote reduction of solid waste production throughout Dixon and expand the range of programs and information available to local residents and businesses.
- NE-3.2 Ensure that 75 percent of solid waste generated be reduced at source, recycled, or composted by the year 2020 and beyond, per AB 341.
- NE-3.3 Continue to promote the safe disposal of household hazardous waste through public education.
- NE-3.4 **Provide information via the City's website on curbside pick up of donations by local organizations such as Goodwill, Salvation Army, Vietnam Veterans of America, and Youth Industries.**
- NE-3.A Provide recycling receptacles in parks and public spaces, in addition to trash receptacles.
- NE-3.B Consider expanding compost collection services to residential customers in Dixon or implementing a backyard composting program for local residents.
- NE-3.C Work with commercial and industrial generators to develop and implement a source reduction and recycling plan tailored to their individual waste streams.
- NE-3.D Adopt a construction and demolition diversion ordinance based on the CalRecycle model ordinance to require diversion of construction and demotion debris as needed to meet State mandates.
- NE-3.E Collaborate with Dixon homeowners associations and other community groups to establish a citywide event such as a garage sale day or goods exchange.

NE-5.C Consider developing a green infrastructure plan that employs tools such as bioswales, permeable pavement, rain gardens, rain barrels and cisterns, and green roofs to treat stormwater, attenuate floods, increase groundwater recharge, and reduce urban heat islands.

Public Facilities and Services

PSF-2.1 Coordinate with the California Water Service Company (Cal Water) to ensure the provision of adequate water service to Dixon residents and businesses.

PSF-2.2 **Expand the City's water supply system, including wells, pipelines and storage facilities,** in order to meet future need as development occurs, particularly in the Northeast Quadrant and in Southwest Dixon.

PSF-2.3 **Improve the reliability of the City's water system to meet future demand, including** through the construction of additional wells and the identification of potential surface water supply sources.

PSF-2.4 **Improve the reliability of the City's water system to meet future demand,** including through the construction of additional wells and the identification of potential surface water supply sources.

PSF-2.5 Use the performance metrics in the Water System Strategic Asset Management Plan adopted April 10, 2018 to identify and prioritize capital and maintenance improvement program elements.

PSF-2.6 Provide wastewater collection and treatment services, ensuring that adequate capacity is available to serve existing and future need in the community and that effluent can be treated and disposed in accordance with RWQCB standards.

PSF-2.7 Operate, maintain and update the City-owned storm sewer system as needed to serve existing and future development.

PSF-2.8 Coordinate with the Dixon Regional Watershed Joint Powers Agency, the Solano County Water Agency, the Solano Irrigation District and other responsible agencies to address storm drainage and flood control on a sub-regional basis in order to optimize the use of existing and planned conveyance facilities.

PSF-2.9 Require through development agreements that new development provide necessary storm drainage improvements and ensure that upstream stormwater generators fully address stormwater needs on their property.

PSF-2.10 Ensure through the development review process that adequate public utilities and services are available to serve new development and ensure that new development pay its fair share of the costs of constructing new public utilities, providing public services, and upgrading existing facilities as needed to accommodate it.

- PSF-2.11 Encourage project designs that minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.
- PSF-2.A Establish a new metered interconnection with the Cal Water system in Southwest Dixon as development occurs in this area in order to augment the backup source of water available to both suppliers in case either system experiences low system pressures or inadequate supplies.
- PSF-2.B **Study options for diversifying and expanding the City's water supply sources.**
- PSF-2.C Investigate opportunities to jointly invest in new facilities, as well as opportunities to share facilities with other regional water transporters and providers or other local municipalities.
- PSF-2.D Plan and construct centralized water treatment facilities providing wellhead treatment to address hexavalent chromium (Cr(VI)) concentrations in excess of the maximum contaminant level.
- PSF-2.E Increase wastewater treatment facility, trunk sewer and pump station capacities in order to accommodate future growth within the City's service area.
- PSF-2.F Prepare a Sewer Master Plan and computer model of the sanitary sewer system to estimate the sizing and costs of needed improvements; to identify and mitigate sources of infiltration and inflow; and to determine how best to accommodate existing needs and future growth.

IMPACTS

- Impact 3.14-1 Implementation of the Proposed Plan would not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (*Less than Significant*)

Implementation of the Proposed Project would allow for the potential development of future residential, commercial, and industrial land uses in the Planning Area. Additional population and businesses would generate additional demand for water and wastewater services, and therefore, a potential increased demand for water provision and wastewater collection, conveyance, and treatment services over currently established levels. Additional development has the potential to increase pervious areas, resulting in increased stormwater runoff. Further, new development could require the relocation or construction of new electric, gas, or telecommunications facilities if existing facilities were found to be insufficient or if planned development interfered with existing facilities.

Water

There could be a significant impact from the implementation of the Proposed Plan if new or expanded water facilities were needed to serve new residents and businesses, and were constructed out of accordance with environmental standards.

The anticipated water demand changes rely on per capita water consumption. As presented in Cal Water's 2015 **Urban Water Management Plan**, the per capita daily water use of Dixon was 104 gallons per capita per day (GPCD) in 2015. For a planning-level water demand estimate, the expected population increase is multiplied by the per capita water consumption factor. Using 104 GPCD as a baseline, the projected additional citywide water demand at buildout of the Proposed Plan, with 9,087 additional residents, would be 1,058 AF per year or 0.94 MGD.

The City's water demand as of 2015 was 2.37 MGD. Therefore, the Proposed Project may result in a water demand change of up to 40 percent. However, the City operates a total of five groundwater wells, which have a total capacity of about 12.2 MGD or 13,700 acre-feet per year (AFY). For planning purposes, the City assumes a firm water supply calculated as the total supply available **with the largest well out of service. The City's existing firm water supply is 6.0 MGD or 6,800 AFY.** The WSMP recommends four additional wells be constructed to meet the buildout demand projections. The total buildout supply capacity with the recommended new wells is projected to be 23,400 AFY with the firm supply capacity (assuming the largest well out of service) to be 17.3 MGD or 19,400 AFY. **Cal Water's wells have the capacity to pump 7.34 MGD;** therefore, no new wells beyond the current existing and planned wells will be required for the Proposed Plan.

The only water **treatment currently provided at any of the City's wells** is chlorination and is not being planned to address hexavalent chromium (Cr(VI)) concentrations in excess of the rescinded maximum contaminant level (MCL) (City of Dixon, 2016). Cal Water currently provides treatment at three well sites in order to reduce impacts from Cr(VI) (California Water Service, 2016). These existing wells have enough capacity to serve the estimated buildout population. The Proposed Plan requires the City to treat water to achieve safe levels of Cr(VI) (PSF.2.D) – any treatment arising from the Proposed Plan would be subject to all applicable State and local regulations, including the California Porter–Cologne Water Quality Control Act and the California Green Building Standards Code.

Additionally, goals and policies in the Proposed Plan aim to conserve water by curbing demand and ensure coordinated planning for the provision of public facilities including water infrastructure (NE2.5, NE2.6, NE2.7, NE2.C, NE2.D, PSF 2.2, and PSF 2.10). Such policies would help to reduce the demand on existing treatment infrastructure and allow for meaningful consideration of potential impacts of any future decisions regarding the provision of new infrastructure. Therefore, through compliance with State and local regulations, and implementation of the Proposed Plan policies, impacts would be less than significant.

Wastewater Treatment

Implementation of the Proposed Plan will result in increased wastewater flows to the City's WWTF, which could result in the need to expand the treatment facility.

In 2016, the City completed an upgrade to its WWTF. The upgrade implemented an activated sludge treatment process that required much less land than the original aerated pond process and resulted in compliance with the CVRWQCB effluent discharge limits. Phase 1 of the WWTF upgrade increased the Average Annual Flow (AAF) capacity of the WWTF to 1.9 million gallons per day (MGD) and was constructed on 4 acres in a 14-acre site at the north edge of the original WWTF, which covered 430 acres. The Phase 1 upgrade/expansion was designed so that the WWTF could be further expanded to an AAF capacity of 2.5 MGD. The City still owns the 430 acres of the original WWTF site. Treated effluent that is generated at the WWTF is disposed of through land application with no discharge to any of the open channels or creeks near the WWTF. Within the City's 14-acre site, there is space to further expand the WWTF beyond 2.5 MGD without reducing the area used for land application. Additionally, the City collects wastewater rates and impact fees to fund the operation, maintenance, and expansion of the collection system and WWTF, ensuring the financial capacity to make any necessary improvements in full compliance with any applicable regulations.

Implementation of policies in the Proposed Plan will also ensure that there are minimal impacts to **the City's ability to treat wastewater**, including by requiring proper sizing and coordination of new lines and adequate capacity to serve new development (E.1.4, PSF.2.6, PSF.2.10, and PSF.2.E). Policy PSF.2.6 requires the City to provide wastewater collection and treatment services, ensuring that adequate capacity is available to serve existing and future needs in the community and that effluent can be treated and disposed in accordance with Central Valley Regional Water Quality Control Board (CVRWQCB) standards.

Because the WWTF can be expanded to accommodate treatment and disposal of the projected buildout flows and because of the Proposed Plan policies, this impact is considered less than significant regarding wastewater treatment capacity.

Stormwater Drainage

As discussed in Chapter 3.9: Hydrology, the City of Dixon has sufficient planned or existing stormwater drainage capacity at accommodate growth projected under the Proposed Plan; therefore, impacts will be less than significant.

Electric Power and Natural Gas

The development envisioned under the Proposed Plan is expected to lead to growth in both population and employment in Dixon, which will require natural gas and electrical facilities to serve them; if the electrical or natural gas needs of the new development exceeds existing facilities' capacities, or required relocation of the facilities, a significant environmental impact could occur.

As discussed in the Settings section above, there is one electric substation in Dixon, and no major natural gas storage facilities. The Proposed Plan does not envision the relocation of the Dixon

Substation, and it is expected to have sufficient capacity to serve new development. Any construction or relocation of electrical lines, poles, or natural gas lines would be minor construction work and would be required to be performed in accordance with applicable CPUC environmental standards. Therefore, the impacts of the Proposed Plan on relocation or construction of electric or gas facilities as less than significant.

Telecommunications Facilities

The Proposed Plan is expected to lead to significant increases in both jobs and residents within the City of Dixon, which could require increased capacity of telecommunications facilities to serve them. If the future development required significant new telecommunications facilities, or the relocation of existing facilities to create space for new planned development, significant environmental impacts could occur.

As discussed above, existing and planned facilities would be adequate to serve the projected buildout population, and existing regulations and policies in the Proposed Plan would ensure that any necessary work on these utilities would not cause significant environmental impacts; therefore, impacts resulting from the Proposed Project would be less than significant.

Mitigation Measures

None required.

Impact 3.14-2 Implementation of the Proposed Plan would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. (*Less than Significant*)

The City of Dixon is entirely reliant on groundwater for its water supply. As the Proposed Plan anticipates up to 9,340 new residents and 2,578 new jobs over the planning horizon, a significant impact could occur if there were insufficient groundwater supply to serve the needs of these new residents and employees or if new water sources could not be acquired.

Water customers within the Planning Area are served by two water suppliers, the City and the Cal Water.

The City serves groundwater supplies within a portion of the current City limits, with groundwater produced from the Solano Groundwater Subbasin. The City is a participant in the Solano Subbasin Groundwater Sustainability Agency (SSGSA) for the purpose of working collaboratively to sustainably manage the groundwater basin as required by the Sustainable Groundwater Management Act of 2014 (SGMA).

As discussed in Impact 3.14-2 above, the projected additional citywide water demand at buildout of the Proposed Plan, with 9,087 additional residents, would be 1,058 AFY or 0.94 MGD, a water demand change of up to 40 percent.

The California Water Code requires urban water suppliers to submit an Urban Water Management Plan (UWMP) every 5 years. The requirement applies to urban water suppliers that serve more than 3,000 customers or supply more than 3,000 acre-feet of water annually. The City of Dixon did not prepare a 2015 UWMP as the City system had only 2,727 service connections and an annual supply of 1,814 acre-feet. The City has prepared a Water System Master Plan (WSMP) (City of Dixon, 2016a) in 2016. The WSMP identified normal year supply and demand information but did not include an evaluation for dry or multiple dry year conditions. The WSMP identified the following:

- Water Supplies (normal year)
- Water Demands (normal year)
- Required Infrastructure

The City operates a total of five groundwater wells, which have a total capacity of about 8,500 gpm (12.2 MGD or 13,700 acre-feet per year (ac-ft/yr)). For planning purposes, the City assumes a firm water supply calculated as the total supply available with the largest well out of service. The City's existing firm water supply is 4,200 gpm (6.0 MGD or 6,800 ac-ft/yr). The WSMP recommends four additional wells be constructed to meet the buildout demand projections. The total buildout supply capacity with the recommended new wells is projected to be 14,500 gallons per minute (gpm) (20.8 MGD or 23,400 ac-ft/yr) with the firm supply capacity (assuming the largest well out of service) to be 12,000 gpm (17.3 MGD or 19,400 ac-ft/yr).

The WSMP identified the following improvements needed for the buildout demand conditions under the 1993 General Plan:

- Construct 4 new wells at 1,500 gpm each
- Construct a 0.4 (nominal) million-gallon tank
- Construct 2,300 gpm (3.3 MGD) booster pump station
- Construct approximately 46,800 feet of 8- to 16-inch diameter pipeline

Because the WSMP was not based on the Proposed Plan land use, it is uncertain that the identified infrastructure will meet the water demands of the Proposed Plan. However, the City will have enough water because 1) Policy PSF.2.2 requires the City to expand its water supply system, including wells, pipelines and storage facilities, in order to meet future need as development occurs, particularly in (but not limited to) the Northeast Quadrant and in Southwest Dixon, and 2) Policy PSF.2.3 requires the City to improve the reliability of the City's water system to meet future demand, including through the construction of additional wells and the identification of potential surface water supply sources. Additionally, the City collects water rates and impact fees to fund the operation, maintenance, and expansion of the water system.

Cal Water provides water to the core area of the City. Cal Water prepared a UWMP in 2015 for its Dixon District. In the Cal Water UWMP, the population served was projected to increase from 9,891 to 12,639 from 2015 to 2040 (Table 3-1 of the UWMP). During this period, the normal year water demands and supplies were projected to increase from 1,596 to 1,726 AFY (Table 7-2 of the UWMP). The single dry year water demands and supplies were projected to increase from 1,705 to

1,844 AFY (Table 7-3 of the UWMP). The multiple dry year water demands and supplies were projected to increase from 1,705 to 1,844 AFY (Table 7-3 of the UWMP). All the Cal Water supply is from groundwater, and the increased demands can be met through increased groundwater pumping. In 2020, Cal Water will prepare an update of the UWMP for their Dixon District to ensure adequate water supply planning for development in Dixon. Additionally, policy PSF.2.1 requires the City to coordinate with Cal Water to ensure the provision of adequate water service to Dixon residents and businesses.

To ensure that increased groundwater pumping does not significantly impact the ground water supply, Policy NESH.2.A requires the City to develop and maintain a Groundwater Sustainability Plan. The City is a participant in the SSGSA for the purpose of working together collaboratively to develop a Groundwater Sustainability Plan (or plans) for the Solano Subbasin, designated as a Medium-Priority basin, over which the City is located. Through participation in the SSGSA, the City is already complying with Policy NESH.2.A and thereby helping to manage and sustain the Solano Subbasin groundwater supply. This is discussed in more detail in Chapter 3.9: Hydrology.

Further, even in dry and multiple dry years, the Solano Subbasin levels have been relatively stable. Since the construction of the Solano Project and the Monticello Dam in the 1950s, groundwater levels have remained consistent throughout Solano County, with no major land subsidence detected, and well levels dropping and rising seasonally, even through the multi-year drought from 2011 to 2017 (Solano County Water Agency, 2019). This indicates that even in dry and multiple dry years, the City of Dixon is likely to have adequate water supply.

Policies in the Proposed Plan would help to reduce per capita water use, reducing the future burden on groundwater supplies, through proactive water conservation measures and education (NE-2.2, NE-2.4, NE-2.5, NE-2.6, NE-2.7, NE-2.C, and NE-2.D). Policies in the Proposed Plan would also help to conserve surrounding farmlands and open spaces, ensuring groundwater recharge in the areas surrounding Dixon (NE-1.1, NE-1.2, NE-1.3, NE-1.4, NE-1.5, NE-1.A); require LID techniques to manage stormwater and promote open space, bioswales, detention ponds, and landscaped buffers, which would reduce the amount of impervious area associated with new development that could adversely affect groundwater recharge (NE-1.8 and PSF-2.11); require continued participation in the SSGSA, proactively promote sustainable groundwater management practices, and pursue grants for investments in groundwater recharge and management programs (NE-1.6, NE-1.7, NE-1.D); and require the City to explore alternative water sources, reducing future reliance on groundwater (PSF-2.3 and PSF-2.B).

Because the Proposed Plan will be served by groundwater supplies and new groundwater well facilities can be constructed to increase water supply production, and because the City is an active participant in the SSGSA to sustainably manage the groundwater basin, this impact is considered less than significant.

Mitigation Measures

None required.

Impact 3.14-3 Implementation of the Proposed Plan would not result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate **capacity to serve the project's projected demand in addition to the provider's existing commitments.** (*Less than Significant*)

Implementation of the Proposed Plan will result in increased population, resulting in greater wastewater flows into the City sewer system, which could exceed the capacity of the sewer system.

However, as discussed in Impact 3.14-1 above, significant improvements have recently been made to Dixon's WWTF. In 2016, the City completed an upgrade to its WWTF. The upgrade implemented an activated sludge treatment process that required much less land than the original aerated pond process and resulted in compliance with the CVRWQCB effluent discharge limits. Phase 1 of the WWTF upgrade increased the Average Annual Flow (AAF) capacity of the WWTF to 1.9 million gallons per day (MGD) and was constructed on 4 acres in a 14-acre site at the north edge of the original WWTF, which covered 430 acres. The Phase 1 upgrade/expansion was designed so that the WWTF can be further expanded to an AAF capacity of 2.5 MGD. The City still owns the 430 acres of the original WWTF site. Treated effluent that is generated at the WWTF is disposed of through land application and there is no discharge to any of the open channels or creeks near the WWTF. The City has additional land (in the 14-acre site) that could be used to further expand the WWTF beyond 2.5 MGD without reducing the area used for land application.

In summer of 2019, the City selected a consultant to prepare a wastewater collection system master plan. The master plan will evaluate the capacity of the existing collection system to serve the existing City and identify the improvements needed to serve the buildout land uses in the Proposed Plan. Preparation and compliance with the master plan will ensure the sewer system has adequate capacity for the existing City and the buildout land uses. Additionally, the City collects wastewater rates and impact fees to fund the operation, maintenance, and expansion of the collection system and wastewater treatment facility (WWTF).

Further, policies and actions in the Proposed Plan ensure that there would be adequate wastewater treatment capacity to accommodate new development. Policy PSF.2.E requires the City to increase its trunk sewer and pump station capacities in order to accommodate future growth within the City's service area. Policy PSF.2.F requires the City to prepare a Sewer System Master Plan and computer model of the sanitary sewer system to estimate the sizing and costs of needed improvements; to identify and mitigate sources of infiltration and inflow; and to determine how best to accommodate existing needs and future growth. And the Proposed Plan requires new utility infrastructure to be correctly sized to accommodate new development (E.1.4).

Therefore, due to planned and existing capacity, because the City is preparing a wastewater collection system master plan to accommodate the projected buildout flows, and because of the Proposed Plan policies, this impact is less than significant.

Mitigation Measures

None required.

Impact 3.14-4 Implementation of the Proposed Plan would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (*Less than Significant*)

Development allowed by the Proposed Plan would likely increase the amount of solid waste generated in Dixon due to growth in population and total jobs, which could generate solid waste in excess of State or local standards, in excess of the capacity of the local landfill, or impair the attainment of Statewide solid waste goals.

As discussed in the Settings section above, solid waste disposal services are provided in the Planning Area by Recology Dixon, a private company under contract with the City. Recology Dixon provides weekly curbside collection of garbage, recycling, and yard waste, and operates the Dixon Recycle Center, located in the city. Household hazardous waste disposal services are provided by Recology Dixon at the Household Hazardous Waste Facility in Vacaville.

Solid waste collected in the Planning Area is transported to the Hay Road Landfill located eight miles south of the city, operated by Recology. In 2017, the City of Dixon sent 17,834 tons of waste to the landfill, or an average of about 40 tons per day (Cal Recycle, 2019). The landfill has a permitted capacity of 2,400 tons per day, with an estimated total permitted capacity of 34,697,000 cubic yards. The total estimated capacity used, as of April 2013, was 6,559,000 cubic yards (18.9% of total permitted capacity). The estimated closure date of the currently permitted facility is 2068 (City of Dixon, 2014). In 2018, Recology released a Notice of Preparation stating an intent to expand the Hay Road Landfill by 8,800,000 cubic yards and extend the estimated life of the landfill by approximately nine years (CEQA, 2019).

From 2008 to 2017, the average per capita disposal rate for residents was 4.3 pounds per person per day (PPD), and 14.4 PPD for employees in Dixon, meeting and exceeding the waste reduction targets set by Cal Recycle of 9.9 PPD and 22.1, respectively (Cal Recycle, 2019). Extrapolated to the planning horizon, the projected approximately 48 percent projected increase in population and approximately 52 percent projected increase in jobs over the planning horizon would result in about 7,300 extra tons of waste per year, or, **combined with the City's average yearly disposal from 2008-2017, an average of about 60 tons per day. This total amounts to only 2.5% of the landfill's daily permitted capacity.** The Proposed Plan would therefore not result in solid waste generation that exceeds capacity at the Clover Flat Landfill.

Further, the Proposed Plan contains numerous policies aimed at reduction and diversion from landfills of solid waste, including by providing recycling receptacles throughout Dixon, requiring development of a construction waste diversion ordinance, increasing public education around waste reduction and diversion, and facilitating citywide goods donation and garage sale events (NE 3.1, NE 3.2, NE 3.3, NE 3.4, NE 3.A, NE 3.B, NE 3.C, NE 3.D, NE 3.E).

Additionally, all new development resulting from implementation of the Proposed Plan would be required to comply with the CALGreen Code, as discussed in Regulatory Setting above, requiring diversion of at least 65 percent of construction waste from landfills.

Given Hay Road Landfill's significant remaining and planned capacity, Proposed Plan policies, and existing waste reduction regulations, the collection, transfer, recycling, and disposal needs of the projected population increase under the Proposed Plan would not result in adverse impacts on landfill facilities. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

Impact 3.14-5 Implementation of the Proposed Plan would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. (*Less than Significant*)

As noted above, the Proposed Plan would likely increase the amount of solid waste generated in Dixon due to growth in population and total jobs, which could lead to noncompliance with federal, State, and local regulations related to solid waste.

AB 939 mandated that California generate a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. In 2005, California diverted 52 percent of its waste from landfills; therefore, the State, including the City of Dixon, reached this goal and is in compliance with this law. AB 341, adopted in 2012, requires that commercial enterprises that generate four cubic yards or more of solid waste and multi-family housing complexes of five units or more weekly participate in recycling programs **in order to meet California's goal to recycle 75 percent of its solid waste by 2020**. SB 1383, adopted in 2016, establishes goals of 50 percent organics waste reduction by 2020 and 75 percent reduction by 2025.

As described in Impact 3.14-4, waste collection services are provided by Recology, which includes solid waste, recycling, green waste, e-waste, and hazardous waste. The Proposed Plan includes multiple policies aimed at achieving solid waste reduction targets established in AB 939, AB 341, and SB 1383, including exploring citywide composting options, providing recycling containers throughout the city, requiring development of a construction waste diversion ordinance, facilitating citywide goods donation and garage sale events, and educating Dixon residents and businesses about recycling, composting, and waste reduction programs (NE-3.1, NE-3.2, NE-3.3, NE-3.4, NE-3.A, NE-3.B, NE-3.C, NE-3.D, NE-3.E).

Development of future land uses, as projected in the Proposed Plan, would be required to comply with these State, and local statutes and regulations related to solid waste. Furthermore, the policies provided in the proposed General Plan regarding solid waste disposal and associated public facilities would further ensure compliance with applicable regulations. Therefore, impacts would be less than significant.

Mitigation Measures

None required.

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4 Alternatives Analysis

The Proposed Plan is described and analyzed in Chapters 3.0 through 3.15 of this EIR with an emphasis on potentially significant impacts and recommended mitigation measures to avoid those impacts. The California Environmental Quality Act (CEQA) Guidelines require the description and comparative analysis of a range of alternatives to the Proposed Plan that could feasibly attain the objectives of the Proposed Plan, while avoiding or substantially lessening potential impacts. CEQA Guidelines also require that the environmentally superior alternative be designated. If the alternative with the least environmental impact is the No Project Alternative, then the EIR must also designate the next most environmentally superior alternative.

The following discussion is intended to inform the public and decision makers of the feasible alternatives that would avoid or substantially lessen significant effects of the Proposed Plan, and to compare such alternatives to the Proposed Plan. Section 15126.6 of the CEQA Guidelines states that:

An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

CEQA Guidelines Section 15126.6(e) requires consideration of a “No Project Alternative” in every EIR. In the case of the Proposed Plan, the No Project Alternative is a scenario in which the Proposed Plan is not adopted and implementation of the existing General Plan continues through 2040. The following discussion includes an evaluation of the No Project Alternative. Several other possible alternatives were considered, including a Transit Oriented Development Alternative, Compact Growth Alternative, a Balanced Jobs-Housing Ratio Alternative, and a Reduced Development Alternative. However, for reasons discussed in Section 4.1, below, these alternatives were determined to be infeasible and are not analyzed in detail.

4.1 Alternatives Considered but Not Evaluated in Detail in this EIR

CEQA Section 15126.6(f) states that alternatives in an EIR should be governed by a “rule of reason” and requires the EIR to set forth alternatives necessary to permit a reasoned choice, that would avoid or substantially lessen any significant effects, and that could feasibly attain most of the project objectives.

The Proposed Plan would result in significant and unavoidable impacts related to agricultural resources, air quality, GHG emissions, and transportation. Specifically, the Proposed Plan would result in the conversion of 98 acres of Prime Farmland to urban uses and given that Farmland is a finite resource this loss would remain significant and unavoidable even after implementation of all feasible mitigation measures. The Proposed Plan would result in a cumulatively considerable increase of ROG, PM₁₀, and PM_{2.5} emissions, contributing to the continued nonattainment status for the region for ozone and particulate matter. Level of service impacts at three intersections under the Proposed Plan could create carbon dioxide hotspots, potentially impacting sensitive receptors. Development under the Proposed Plan would also generate greenhouse gas emissions that could have a significant impact on the environment and would conflict with multiple plans and regulations adopted for the purpose of reducing greenhouse gases. Additionally, whereas the threshold of significance for transportation impacts pursuant to SB 743 is 15 percent below existing conditions, the Proposed Plan would result in a daily rate of 30 VMT per service population, which represents a 12.8 percent decrease over 2018 conditions after implementation of all feasible mitigation measures. Therefore, while the Proposed Plan would promote a compact land development pattern and significant local job creation, the regional distribution of jobs and housing is such that even with the beneficial affects of the Proposed Plan and recommended mitigation measures, many residents of Dixon will still need to commute long distances to jobs outside of the city in the future. As such, transportation impacts from the Proposed Plan would remain significant and unavoidable.

Three alternatives to the Proposed Plan that could potentially avoid or substantially reduce these significant impacts were considered: a Transit Oriented Development Alternative; a Compact Growth Alternative; and a Balanced Jobs-Housing Ratio Alternative. These alternatives, described below, were developed with a view to avoiding the conversion of Prime Farmland and substantially reducing daily VMT per service population. However, VMT analysis conducted on these alternatives determined that none of them would avoid or substantially reduce 2040 per service population VMT as compared to the Proposed Plan. As shown on Table 4-1, daily VMT per service population in 2040 would be higher under the Transit Oriented Development Alternative and the Compact Growth Alternative as compared to the Proposed Plan. Therefore, all of these alternatives were found to be infeasible and were not further analyzed in this Draft EIR. By contrast, the No Project Alternative could feasibly address the significant and unavoidable impact related to conversion of Prime Farmland that would result from the Proposed Plan and is fully analyzed in this chapter.

TRANSIT ORIENTED DEVELOPMENT ALTERNATIVE

The Transit Oriented Alternative would not include the Campus Mixed Use designation applied in the NEQ under the Proposed Plan and not allow residential development in the NEQ. Instead, the allowable residential density range in the Corridor Mixed Use designation would be increased around the Dixon Park and Ride lot and along SR-113 in order to increase access to transit and promote the use of transit for commute trips outside the city. Further, existing agricultural uses located in the NEQ containing Prime Farmland would not be converted to urban uses under this alternative and would instead retain the Agriculture designation as under the current general plan. Population, housing, and employment projections would be the same under this alternative; however, the location of development would be different in view of the change in land use designations described above.

While this alternative would avoid significant impacts related to the conversion of Prime Farmland, it would not substantially reduce daily VMT per service population as compared to the Proposed Plan and would in fact result in a slightly higher daily VMT per service population than the Proposed Plan. Further, this alternative would locate more sensitive receptors nearby the I-80 freeway, which could exacerbate impacts to health with respect to air quality and noise levels. Given that VMT would be similar to the Proposed Plan, implementation of the Transit Oriented Alternative would likely also result in significant and unavoidable impacts regarding the continued nonattainment status of the region for criteria air pollutants and the generation of GHG emissions in excess of State reduction goals. As such, this alternative would not avoid or substantially reduce the significant and unavoidable impacts of the Proposed Plan and was therefore not carried forward for further analysis.

COMPACT GROWTH ALTERNATIVE

The Compact Growth Alternative would not include the Campus Mixed Use designation applied in the NEQ under the Proposed Plan and would not allow residential development in the NEQ. Instead, the allowable residential density range in the Corridor Mixed Use designation and in the Downtown Mixed Use designation would be increased to encourage residential development closer to the center of the city so as to reduce the length of vehicle trips internal to Dixon and to further promote the use of non-motorized modes of transportation for trips internal to the city. Further existing agricultural uses located in the NEQ containing Prime Farmland would not be converted to urban uses under this alternative and would instead retain the Agriculture designation as under the current general plan. Population, housing, and employment projections would be the same under this alternative; however, the location of development would be different in view of the change in land use designations described above.

While this alternative would avoid significant impacts related to the conversion of Prime Farmland, it would not substantially reduce daily VMT per service population as compared to the Proposed Plan and would in fact result in a higher daily VMT per service population than the Proposed Plan. Further, this alternative would locate more sensitive receptors nearby the I-80 freeway, which could exacerbate impacts to health with respect to air quality and noise levels. Given that VMT would be similar to the Proposed Plan, implementation of the Transit Oriented Alternative would likely also result in significant and unavoidable impacts regarding the continued nonattainment status of the region for criteria air pollutants and the generation of GHG emissions in excess of State reduction goals. As such, this alternative would not avoid or substantially reduce the significant and

unavoidable impacts of the Proposed Plan and was therefore not carried forward for further analysis.

BALANCED JOBS-HOUSING RATIO ALTERNATIVE

Achieving a one-to-one jobs-housing ratio would theoretically reduce daily VMT per service population by providing an equal number of jobs and homes in the city, thereby potentially reducing the need for residents to commute long distances to jobs outside of Dixon. However, to achieve a balanced jobs-housing ratio in 2040, Dixon would need to more than quadruple the number of jobs in the city while simultaneously limiting housing growth to the minimum required in each RHNA cycle through 2040. This level of job growth far exceeds regional projections for the City of Dixon developed by MTC and is not realistically achievable given the existing distribution of jobs and housing in the region. As such, this alternative was determined to be infeasible and was not carried forward for further analysis.

Table 4-1: Vehicle Miles Traveled Under Each Alternative

	<i>Population</i>	<i>Jobs</i>	<i>VMT</i>	<i>VMT per service population</i>
Existing (2018)	20,147	5,742	891,090	34.4
No Project Alternative (2040)	26,181	6,891	1,048,095	31.7
Proposed Plan (2040)	28,879	8,494	1,134,739	30.4
Transit-Oriented Development Alternative (2040)	28,879	8,494	1,140,306	30.5
Compact Growth Alternative (2040)	28,879	8,494	1,195,802	32.0

Sources: Dyett & Bhatia, 2019; DKS, 2019.

4.2 Alternatives Analyzed In This EIR

Given that the three aforementioned alternatives were deemed infeasible, only the No Project Alternative is analyzed in detail. A description of the No Project Alternative appears below.

NO PROJECT ALTERNATIVE

Consistent with Section 15126.6(e)(2) of the CEQA Guidelines, the No Project Alternative represents what would be reasonably expected to occur in the foreseeable future if the Proposed Plan were not adopted and the City's current General Plan was left unchanged and in use. This alternative would retain all current land use designations and policies from the 1993 General Plan as amended to date. There would be no changes to the current General Plan Land Use map (see Figure 4.1) and no consolidation of land use designations; the new Corridor Mixed Use and Campus Mixed Use land use designations would not be applied. The following major roadway improvement projects included in the City's Capital Improvements Program (CIP) would be implemented under the No Project Alternative as with the Proposed Plan: the Parkway Overcrossing Project, the Vaugh Road Realignment Project, the A Street Grade Separation Project,

and the A Street Queue Cutter Project. However, the City would not pursue passenger rail service to Dixon under this alternative.

Overall, the No Project Alternative would result in approximately 4,238 new residents, 1,487 new housing units, and 889 new jobs within the City of Dixon, and 4,650 new residents, 1,625 housing units, and 890 new jobs in Dixon and its SOI by 2040. Growth in the Sphere of Influence would be the same as under the Proposed Plan. The No Project Alternative would result in a ratio of single-family to multi-family residential units of 4.32, which is higher than the ratio of 3.89 which would be obtained under the Proposed Plan. This ratio is consistent with the requirements of Measure B, **the City’s residential growth management implementation plan, adopted to meter the pace of residential development in Dixon and foster a ratio of not less than 80 percent single-family units and 20 percent multi-family units throughout the city.**

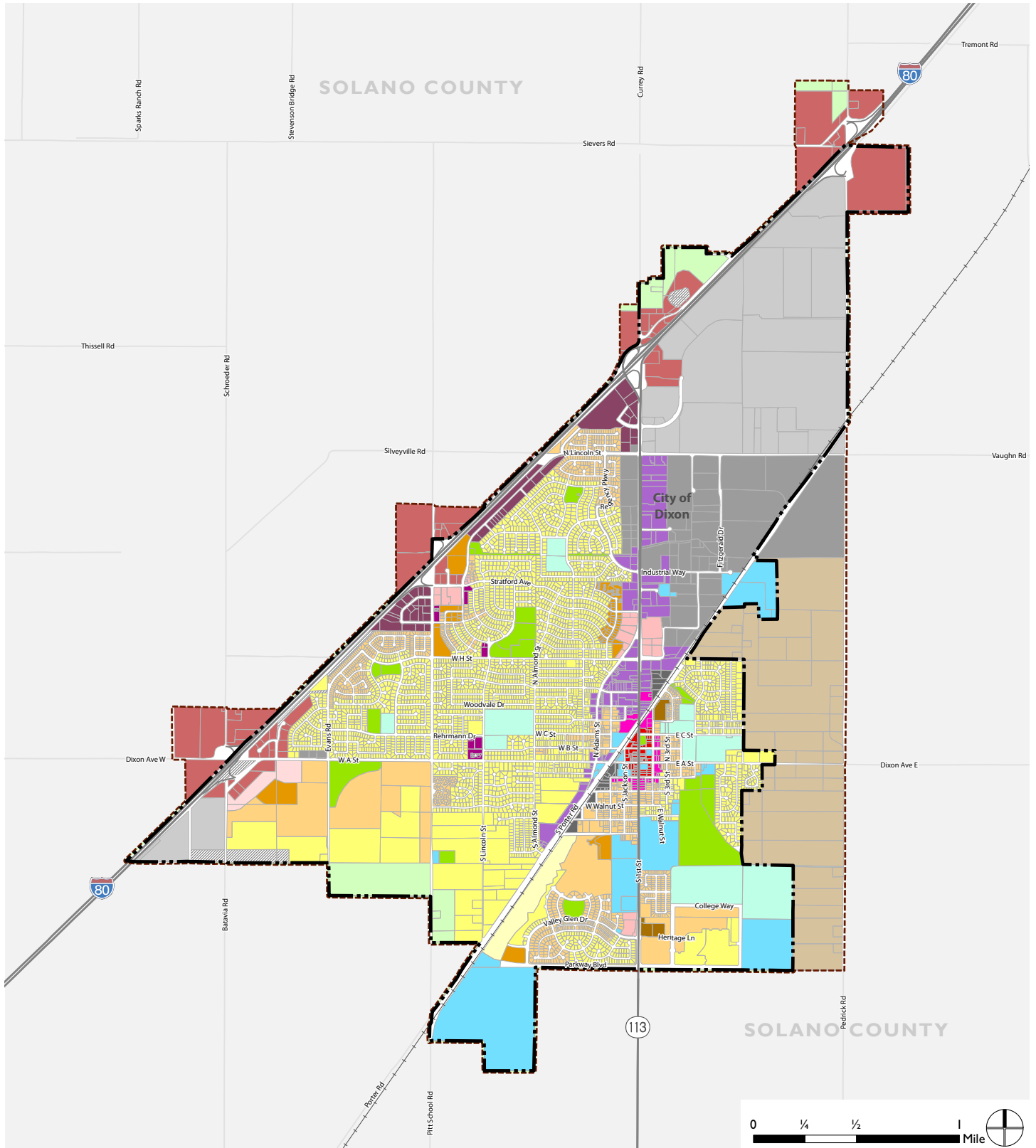
Table 4.2: Comparison of Key Characteristics, presents a summary of the residential capacity and reasonably anticipated non-residential development on opportunity sites in the No Project Alternative.

Table 4.2: Comparison of Key Characteristics

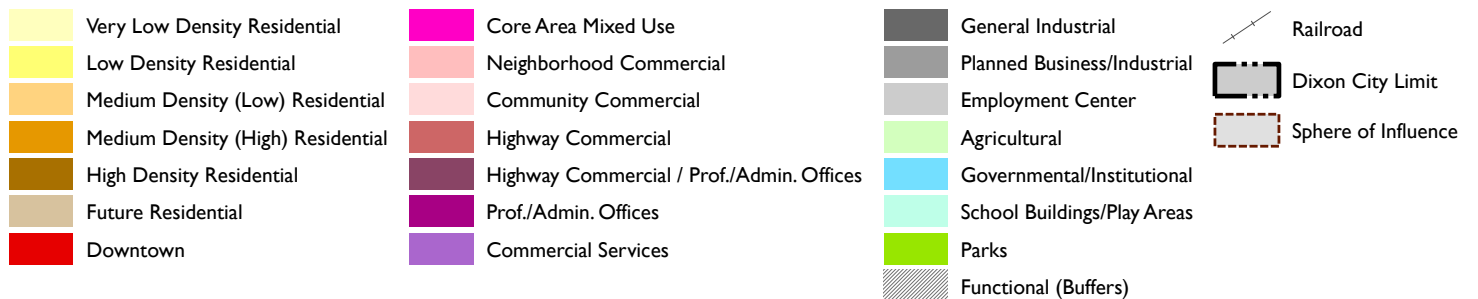
	<i>City of Dixon</i>			<i>Study Area</i>			<i>Planning Area Total</i>		
	<i>Population</i>	<i>Housing</i>	<i>Jobs</i>	<i>Population</i>	<i>Housing</i>	<i>Jobs</i>	<i>Population</i>	<i>Housing</i>	<i>Jobs</i>
Existing (2018)	20,099	6,536	4,949	31	13	413	20,130	6,549	5,362
Proposed Plan (2040)	28,449	9,358	6,224	443	148	413	28,893	9,506	6,637
No Project Alternative (2040)	24,337	8,024	5,837	443	148	413	24,781	8,172	6,250

Source: Dyett & Bhatia, 2019.

Figure 4-1: No Project Alternative



Data Source: Solano County GIS, 2014; City of Dixon, 2019; Dyett & Bhatia, 2019



4.3 Impact Analysis

This section provides a qualitative analysis of the potential environmental impacts of the No Project Alternative relative to existing conditions and compares its performance with that of the Proposed Plan. The discussions are arranged by resource topic and address the same significance criteria used to evaluate the Proposed Plan in Chapter 3 of this EIR.

AESTHETICS

As described in Section 3.1: Aesthetics, unlike much of the rest of the northern Bay Area, Dixon has flat terrain and climate similar to that of the Central Valley. This allows clear and largely unobstructed views of the surrounding greenbelt of open space and agricultural land. The Northern Coast Range forms the western border of the Sacramento Valley and is visible from the Planning Area, particularly along stretches of I-80. The No Project Alternative would maintain all land use designations from the 1993 General Plan. Development under the No Project Alternative would be subject to the City of Dixon Municipal Code, including standards regarding sustainable construction, preservation of historic structures, and off-street parking. Development would be subject to review by the Design Review Commission. Development occurring under the jurisdiction of the Northeast Quadrant Specific Plan, Northeast Quadrant PPA, Southwest Dixon Specific Plan, and City Downtown Dixon Business Association Design Guidelines would be subject to the aesthetic standards set forth in those plans. The No Project Alternative also contains policies to preserve scenic resources and visual character within the Planning Area. These provisions would insure that impacts under the No Project Alternative are less than significant. Development occurring under the Proposed Plan would be subject to the same local regulations. The Proposed Plan contains policies for scenic resources and visual character that are similar in spirit to those contained in the No Project Alternative. However, policies contained within the Proposed Plan contain more detailed guidance, which may make them easier to implement. Thus, both the Proposed Plan and No Project Alternative would be expected to have a less than significant impact related to scenic vistas. Ultimately, the No Project Alternative may have the least impact as it proposes fewer changes to existing agricultural land uses.

As discussed in Section 3.1: Aesthetics, there are no State scenic highways in the Planning Area. Neither the No Project Alternative nor Proposed Plan would have a significant impact on resources within a State scenic highway.

The visual character of the Planning Area is currently characterized by historic buildings and cultural resources, an accessible street network, and surrounding agricultural resources. The small-town character of the Planning Area contributes to its overall visual character. Under the No Project Alternative, City of Dixon design review process would regulate new development and redevelopment for consistency with existing style, character, and quality. Future residential development projects would be required to comply with the Southwest Dixon Specific Plan, as well as Zoning Ordinance requirements associated with site planning and development regulations including the height limitations, screening and landscaping, setbacks, and design review requirements established in Section 18.23. In addition, subsequent residential development projects would continue to be subject to the Dixon Downtown Design Guidelines and/or the Southwest Dixon Supplemental Design Guidelines where appropriate. These regulations, in conjunction with policies contained in the No Project Plan to preserve visual character, would ensure that impacts

are less than significant. The Proposed Plan would be subject to the same local regulations as the No Project Alternative. Development density and intensity would be higher under the Proposed Plan than the No Project Alternative. The Proposed Plan contains policies designed to preserve visual character that are similar to those contained in the No Project Alternative. However, the **Proposed Plan's more specific suite of policies may afford greater protection to those resources which constitute the Planning Area's visual character.** Thus, neither the No Project Alternative nor the Proposed Project would have a significant impact on the existing visual character and quality of the Planning Area or its surroundings. However, impacts may be slightly reduced under the Proposed Plan. Any difference in impact associated with implementation of the two alternatives would be negligible.

Both the No Project Alternative and the Proposed Plan would accommodate new development that could generate additional light and glare in the Planning Area. Under both the No Project Alternative and Proposed Plan, new development would be regulated by the Dixon Municipal Code, the City Design Review Commission, the Zoning Ordinance, and the 2016 California Green Building Standards Code. Under the No Project Alternative, industrial land uses would be subject to performance standards regarding light and glare. The Proposed Plan would require that similar performance standards be applied to light industrial and agro-industrial development as well. Thus, the Proposed Plan may be associated with slightly smaller environmental impacts associated with light and glare.

AGRICULTURAL RESOURCES

As discussed in Chapter 3.2: Agricultural Resources, agricultural land use represents a substantial portion of overall existing land use within the Planning Area, and most of the land in the Planning Area that is not urbanized is classified as FMMP Prime Farmland. The Proposed Plan would establish various urban land uses designations for areas with FMMP Prime and Unique Farmland. These designations allow for development that would result in farmland conversion. However, the majority of this agricultural land would also be designated for urban land use under the No Project Alternative. Both the Proposed Plan and No Project Alternative include policies that would encourage the perseveration of agricultural land and minimize land use conflicts associated with agricultural operations. While more growth would occur under the Proposed Plan than the **No Project Alternative, the Proposed Plan's emphasis on compact, in-fill development, greenbelt development, and creation of a Right to Farm ordinance would provide more protections for agricultural land than would exist under the No Project Alternative.** Additionally, MM-AG-1 in the Proposed Plan would require developers to either acquire off-site land or dedicate a conservation easement **on such land within the Planning Area, or to participate in the City's Agricultural Mitigation Program.**

Under the No Project Alternative, three parcels within City limits would be zoned for agricultural use. Under the Proposed Plan, these parcels would be given non-agricultural land use designations. However, upon adoption of the Proposed Plan **and in accordance with State law, the City of Dixon's Municipal Code would be updated to match the Proposed Plan's land use designations.** Therefore, **there would not be a conflict between the City's zoning for agricultural use and the Proposed Plan,** and both the Proposed Plan and No Project Alternative would result in no impact. The areas under **Dixon's Sphere of Influence are regulated under the Solano County General Plan, which includes policies that provide for continued agricultural uses within unincorporated MSAs until properties**

are annexed by cities for development. Neither the Proposed Plan nor the No Project Alternative would change zoning designations within the SOI.

Two portions of parcels in the SOI are under active Williamson Act contract, and both would be designed Regional Commercial under the Proposed Plan. Under the No Project Alternative, these parcels would be designated as Highway Commercial, another non-agricultural use. Impacts associated with conservation of Williamson Act properties would thus be identical under the two alternatives.

As both the Proposed Plan and No Project Alternative provide for infill development on non-agriculturally designated lands that support existing agricultural uses and the expansion of the urban footprint in an area surrounded by existing agricultural uses, both have the potential to cause indirect impacts to agricultural lands. Under either alternative, the California Right to Farm Act, Solano County Right-to-Farm Ordinance, the City of Dixon's Agricultural Mitigation Program, and the City's Title 18 Zoning would reduce the degree of indirect impacts of development on agricultural land uses within the Planning Area. The Proposed Plan contains policies that would consolidate urban development and prevent encroachment of urban land uses into agricultural areas, thereby reducing the indirect impacts of development. These policies, including the promotion of compact in-fill development and establishment of greenbelt areas, provide a more comprehensive suite of protections than those contained in the No Project Alternative. Indirect impacts to agriculture would thus be lower under the Proposed Plan.

AIR QUALITY

Implementation of the No Project Alternative would not conflict with the implementation of any applicable air quality plan, including the Yolo-Solano Air Quality Management District 2019 Triennial Assessment and Plan Update or the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Progress Plan. While the No Project Alternative would not include Proposed Plan policies aimed at reducing air quality impacts, the existing Air Quality and Energy Element of the General Plan was adopted in 2015 and includes similar strategies. Additionally, buildout of the No Project Alternative would align with regional projections for the City of Dixon, which are considered in the development of the applicable air quality plan. As with the Proposed Plan, the No Project Alternative would have a less than significant impact on the implementation of the applicable air quality plan.

Emissions of ROG, NO_x, SO₂, and CO would be slightly lower under the No Project Alternative compared to the Proposed Plan, while emissions of PM₁₀ and PM_{2.5} would be slightly higher. Given that the No Project Alternative does not propose any land use changes, construction emissions under this alternative would likely be lower. Additionally, growth under the No Project Alternative would be generally consistent with the growth assumptions in Plan Bay Area; therefore, this alternative would support the Sacramento Federal Nonattainment Area's ability to attain ozone standards by appropriate deadlines. Thus, the No Project Alternative would have a reduced cumulative impact to air quality compared to the Proposed Plan. However, implementation of the No Project Alternative would generate emissions of ROG, PM₁₀, and PM_{2.5} that would exceed Yolo-Solano AQMD's project level thresholds, resulting in a significant and unavoidable impact. Mitigation Measures AQ-1, AQ-2, and AQ-3 would not be implemented under the No Project Alternative.

Under the No Project Alternative, level of service impacts would occur at intersections of Jackson Street & West A Street, First Street & Chestnut Street, First Street & B Street, and First Street & Cherry Street. The No Project Alternative also would not include traffic calming measures and policies improving multi-modal connectivity found in the Proposed Plan. Therefore, the No Project Alternative would result in more intersections with the potential to create CO hotspots than the Proposed Plan. As with the Proposed Plan, development under the No Project Alternative would be subject to existing CARB and Yolo-Solano AQMD regulations that limit exposure to asbestos and TACs. The No Project Alternative would not include Mitigation Measures AQ-4, AQ-5, and AQ-6. Therefore, the No Project Alternative would have a slightly greater impact on the health of sensitive receptors compared to the Proposed Plan.

Given compliance with Yolo-Solano AQMD Regulation 2, Rules 5 and 14, the California Green Building Code, and policies found within the Air Quality and Energy and Public Safety elements of the existing General Plan, impacts related to odor under the No Project Alternative would be less than significant and similar to the Proposed Plan.

BIOLOGICAL RESOURCES

While land in the SOI is largely undeveloped, land within the Dixon City limit is generally developed with urban uses or land planned for urban development. A range of special-status species have been observed within the Planning Area, and the Planning Area does include habitat types such as annual grassland, fresh emergent wetland, lacustrine, riverine, valley foothill riparian, and agricultural habitats including deciduous orchard, evergreen orchard, vineyard, and irrigated row and fresh crops, that could serve as habitats for special-status species. The No Project Alternative would apply urban land use designations to parcels containing Valley Foothill Riparian Habitat, Fresh Emergent Wetland, and Lacustrine, Riverine habitat, where special-status species have been found. However, the No Project Alternative would require new development to investigate for the presence of special-status species on site and adopt appropriate mitigation measures should special-status species be found and would call for compliance with Solano Countywide Multispecies Habitat Conservation Plan. Development occurring under the No Project Alternative would be required to comply with Chapters 17.10, 13.05, and 18.33 of the Dixon Municipal Code, Solano County General Plan conservation element, and Clean Water Act Sections 401 and 404. These regulations would ensure that impacts are less than significant.

Under the No Project Alternative, the Agricultural (A) and Functional Open Space (F) land use designations would be applied to conserve and protect environmental resources, as shown on Figure 4-1. These are similar to the land use designations that would be applied under the Proposed Plan, with the most significant changes in land uses occurring in those portions of the Planning Area that are already highly developed. Both the No Project Alternative and Proposed Plan would apply urban land uses to parcels on which special-status species have been found. However, both the Proposed Plan and No Project Alternative would leave the open space within the Vacaville/Dixon Greenbelt undeveloped in accordance with the Solano County General Plan Agricultural Reserve Overlay.

Development occurring under the Proposed Plan would be subject to the same local regulations regarding habitat and special-status species protection as the No Project Alternative. The Proposed Plan also contains policies related to habitat and species protection that are similar to those in the

No Project Alternative. However, the Proposed Plan contains policies which call for the protection of bird nests and urban forest, which would not be implemented under the No Project Alternative. Thus, while the No Project Alternative would result in less than significant impacts to biological resources, it would have a slightly greater impact on special-status species as compared to the Proposed Plan.

CULTURAL AND TRIBAL RESOURCES

Implementation of either the No Project Alternative or Proposed Plan has the potential to disturb historic resources. Under both the No Project Alternative and Proposed Plan, development would proceed as envisioned in the Northeast Quadrant Specific Plan Area and the Southwest Dixon Specific Plan Area, where applicable.

Both the No Project Alternative and Proposed Plan would implement policies intended to preserve the historic character of the Planning Area. However, the Proposed Plan contains a more comprehensive suite of policies pertaining to historic preservation, which would therefore afford greater protection for these resources. While the Proposed Plan encourages infill development within the environs of the Historic Downtown and thus may increase the desirability of redeveloping those parcels compared to the No Project Alternative, the enhanced protections for historic resources embedded within the Proposed Plan reduce its overall impact relative to the No Project Alternative.

Prehistoric and historic archaeological resources have been found in the Planning Area, and there are sites in the Planning Area that may be sensitive for unrecorded resources, most notably anywhere that has been under occupation or use for at least 45 years. Numerous paleontological resources have been discovered throughout the Sacramento Valley and Solano County regions, including Vacaville and Putah Creek. While no paleontological or Native American resources have been discovered within the Planning Area to-date there is a possibility that such resources could be found in the future.

Under both the No Project Alternative and Proposed Plan, a project-level CEQA document would need to identify potential impacts on known or potential historic sites and structures. New development would also be required to comply with Public Resources Code Section 5097.98, which addresses the disposition of Native American burials, protects remains, and appoints the NAHC to resolve disputes.

Both the No Project Alternative and Proposed Plan contain policies that would facilitate the preservation of archaeological resources. Compliance with local regulations and additional protections provided in the No Project Alternative would ensure that impacts under this alternative would be less than significant. However, the Proposed Plan contains policies that would further minimize or avoid impacts to archaeological and cultural resources by requiring the assessment, protection, and preservation of such resources, which would not be required under the No Project Alternative. Development occurring under Proposed Plan may thus have a smaller impact on cultural resources than development that would occur under the No Project Alternative.

GREENHOUSE GASES

Implementation of the No Project Alternative would result in lower development than the Proposed Plan at buildout, and therefore may reduce construction-related GHG emissions. Similar to the Proposed Plan, this impact would be less than significant. Full buildout of the No Project Alternative would generate operational emissions of 192,194 MTCO₂e per year in 2040. Mass emissions under the No Project Alternative would approximately 9,400 MTCO₂e per year higher than the Proposed Plan, given that the No Project Alternative would not include proposed policies aimed at reducing GHG emissions through infill development, reduced vehicle trips, energy conservation, water conservation, and waste reduction. Given the reduced population at buildout of the No Project Alternative, this alternative would result generate 7.8 MTCO₂e per capita in 2040. As with the Proposed Plan, the No Project Alternative would generate GHG emissions that could have a significant impact on the environment and would conflict with applicable policies and plans adopted for the purpose of reducing GHG emissions, including SB 375 and Plan Bay Area, the 2017 CARB Scoping Plan, AB 32, and EO S-3-05. Additionally, the No Project Alternative would increase per capita passenger vehicle emissions to 2.3 MTCO₂e, higher than the Proposed Plan and under 2005 conditions. Given that the No Project Alternative would not include Mitigation Measure GHG-1, which would require the adoption of a Climate Action Plan consistent with State reduction goals and SB 375 Regional Plan Climate Targets, it would result in a greater impact than the Proposed Plan with respect to conflicts with GHG emissions reduction plans and would result in a significant and unavoidable impact with respect to conflicts with energy conservation plans.

Implementation of the No Project Alternative would result in a net energy consumption of 1,746,306 million BTUs at buildout in 2040. Additionally, energy consumption per capita would increase by 21 percent compared to existing conditions, to 216 million BTUs per capita. Under the Proposed Plan, energy consumption per capita would decrease and net energy consumption would not increase as significantly. Additionally, the No Project Alternative would not include the proposed policies that encourage energy efficient upgrades and promote energy conservation throughout the community. Therefore, the No Project Alternative would result in a significant and unavoidable impact to the consumption of energy.

GEOLOGY

Due to the lack of any Alquist-Priolo Fault Zones, active faults, or potentially active faults within the Planning Area, neither the No Project Alternative nor Proposed Plan would produce any impacts due to fault rupture. Likewise, the Planning Area has slopes of less than two percent; thus, there is no risk of impact on people and property from seismically-induced landslides under either the No Project Alternative or Proposed Plan.

The majority of the Planning Area is prone to a moderate level of liquefaction hazard, with small high-risk portions of the Planning Area at the southeast corner, and the wastewater treatment facility site to the southeast. Under the No Project Alternative, small channels with very high liquefaction risk would intersect regional commercial land uses in the western portion of the Planning Area; **the low density residential area in Dixon's sphere of influence to the east; and small portions of the city limit's land designated as General Industrial and Governmental/Institutional use.** Development in these areas would be subject to a certain degree of risk associated with liquefaction. However, policies contained in the No Project Alternative would keep these risks to a less-than-significant level. Land use designations for areas of elevated liquefaction risk do not differ

significant between the No Project Alternative and Proposed Plan. Like the No Project Alternative, the Proposed Plan contains policies that would reduce potential impacts from seismic activity to the maximum extent practicable, and would thus provide an equivalent level of protection with regards to seismic hazards. Potential impacts would be equivalent under the two alternatives.

Sixty seven percent of the Planning Area is located on soils with a moderate to high risk of erosion, though a majority of this area is on previously developed land. Under both the No Project Alternative and Proposed Plan, new development will be required to comply with Dixon Municipal Code Chapter 16.04, which would minimize impacts from erosion. In addition, construction that disturbs more than one acre would be subject to compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

The City of Dixon provides domestic wastewater collection and treatment for land within the jurisdictional boundary as well as some unincorporated areas in the Northeast Quadrant. Most other areas of unincorporated Solano County utilize individual septic systems. The No Project Alternative does not anticipate that significant levels of development will occur within the SOI. Should development in this area occur, the Solano County code specifies that a site evaluation is required prior to construction of any on-site sewage disposal system or expansion, alteration, or replacement of an existing system which includes one or more soil evaluations within the boundaries of the absorption area of the on-site sewage disposal system proposed for construction, expansion, alteration, replacement, or repair. Adherence to these regulations would ensure that impacts are less than significant. **The Proposed Plan also does not anticipate that significant new development will occur within Dixon's SOI, and development in this area would be subject to the same regulations.** Impacts would thus be less than significant under either alternative and the magnitude of difference between these two impacts would be negligible.

Under the No Project Alternative, construction activities such as grading, excavation, and ground-disturbing activities may result in the accidental destruction or disturbance of paleontological sites. Numerous paleontological resources have been discovered throughout the Sacramento Valley and Solano County regions, including Vacaville and Putah Creek. While no paleontological resources have been discovered within the Planning Area to-date there is potential that resources could be found in the future. However, development on public lands, including lands owned by or under the jurisdiction of the City of Dixon, Solano County (including the SOI), and public agencies, would be subject to the provisions of California Resources Code Sections 5097-5097.6, which prohibit the unauthorized disturbance or removal of paleontological resources. Any highway projects associated with implementation of the No Project Alternative would be subject to paleontological studies conducted by Caltrans and local project sponsors, and Section 305 of the Federal Highway Act of 1956 gives Caltrans authority to use federal funds to salvage paleontological sites affected by highway projects. The No Project Alternative does not contain any policies that specifically address the protection of paleontological resources. The Proposed Plan, implemented in conjunction with MM-GEO-1, would expand these protections. Impacts under the Proposed Plan would thus be less severe than those which could occur under the No Project Alternative.

HAZARDS

Many businesses in the Planning Area currently use hazardous materials and generate hazardous wastes. These uses are regulated by the Solano County Agriculture and Resource Management Departments under State and Federal laws and regulations. These regulations include the DTSC, which regulates the generation, transport, and disposal of hazardous waste, and the SWRCB, which enforces the Clean Water Act and protects the quality of ground and surface waters. Under the No Project Alternative, routine transport of hazardous materials on Interstate 80 and State Route 113 would be regulated and monitored by USDOT, Caltrans, and the California Highway Patrol. Any hazardous material transport on the Union Pacific Railroad tracks would be regulated and monitored by USDOT. Agricultural transport and use of pesticides would be regulated by CCR Title 3. Under the No Project Alternative, the City would pursue opportunities for re-routing SR 113 away from Downtown Dixon. The No Project Alternative would also encourage design elements adjacent to State highway corridors that would provide buffers between these sources of hazardous substances, thereby reducing impacts to less than significant levels. Development occurring under the Proposed Plan would be subject to the same federal, State, and local regulations as that occurring under the No Project Alternative. The Proposed Plan's policies with regards to protection from the transport of hazardous materials do not differ significantly from those that would be implemented under the No Project Alternative. The difference in nature or magnitude of impacts associated with the transport of hazardous materials between the No Project Alternative and Proposed Plan would be negligible, and impacts would be less than significant.

Under both the No Project Alternative and Proposed Plan, household use and disposal of hazardous materials would be regulated by Title 27 of the CCR. Under Proposed Plan NE.3-3, Dixon households would receive education regarding the use and disposal of hazardous wastes. As this provision is not included in the No Project Alternative, the environmental impacts associated with the household use and disposal of hazardous materials would be lower for the Proposed Plan than the No Project Alternative. Likewise, while the No Project Alternative would require that industrial land uses achieve performance standards related to soil, surface, and groundwater contamination, the Proposed Plan would further reduce environmental impacts associated with hazardous material contamination by requiring remediation of hazardous material releases and requiring protection for construction workers, future residents, and adjacent residents of sites with known contamination.

Under both the No Project Alternative and Proposed Plan, land uses that could reasonably be expected to handle hazardous materials or generate hazardous emissions would be permitted within one-quarter mile of existing schools. However, under both conditions, State law would dictate that schools must be sited to prevent them from being located near hazardous materials sites. The No Project Alternative and Proposed Plan would maintain similar boundaries for agricultural and industrial land uses, and both would contain policies mandating the creation of buffers between sensitive land uses and potential hazard sources. The difference in environmental impact associated with the relative locations of schools and hazards emitters between the No Project Alternative and Proposed Plan would not be significant and impacts under either alternative would be less than significant.

Development occurring under the No Project Alternative would increase population and the associated need for emergency services in the Planning Area. This development may affect the

implementation of an adopted emergency response plan or emergency evacuation plan. However, growth under the Proposed Plan is anticipated to be larger than that which would occur under the No Project Alternative, and impacts would thus be greater under the Proposed Plan.

The No Project Alternative and Proposed Plan adopt different approaches for managing the capacity of emergency response services in relation to growth. While the No Project Alternative would ensure that potential impacts remain less-than-significant by requiring that development within the Planning Area not exceed the capability of the Dixon Fire Department to provide an adequate level of fire protection, the Proposed Plan introduces policies for improving the responsiveness of fire protection services and continuing fire prevention outreach and participation in fire protection mutual aid agreements. While the environmental impacts associated with the implementation of emergency response plans are anticipated to be less than significant under the Proposed Plan, the relaxation of the strict cap on development to match the capacity of the Dixon Fire Department may slightly elevate environmental impacts associated with emergency response to fire under the Proposed Plan, as opposed to the No Project Alternative.

Both the No Project Alternative and Proposed Plan would implement policies that ensure that impacts associated with emergency access and response are less than significant. However, the policies contained in the Proposed Plan provide a more comprehensive suite of emergency protections, including ensuring that the siting of critical emergency response facilities and communications facilities have minimal exposure to flooding, seismic and geologic effects, fire, and explosions. Thus, implementation of the Proposed Plan may provide greater protection for critical emergency response facilities in the event of an emergency.

No areas within the Planning Area have been classified by the State as having “very high” or “high” fire risk, and associated impacts under either the No Project Alternative or Proposed Plan would thus be less than significant. Additionally, both the No Project Alternative and Proposed Plan contain policies that would mitigate the risk of urban fire and minimize the effects of air pollution exposure. Therefore, environmental impacts associated with development in or around Very High Fire Severity Zones would be identical and less than significant under both the No Project Alternative and Proposed Plan.

There are no airport land use compatibility plans affecting any portion of the Planning Area. Thus, neither the No Project Alternative nor the Proposed Plan would have any environmental impact associated with airport hazards.

HYDROLOGY

The City complies with the RWQCB Monitoring and Reporting Program. Any new industrial uses within the Planning Area would have to comply with the Industrial General Permit. In compliance with the SWRCB Construction General Permit, a SWPPP would be prepared for any projects resulting from the No Project Alternative or No Project Alternative. Both the No Project Alternative and Proposed Plan would primarily involve construction and operation of residential and commercial uses and would involve few industries likely to substantially increase pollutant loading levels in the sanitary sewer system.

Both the No Project Alternative and Proposed Plan contain policies that would limit potential water pollution. While the Proposed Plan is more explicit in its call for green infrastructure, the policies

under the two alternatives do not differ significantly enough to constitute a significant difference in potential environmental impact and impacts would be less than significant.

The City of Dixon is entirely dependent on groundwater drawn from the Solano Groundwater Subbasin. Under the implementation of the No Project Alternative, the City of Dixon would continue to participate in the Solano Subbasin Groundwater Sustainability Agency (SSGSA). The SSGSA is required to complete and maintain a plan for long term sustainability of the Solano Subbasin. Compliance with the SGMA legislation, by regularly demonstrating that the basin is not overdrafted, ensures that groundwater draws will be carefully managed and sustainably used. Additionally, the No Project Alternative contains policies that would help ensure the quantity and quality of groundwater supplies, including calling for water conservation, protecting farmland and open space, and preventing groundwater pollution. The Proposed Policy's suite of policies pertaining to groundwater quality are slightly more comprehensive, including a call for porous paving that would not be implemented under the No Project Alternative. However, the Proposed Plan anticipates up to 9,340 new residents and 2,578 new jobs over the planning horizon, whereas under the No Project Alternative, the Planning area would receive 4,238 new residents and 889 new jobs. The higher levels of growth anticipated under the Proposed Plan mean that increases in demand for groundwater supplies may be higher under this alternative.

Under both the No Project Alternative and Proposed Plan, a number of areas within the Planning Area will be converted from agricultural use to non-agricultural uses. As many agricultural lands within the Planning Area—which are permeable by nature—are currently served by drainage ditches, development could potentially increase runoff and alter existing drainage patterns. Additionally, construction of projects developed under either alternative could involve excavation and disturbance of existing ground surface, exposing base soil and temporarily altering surface drainage patterns. Under either alternative, each individual project would be required to develop and implement a SWPPP with erosion, sediment, and stormwater control BMPs. Projects would also be subject to requirements of the Construction General Permit, the City's Stormwater Management Standards for construction activity, and the City's grading requirements, as applicable. Both the No Project Alternative and Proposed Plan contain drainage management policies. Implementation of these policies, in conjunction with the aforementioned regulations, would ensure that impacts would be less than significant. Differences in these policies are not substantial enough to constitute a significant difference in nature or degree of environmental impact.

Development occurring under either alternative would be required to comply with best practices for stormwater treatment, as required by the City of Dixon's Phase II Small MS4 General Permit and the City of Dixon's Stormwater Management Standards. In addition, new inputs to the stormwater drainage system must comply with Title 16 of the Municipal Code. While both the No Project Alternative and Proposed Plan are expected to generate increases in impervious surface through the addition of new jobs and housing units, increases in impervious surface area are anticipated to be higher under the Proposed Plan than No Project Alternative. The No Project Alternative and Proposed Plan both contain policies pertaining to tree planting and low impact design, which would reduce stormwater impacts. However, the Proposed Plan, with its explicit calls for green infrastructure, porous pavement, and rainwater reuse, will likely have a lower overall impact on stormwater than the No Project Alternative.

The only area within City limits designated as being within a 100-year flood hazard zone is along SR-113 south of College Way and is already fully built out as housing. There are three areas designated as 100-year flood hazard areas within the SOI, all north of I-80, none of which are envisioned as locations for new housing under either the No Project Alternative or the Proposed Plan. Both the No Project Alternative and Proposed Plan contain policies that would reduce flood risk. The No Project Alternative would explicitly require that the City avoid new development within the 100-year flood zone. While the Proposed Plan does not contain this policy language, flood control and prevention measures that would be implemented as part of the Proposed Plan mean that the degree and nature of flood risk would not differ significantly between the two alternatives.

The entirety of Dixon and its SOI are in the flood inundation zone of the federally-owned Monticello Dam and have a risk of major loss of life and damage to property if a catastrophic event were to occur. Under either alternative, monitoring and assessment of the dam would be conducted by the Bureau of Reclamation. The Proposed Plan contains a more comprehensive suite of policies pertaining to dam safety than the No Project Alternative. The Proposed Plan calls for the City to collaborate with the Bureau of Reclamation, Solano Irrigation District, Solano County Water Agency, and other responsible agencies to ensure the safety of the Monticello Dam. Additionally, the Proposed Plan would include policies to require adequate emergency response procedures to be in place and periodically updated in the case of a dam failure that requires evacuation, including **continuing to maintain the City's Emergency Operations Plan, increasing public awareness of emergency plans and resources, and establishing a volunteer Community Emergency Response Team.** The inclusion of these policies means that environmental impacts associated with flood losses associated with Monticello Dam will likely be lower under the Proposed Plan than the No Project Alternative.

The Planning Area's low risk of experiencing tsunamis, seiches, or mudflows would be identical under either alternative.

LAND USE, POPULATION, AND HOUSING

Neither the No Project Alternative nor Proposed Plan would divide an established community. However, the Proposed Plan contains a more comprehensive suite of policies that would facilitate the development and use of the bicycle, sidewalk, and road networks within the Planning Area. Implementation of these policies would make it easier for residents to travel throughout the community, as compared to the No Project Alternative.

The City's Zoning Ordinance would be revised to implement the Proposed Plan. By State law, specific plans within the Planning Area must be consistent with the ultimately adopted alternative. Neither the No Project Alternative nor the No Project Alternative would conflict with policies included in these specific plans adopted for the purpose of avoiding or mitigating an environmental effect. The adopted alternative must also be consistent with regional and local plans. The Proposed Plan contains a more comprehensive suite of policies pertaining to inter-plan consistency. Policy LGC-1.B of the Proposed Plan requires the City of Dixon to coordinate with Solano County to ensure consistency in unincorporated areas. Under implementation of the Proposed Plan, the City of Dixon Housing Element would be reviewed for consistency and amended as necessary to maintain an internally consistent General Plan. Thus, any potential impacts associated with

maintaining consistency between local plans, zoning, and the ultimately adopted alternative would be lower under the Proposed Plan.

The majority of developed land in the Planning Area is comprised of residential uses, which are not anticipated to undergo significant land use changes under either the No Project Alternative or Proposed Plan. Under the No Project Alternative, housing development would largely be constricted to within Dixon city limits. Housing stock would consist of 82 percent single-family housing by 2040. In contrast, the Proposed Plan expands opportunities for housing construction, particularly within the SOI. Under the Proposed Plan, the majority of the proposed land use changes would be within non-residential neighborhoods or change areas; no existing housing is projected to be removed or replaced due to implementation of the Proposed Plan. Additionally, under the Proposed Plan, the housing stock would consist of only 80 percent single-family housing by 2040. By expanding opportunities for housing construction and diversifying the type of housing available, the Proposed Plan would reduce both supply- and price-related displacement pressures, compared to the No Project Alternative.

NOISE

Some degree of construction would occur under either alternative. Under both the No Project Alternative and Proposed Plan, construction-related noise impacts would be temporary and subject to **the Dixon Municipal Code's noise regulation. Adherence to these regulations would ensure that** construction-related noise impacts would be less than significant under either alternative. However, the higher degree of growth associated with the Proposed Plan would create more construction-related noise impacts. Thus, the Proposed Plan would have a greater impact associated with construction-related noise. Similarly, impacts arising from construction-related vibration would be greater under the Proposed Plan than the No Project Alternative.

Under the No Project Alternative, total traffic within the Planning Area would increase relative to existing conditions. These increases in traffic level would be associated with increases in traffic-related noise. However, traffic-related noise impacts would not be significant. The No Project Alternative and Proposed Plan contain similar sets of policies designed to address impacts arising from traffic-related noise. The Proposed Plan would generate more total traffic than the No Project Alternative and would therefore generate more traffic-related noise. While impacts related to traffic-related noise would be less than significant under either alternative, they would be slightly greater under the Proposed Plan.

Neither the No Project Alternative nor the Proposed Plan contain any railway upgrades or improvements that would increase train volumes or number of tracks. As both the No Project Alternative and Proposed Plan contain policies for minimizing the impact of railway-related noise, the difference in magnitude of railway-related noise impacts between the two alternatives would be negligible.

The Planning Area is not located within two miles of a public airport or public use airport. Therefore, there would be no impact regarding the exposure of people to excessive noise levels related to the location of the Planning Area within two miles of a public airport, public use airport, or private airstrip.

PUBLIC SERVICES AND RECREATION

Population within the Planning Area is anticipated to increase under the No Project Alternative. This growth in residential population may generate additional demand for fire and emergency services. The No Project Alternative would address any issues associated with the provision of fire and emergency services by requiring that development within the Planning Area not exceed the capability of the Dixon Fire Department and limiting new commercial and industrial development to locations where the water supply is adequate for fire protection. These measures would ensure that impacts associated with the provision of fire and emergency service remain less than significant. As more growth is anticipated to occur under the Proposed Plan than No Project Alternative, implementation of the Proposed Plan would generate a demand for fire and emergency services that would not otherwise exist. The Proposed Plan addresses fire and emergency service provision by increasing the supply of fire protection services by increasing firefighter staff levels and maintaining supplemental aid agreements. Both alternatives contain similar policies for facilitating the delivery of fire protection services and incorporating review for fire protection in the development process. As the approach put forth in the Proposed Plan may necessitate the continual expansion of fire protection services in step with increases in development, the environmental impact associated with fire protection will likely be larger for the Proposed Plan than the No Project Alternative.

Population within the Planning Area is anticipated to increase under the No Project Alternative. This growth in residential population may generate additional demand for police protection services. Growth under the Proposed Plan would be higher than growth under the No Project Alternative, with a corresponding higher demand for police services. Both the Proposed Plan and No Project Alternative contain policies that would facilitate the provision of police services. The substance of these policies would not differ significantly. While the impact on police service ratios under the Proposed Plan would be less than significant, the slightly higher demand that would occur under the Proposed Plan means that the impact under the Proposed Plan will be slightly higher than that under the No Project Alternative.

Population within the Planning Area is anticipated to increase under the No Project Alternative. This increase in residential population would be associated with a higher demand for public school services. Under the No Project Alternative, the City would require proponents of new development projects to contribute to the acquisition of land to construct education facilities, developers would be required to obtain a certification from the Dixon Unified School District showing that all major requirements imposed by the District regarding the assurance of adequate school facilities for future residents have been met, and the City would ensure that residential growth would not exceed the capabilities or capacities of the Dixon Unified School District to provide adequate educational facilities. These policies would ensure that impacts associated with the provision of public school services would be less than significant. As more growth would occur under the Proposed Plan than No Project Alternative, demand for public school services under this alternative would be higher. Additionally, the suite of policies within the Proposed Plan designed to ensure the continued provision of public school services are less comprehensive than those which would be implemented under the No Project Alternative. Thus, while the impact would be less than significant under the Proposed Plan, impacts would be higher under this alternative compared to the No Project Alternative.

Population within the Planning Area is anticipated to increase under the No Project Alternative. This increase in population would be associated with a higher demand for library services. Under the No Project Alternative, the City would commit to providing support for the public library, thus ensuring that impacts associated with the provision of library services are less than significant. The higher levels of growth anticipated under the Proposed Plan would be associated with higher demand for library services, compared to that which would occur under the No Project Alternative. However, the Proposed Plan also contains a more comprehensive suite of policies designed to ensure the integrity of library structures and services. Impacts under the two alternatives would thus not differ significantly.

Growth anticipated to occur under the No Project Alternative would necessitate the development of **new park services in order to comply with the City's** requirement of providing 5.0 acre of parkland per 1,000 residents. This ratio is currently 4.78, representing a deficiency in the provision of park services. The City is currently planning to add an additional 23 acres of parkland and is also currently preparing an update of its Parks Master Plan. Under buildout conditions of the No Project Alternative, the Planning Area would thus contain 119.27 acres of parkland and 24,781 residents, for a parkland ratio of 4.81. Thus, under the No Project Alternative, the City would experience a deficiency in park space. Implementation of the Proposed Plan would result in a parkland ratio of 4.13 acres per 1,000 residents, which is higher than that would be obtained under the No Project Alternative. Both the Proposed Plan and No Project Alternative contain policies that relieve stress of park facilities. The provision of additional parkland under the Proposed Plan, as well as the **Proposed Plan's more comprehensive suite of policies pertaining to parkland maintenance**, means that its impact on park facilities would be less severe than that which would occur under the No Project Alternative. However, given that the Proposed Plan would result in more population growth than the No Project Alternative, the Proposed Plan would also be associated with a higher likelihood of construction and expansion of recreational facilities. Thus, while the Proposed Plan was found to have a less than significant impact with regards to the environmental impact of the construction of new and expanded recreational facilities, this impact would be slightly higher than that which would occur under the No Project Alternative.

TRANSPORTATION

As described in Chapter 3.13: Transportation, the City of Dixon has a defined a level of service threshold for acceptable traffic operations of LOS D to evaluate intersection deficiencies. For this evaluation, the No Project Alternative or Proposed Plan is considered to have an impact on an intersection if it would cause an intersection that is currently operating at LOS D or better to operate at LOS E or LOS F. Under the No Project Alternative, it was found that the intersections at First Street & Chestnut Street, First Street & B Street, and First Street & Cherry Street would experience significant delays. Under the Proposed Plan, significant delays are anticipated to occur at First Street & B Street and First Street & Cherry Street. While impacts would be significant and unavoidable in both cases, the fact that significant delays would occur at fewer intersections under the Proposed Plan makes it the environmentally desirable alternative, compared to the No Project Alternative.

The City of Dixon has no standardized metric to evaluate transit service citywide. The No Project Alternative would be expected to increase demand for travel in the Planning Area through new residential and commercial development. This could increase the market for public transportation,

resulting in increased ridership. Increased overall travel demand is expected to lower the levels of service on some roadways, increasing vehicle delays that could reduce the reliability of transit service. Both the No Project Alternative and contain similar policies that would encourage ridership of and provide support for public transit services. However, due to the fact that growth would be higher under the Proposed Plan than the No Project Alternative, impacts to transit service would be correspondingly higher.

The City of Dixon does not have a standardized metric by which to evaluate the effectiveness of either the bicycle circulation system or the pedestrian circulation system. Both the Proposed Plan and No Project Alternative contain policies that would improve bicycle and pedestrian facilities within the Planning Area; the impacts of either alternative would thus be less than significant.

VMT per service population within the Planning Area is currently 34.4. The No Project Alternative would achieve a daily VMT per service population of 31.7, an eight percent reduction compared to current conditions. Under the Proposed Plan, VMT per service population would be 30.4, an almost 12 percent reduction compared to existing conditions. Thus, while implementation of either alternative would decrease VMT in the Planning Area, the Proposed Plan would create the larger reduction. Implementation of MM-UTIL-1 and MM-UTIL-2, as described in Chapter 3.13: Transportation, would further reduce the relative impact of the Proposed Plan compared to the No Project Alternative by adding fixed route transit service to school sites and implementing commute travel demand programs.

Neither the No Project Alternative nor the Proposed Plan contain specific geometric designs for transportation systems in the Planning Area and thus would not substantially increase hazards due to a design feature. The Proposed Plan contains a more comprehensive suite of policies that would impact transportation safety, including an emphasis on Complete Streets as well as policies to promote pedestrian and bicycle safety and safe routes to school. Thus, the Proposed Plan would be less likely to increase transportation-related hazards overall.

Under both the No Project Alternative and Proposed Plan, emergency accessibility would be assessed at a project level. Project level review required by the City includes site access review for emergency vehicles and traffic control plans as needed that account for emergency vehicles. Both the No Project Alternative and Proposed Plan contain similar policies that would facilitate emergency access and response, and both would have a less than significant impact on emergency access.

UTILITIES AND SERVICE SYSTEMS

Population within the Planning Area would increase under the No Project Alternative. Additional population and businesses would generate additional demand for water and wastewater services and, therefore, a potential increased demand for water provision and wastewater collection, conveyance, and treatment services over currently established levels.

As described in Chapter 3.14: Utilities and Service Systems, the Planning Area is reliant on groundwater for its water supply. Both the No Project Alternative and Proposed Plan contain policies that would promote water conservation and protect groundwater quality. Under the No Project Alternative, the City would ensure that development does not exceed the capacity of the local water supply system. Additionally, as described in Chapter 3.14: Utility and Service Systems,

the Planning Area's current and planned water delivery system would be able to meet the Proposed Plan's water demand. As more population growth is anticipated to occur under the Proposed Plan **than the No Project Alternative, the Planning Area's current and planned water delivery systems** would be able to satisfy water demand under the No Project Alternative, and impacts would thus be less than significant. The Proposed Plan would relax the **No Project Alternative's policy requiring** that development not exceed the capacity of the local water supply system. In contrast, the Proposed Plan focuses on **diversifying and expanding the Planning Area's water supply.** This change in approach to the management of water resources, in conjunction with the higher levels of water demand anticipated under the Proposed Plan, mean that the Proposed Plan will likely have a larger environmental impact associated with water supply and delivery systems than the No Project Alternative.

Implementation of the No Project Alternative would result in increased wastewater flows to the **City's WWTF, which could result in the need to expand the treatment facility.** The No Project Alternative contains policies that would ensure the continued delivery of wastewater treatment services to the Planning Area, and the City would continue to collect wastewater rates and impact fees to fund the operation, maintenance, and expansion of the collection system and WWTF. Additionally, completion of the upcoming wastewater collection system master plan will help the City identify the improvements needed to serve the buildout land uses under the ultimately adopted alternative. Impacts on wastewater services under the No Project Alternative would thus be **less than significant.** **The Proposed Plan's wastewater-related policies** do not differ substantially from those in the No Project Alternative. The City would collect wastewater impact fees under either alternative; preparation of the wastewater collection system master plan would continue under either alternative. As higher levels of population growth would occur under the Proposed Plan, the likelihood of needing to add capacity to wastewater treatment facilities would be higher under this alternative. Wastewater impacts would thus be higher under the Proposed Plan.

Development occurring under the No Project Alternative may increase the occurrence of impervious surfaces, **which would place strain on the City's stormwater drainage system.** Policies contained in the No Project Alternative to preserve open space would help mitigate these impacts. As development under the Proposed Plan is anticipated to be higher than that which would occur under the No Project Alternative, area of impervious surfaces may increase as well. However, the Proposed Plan contains a more comprehensive suite of policies, including emphasis on green infrastructure and porous pavement, that would reduce strain on stormwater drainage systems. Additionally, as discussed in Chapter 3.9: Hydrology, the City of Dixon has sufficient planned or existing stormwater drainage capacity to accommodate growth projected under the Proposed Plan. Impacts would thus be lower under the Proposed Plan.

New growth anticipated to occur under the No Project Alternative would be associated with increases in demand for energy. However, as discussed in Chapter 3.14: Utilities and Service Systems, the Dixon Substation would have sufficient capacity to serve new development under the Proposed Plan. As more growth would occur under the Proposed Plan than No Project Alternative, the Dixon Substation would also have sufficient capacity under the No Project Alternative. As less population growth would occur under the No Project Alternative, demand for energy may be slightly higher under the Proposed Plan. Under either alternative, environmental impacts associated with the provision of energy supplies would be less than significant.

New growth anticipated under the No Project Alternative would be associated with increases in demand for telecommunications facilities. However, it was determined in Chapter 3.14: Utilities and Service Systems, that existing and planned facilities would be adequate to serve the buildout population under the Proposed Plan. As the number of new housing units and new jobs would be higher under the Proposed Plan than the No Project Alternative, these facilities would also be sufficient under buildout of the No Project Alternative. Under either alternative, impacts would be less than significant.

New development occurring under the No Project Alternative would be anticipated to be associated with increased generation of solid waste. However, as discussed in Chapter 3.14: Utilities and Service Systems, waste generation rates under the Proposed Plan would not exceed the capacity of the Clover Flat Landfill. As the Proposed Plan generate more growth than the No Project Alternative, the Clover Flat Landfill would have sufficient capacity under the No Project Alternative. Additionally, development occurring under the No Project Alternative would be expected to comply with State regulations regarding solid waste. Impact associated with solid waste would thus be less than significant. Development occurring under the Proposed Plan would also be subject to State regulations regarding solid waste. Additionally, the Proposed Plan introduces new policies that would reduce waste generation rates, including requiring development of a construction waste diversion ordinance and increasing public education around waste reduction. Thus, waste generation rates under the Proposed Plan may be slightly lower than those which would occur under the No Project Alternative.

4.4 Environmentally Superior Alternative

CEQA Guidelines (Section 15126.6) require the identification of an environmentally superior alternative among the alternatives analyzed.

Table 4.4-1: **Summary of Impacts for Alternatives**, summarizes the alternatives' overall environmental impacts for each topic presented in Section 4.3. For the Proposed Plan, seven impacts were expected to be significant and unavoidable, 55 impacts were expected to be less than significant, and three were found to be no impact. For the No Project Alternative, nine impacts were expected to be significant and unavoidable, 53 impacts were expected to be less than significant, and three were found to be no impact. The Proposed Plan was found to be environmentally superior in 23 cases. The No Project Alternative was found to be environmentally superior in 11 cases. In 25 cases, the difference in anticipated environmental impact between the two alternatives was determined to be insignificant.

Overall, the Proposed Plan was found to have a similar impact profile as the No Project Alternative. As the Proposed Plan would concentrate development along key mixed-use corridors and in downtown, it would result in both more growth and a more compact pattern of growth than the No Project Alternative. The Proposed Plan would also result in more multi-family housing units, which would provide a broader range of housing options, potentially reducing the risk of displacement. While the No Project Alternative would result in a higher jobs-to-housing ratio, the Proposed Plan would ultimately be more successful in achieving the objectives of the General Plan update process including fostering economic growth, encouraging careful stewardship of resources like water and energy, promoting high-quality development, and allowing convenient and safe

travel. Given that the Proposed Plan would be more successful in achieving these objectives and is found to be environmentally superior in more cases, the Proposed Plan is determined to be the environmentally superior alternative.

Table 4.4-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>		<i>Superior Alternative</i>
	<i>Proposed Plan</i>	<i>No Project Alternative</i>	
Aesthetics			
Scenic Vistas	LTS	LTS	NPA
Scenic Resources	NI	NI	Equivalent
Visual Character	LTS	LTS	Equivalent
Light and Glare	LTS	LTS	PP
Agriculture			
Farmland Conversion	SU	SU	NPA
Agricultural Zoning/Williamson Act	LTS	LTS	Equivalent
Indirect Impacts	LTS	LTS	PP
Air Quality			
Air Quality Plan	LTS	LTS	Equivalent
Criteria Pollutants	SU	SU	NPA
Sensitive Receptors	SU	SU	PP
Odors	LTS	LTS	Equivalent
Biological Resources			
Special-Status Species	LTS	LTS	PP
Sensitive Habitat	LTS	LTS	Equivalent
Wetlands	LTS	LTS	Equivalent
Wildlife Corridors	LTS	LTS	Equivalent
Policies and Ordinances	LTS	LTS	Equivalent
HCPs	LTS	LTS	Equivalent
Historic and Cultural Resources			
Historical Resources	LTS	LTS	PP
Archaeological Resources	LTS	LTS	PP
Human Remains	LTS	LTS	PP
Tribal Cultural Resources	LTS	LTS	PP
Energy, Greenhouse Gases, and Climate Change			
Impact on Environment	SU	SU	PP
Plan, Policy, or Regulation	SU	SU	PP

Table 4.4-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>		<i>Superior Alternative</i>
	<i>Proposed Plan</i>	<i>No Project Alternative</i>	
Wasteful Energy Consumption	LTS	SU	PP
Energy Efficiency Standards	LTSM	SU	PP
Geology, Soils, and Seismicity			
Seismic Hazards	LTS	LTS	Equivalent
Soil Erosion	LTS	LTS	Equivalent
Expansive or Unstable Soils	LTS	LTS	Equivalent
Septic Systems	LTS	LTS	
Paleontological Resources	LTS	LTS	
Hazards and Hazardous Materials			
Transport, Use, or Disposal	LTS	LTS	Equivalent
Accidental Upset	LTS	LTS	Equivalent
Quarter-Mile of Schools	LTS	LTS	Equivalent
Cortese List	LTS	LTS	PP
Airport Hazards	NI	NI	Equivalent
Emergency Response	LTS	LTS	NPA
Wildland Fires	LTS	LTS	Equivalent
Hydrology and Water Quality			
Water Quality Standards	LTS	LTS	Equivalent
Groundwater	LTS	LTS	NPA
Drainage	LTS	LTS	Equivalent
Runoff	LTS	LTS	PP
Water Quality Degradation	LTS	LTS	PP
Housing in Flood Zones	LTS	LTS	Equivalent
Structures in Flood Zones	LTS	LTS	PP
Flood Hazards	LTS	LTS	PP
Seiche, Tsunami, and Mudflows	LTS	LTS	Equivalent
Land Use, Population, and Housing			
Division of a Community	LTS	LTS	PP

Table 4.4-1: Summary of Impacts for Alternatives

<i>Impact</i>	<i>Level of Significance</i>		<i>Superior Alternative</i>
	<i>Proposed Plan</i>	<i>No Project Alternative</i>	
Conflict with Land Use Plan	LTS	LTS	PP
Displacement	LTS	LTS	PP
Noise			15
Noise Standards	LTS	LTS	NPA
Vibration	LTS	LTS	NPA
Airport Noise	LTS	LTS	Equivalent
Public Services			
Fire, Police, Schools, Parks, and Public Facilities	LTS	LTS	NPA
Degradation of Parks	LTS	LTS	
Construction or Expansion of Parks	LTS	LTS	
Transportation			
Congestion Management Plan	SU	SU	PP
CEQA Guidelines Section 15064.3, Subdivision (b)	SU	SU	NPA
Traffic Hazards	LTS	LTS	PP
Emergency Access	LTS	LTS	Equivalent
Utilities			
Constriction of New Facilities	LTS	LTS	NPA
Water Supply	LTS	LTS	NPA
Wastewater Capacity	LTS	LTS	
Landfill Capacity	LTS	LTS	Equivalent
Solid Waste Regulations	LTS	LTS	PP
Notes:			
LTS = Less than Significant			
LTSM = Less than Significant with Mitigation			
NI = No Impact			
SU = Significant and Unavoidable			
PP = Proposed Plan			
NPA = No Project Alternative			

5 CEQA Required Conclusions

This section presents a summary of the impacts of the Proposed Plan in several subject areas specifically required by CEQA, including growth-inducing impacts, cumulative impacts, significant and unavoidable impacts, significant irreversible environmental changes, and impacts found not to be significant. These findings are based, in part, on the analysis provided in Chapter 3: Environmental Settings and Impacts.

5.1 Growth-Inducing Impacts

CEQA Guidelines require that an EIR “discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly” (CEQA Guidelines Section 15126.2(d)). This analysis must also consider the removal of obstacles to population growth, such as improvements in the regional transportation system.

Growth-inducing impacts, such as those associated with job increases that might affect housing and retail demand in other jurisdictions over an extended time period, are difficult to assess with precision, since future economic and population trends may be influenced by unforeseeable events such as business development cycles and natural disasters. Moreover, long-term changes in economic and population growth are often regional in scope; they are not influenced solely by changes or policies related to a single city or development project. Business trends are influenced by economic conditions throughout the state and country, as well as around the world.

Another consideration is that the creation of growth-inducing potential does not automatically lead to growth. Growth occurs through capital investment in new economic opportunities by the private or public sector. These investment patterns reflect, in turn, the desires of investors to mobilize and allocate their resources to development in particular localities and regions. These factors, combined with the regulatory authority of local governments, mediate the growth-inducing potential or pressure created by a proposed plan. Despite these limitations on the analysis, it is still possible to qualitatively assess the general potential growth-inducing impacts of the Proposed Plan.

The Proposed Plan allows for new residential and non-residential development that could result in an increase in population, housing, and jobs, compared to existing conditions, which is also described in Chapter 3.10: Land Use, Population, and Housing.

GROWTH HISTORY AND PROJECTIONS

The Association of Bay Area Governments (ABAG) is the key regional agency involved in forecasting growth in Solano. Although ABAG can forecast growth, it does not have authority to approve or deny land use plans or development projects.

Population

The City of Dixon has an estimated population in 2018 of 19,500. This estimate represents an **approximately 21 percent increase from 2000, when the city’s population was 16,103** (US Census, 2010). This population growth was more rapid than growth in Solano County as a whole, which increased by approximately 13 percent between 2000 and 2018, from a population of 394,542 to 446,610 (US Census, 2010) (American Community Survey, 2018).

The Association of Bay Area Governments (ABAG) projects that through 2040, Dixon’s population is projected to grow to about 20,700 residents. Existing population and anticipated future population, based on buildout of the Proposed Plan is shown in Table 5.1-1. A total addition of 8,760 residents over the next 20 years represents an annual growth rate of less than one percent.

Table 5.1-1 Projected Residential Population at Buildout (2040)

	City of Dixon		Planning Area ²	
	Housing Units ¹	Population ¹	Housing Units ¹	Population ¹
Existing (2018)	6,536	20,099	6,549	20,130
Additional Proposed	2,822	8,350	2,957	8,763
Total at Buildout	9,358	28,449	9,506	28,893

Notes:

1. Numbers have been rounded to the nearest hundred.
2. Includes the City of Dixon and the Sphere of Influence.

Source: Dyett & Bhatia, 2019

Increase in Regional Housing Demand

Between 2000 and 2018, the number of housing units increased throughout the Bay Area by approximately 13.2 percent, from 2,552,404 to 2,888,882 (California Department of Finance, 2012) (California Department of Finance, 2018). During this period, Solano County experienced an approximate 18 percent growth in the housing stock, adding about 24,243 units (California Department of Finance, 2012) (California Department of Finance, 2018). During the same time, the number of housing units in the City of Dixon increased by approximately 23 percent, from 5,172 housing units in 2000 to 6,337 in 2018.¹ ABAG projects a housing increase to 6,660 housing units by 2040, an increase of 8 percent from 2010 estimates.

¹ 2018 housing unit total includes accessory dwelling units (ADUs).

In 1986, Dixon voters approved Measure B, a growth management initiative. Voters reaffirmed the measure in 1996. The measure limits annual residential growth in the city to a number of dwelling units that is no more than 3 percent of the total number of housing units as of December 31 of the prior calendar year. In addition, Measure B is intended to create and maintain an approximate mix of 80 percent single-family housing units (including single-family attached and duplex units) and 20 percent multi-family dwelling units. While the housing stock in 2000 consisted of 14 percent multi-family units, Measure B enables the City to enhance the mix of housing types by encouraging 20 percent multi-family units. The measure was also designed to ensure that City services and facilities would be adequate to serve the needs of existing and future residents. Measure B includes one key categorical exemption so that it does not unduly constrain residential development, particularly affordable housing. This categorical exemption excludes development that was approved prior to the enactment of Measure B. This development is also exempt from the 80/20 residential mix objective and the 3 percent annual growth rate.

In order to encourage the production of housing, any unallocated allotments from the residential development allotment pool that remain unallocated under Measure B at the end of each Housing Element Dixon Housing Element Update February 2015 III-20 consecutive five-year period may continue to be used for housing. Furthermore, Measure B contains a nondiscretionary exemption that permits a higher number of units to be built in a single year. **The measure’s “rollover” provision** enables units not built during one year to be constructed in subsequent years as long as the total number of units approved over the five-year period averages 3 percent a year. In addition to the exemptions listed above, Measure B also allows the City Council to grant an exception to increase the number of residential units built in any one year above the 3 percent threshold to meet the **City’s share of the regional housing needs.**

As seen in Table 5.1-2, the Proposed Plan is anticipated to facilitate housing growth. The Proposed Plan’s **projection for twenty percent multi-family housing** by 2040 is in line with the requirements of Measure B.

Table 5.1-2: Projected Residential Buildout and Population (2040)

	<i>Existing (2018)</i>	<i>Future Development</i>	<i>2040 Total</i>
Housing Units	6,550	2,960	9,510
Single-Family Residential	5,241	2,350	7,591
Multi-Family Residential	1,310	605	1,915
Households	6,292	2,738	9,030
Population	20,130	8,760	28,890

Source: Dyett and Bhatia, 2019.

Employment Growth

ABAG projects an employment increase 5,780 jobs by 2040, an increase of 29 percent from 2010 estimates. The Proposed Plan includes opportunities for employment growth, based on assessment of economic factors and potential demand.

A 24 percent increase in jobs is projected to occur in the Planning Area between 2018 and 2040, for a total of 6,637 jobs, with the majority of the job growth projected for within City limits. Table 5.1-3 describes employment by sector under existing conditions and the Proposed Plan.

Table 5.1-3: Projected Employment (2040)

	Existing (2018)	Future Development	2040 Total
Agriculture	686	1	687
Education and Health	584	3	587
Hotel	106	26	133
Industrial	1,384	592	1,976
Office	577	148	726
Public	258	22	280
Retail	1,370	476	1,846
Utilities	3	-	3
Other	393	10	403
Total Jobs	5,362	1,275	6,637

Source: Dyett and Bhatia, 2019.

Jobs/Housing Ratio

The Proposed Plan’s population and housing growth would exceed that projected by ABAG. Additionally, as shown in Table 5.1-4, the City of Dixon’s jobs-to-housing ratio would decline under implementation of the Proposed Plan. As of 2018, the City’s jobs-to-housing ratio was 0.76. Under the Proposed Plan, this ratio would decline to 0.67. A jobs-to-housing ratio lower than 1.0 suggests that residents are required to commute to jobs outside of their place of residence; implementation of the Proposed Plan would exacerbate this issue. While the Proposed Plan does facilitate new residential development, it would also encourage new job growth, particularly in Campus Mixed Used areas designed to foster new mixed-use employment districts with a range of job-generating uses, housing, and easy access to the regional transportation network.

Table 5.1-4: Jobs-to-Housing Unit Ratio (2018 & 2040)

	City of Dixon		Planning Area ²	
	2018	2040	2018	2040
Jobs ¹	4,900	6,200	5,400	6,600
Housing Units ¹	6,500	9,400	6,500	9,500
Jobs to Housing Unit Ratio	0.76	0.67	0.82	0.70

Notes:

1. Numbers rounded to the nearest hundred
2. Includes the City of Dixon and the Sphere of Influence

Source: Dyett & Bhatia, 2019.

DIRECT AND INDIRECT GROWTH

As shown in Tables 5.1-1 and 5.1-2, the Proposed Plan would support a degree of anticipated growth in the City of Diamond Bar and this direct growth is analyzed throughout this EIR. Impacts of growth on infrastructure such as public services and utilities, the transportation system, and natural resources are identified, based on the buildout of the Proposed Plan. Some of the identified effects of growth are significant and unavoidable (e.g., VMT increases). In general, future development would be subject to additional site-specific environmental review under CEQA.

Given Dixon's relatively small population size compared to Solano County overall, it is unlikely that growth within the City will cause substantial pressure for growth elsewhere in the County (indirect growth). Growth under the Proposed Plan would primarily serve the local community and would accommodate existing and projected demand. Growth under the proposed General Plan is concentrated in six focus areas, including commercial and employment centers, transit-oriented development, neighborhood centers, and mixed-use neighborhoods. Growth in these focus areas would increase available housing, jobs, retail and entertainment opportunities, and access to transit options.

REMOVAL OF OBSTACLES TO GROWTH

The existing General Plan could be viewed as an obstacle to growth, given that the City is almost built out under existing land use designations. By updating the General Plan, the Proposed Plan could be viewed as removing an obstacle to growth. There is an existing demand for both residential and employment growth, which the City is trying to accommodate by revising some land use designations. Redevelopment of several sites within the City and implementation of numerous policies intended to reduce overall impacts will allow additional growth in a more compact and efficient manner. Specific impacts resulting from this change are analyzed by resource area in Chapter 3 of this EIR.

5.2 Cumulative Impacts

CEQA requires that an EIR examine cumulative impacts. As discussed in CEQA Guidelines Section 15130(a)(1), a cumulative impact “consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.” Furthermore, the analysis of cumulative impacts need not provide the level of detail required of the analysis of impacts from the project itself, but shall “reflect the severity of the impacts and their likelihood of occurrence.” (CEQA Guidelines Section 15130(b)).

In order to assess cumulative impacts, an EIR must analyze either a list of past, present, and probable future projects or a summary of projections contained in an adopted general plan or related planning document. Because it is a long-range, programmatic plan for an entire city and surrounding area, the Proposed Plan represents the cumulative development scenario for the reasonably foreseeable future in the Planning Area, and this analysis uses the summary projections of the Proposed Plan.

Several analyses presented in Chapter 3: Environmental Settings and Impacts represent cumulative analyses of issues through the Proposed Plan horizon year of 2040 because they combine the anticipated effects of the Proposed Plan with anticipated effects of regional growth and development. By their nature, the air quality transportation, noise, energy, greenhouse gas emissions, and climate change analyses presented in Chapter 3 represent a cumulative analysis, because the effects specific to the Proposed Plan cannot reasonably be differentiated from the broader effects of regional growth and development. Thus, analyses for these topics reflect not just growth in the Planning Area, but growth elsewhere in the region as well. The cumulative conclusions are summarized there, and where applicable, significant unavoidable impacts are listed in Section 5.3 Significant and Unavoidable Impacts. Other cumulative impacts are identified below.

AESTHETICS

Reasonably foreseeable growth within the Solano County region, including Dixon, could have **cumulative effects on the region's aesthetic character**. The Planning Area is a community of approximately 20,000 residents with a rich agricultural heritage and a distinct small-town feel. A greenbelt of open space and/or farmland surrounds the city, and the city limits are bordered by flat fields of row crops. **Other open space amenities include the city's parks. Within the city, downtown Dixon serves as the focal point of community identity.** Dixon has become more suburban in recent decades, with subdivisions swelling its population of commuters who travel to Davis and the Sacramento area to work along the Interstate 80 (I-80) corridor. Architectural elements of significant merit include **historic buildings located within Dixon's downtown**.

Implementation of the Proposed Plan could have a significant impact on scenic vistas if development resulted in the obstruction or removal of existing scenic vistas, including agricultural and historic resources. Various proposed policies ensure that scenic quality is maintained in Dixon. These include preserving views of agricultural and open lands and ensuring the design quality and visual character of new development.

Proposed General Plan policies are consistent with regulations governing scenic quality and would not result in a cumulatively considerable impact. No State scenic highway is located within the Planning Area. Thus, the Proposed Plan's **contribution** to this cumulative impact is not cumulatively considerable.

While the Solano County region, including Dixon, is expected to experience population growth over the planning horizon, development to accommodate new jobs and residents would not have a cumulatively considerable impact on light and glare in the Planning Area given compliance with the Dixon Municipal Code and Proposed Plan policies related to light and glare performance standards.

AGRICULTURAL RESOURCES

In the Planning Area, agriculture has played a role as an important industry, a predominant feature **of the visual landscape, and a major contributor to the City of Dixon's identity.** In California, productive farmland acreage has been gradually declining, due primarily to the conversion of farmland to non-agricultural uses. Since 1984, **Solano County's annual agricultural land acreage** has been decreasing, with a loss of 156 net acres between 2014 and 2016. The Proposed Plan would

establish various urban land use designations for areas with FMMP Prime and Unique Farmland, and thus would contribute to a cumulatively considerable impact. Implementation of the Proposed Plan would not introduce any new conflicts with existing zoning for agricultural use or Williamson Act contracts, and thus would not contribute to any cumulatively considerable impacts.

Existing regulations and policies protect agricultural lands from land use conflicts to a certain extent. The Proposed Plan would further reduce the probability of creating indirect impacts on agricultural lands by promoting compact development patterns. These requirements will limit development pressures on surrounding agricultural lands, increasing the long-term viability of agricultural uses in those areas. Impacts would thus be less than cumulatively considerable.

BIOLOGICAL RESOURCES

Implementation of the Proposed Plan, in combination with other reasonably foreseeable future projects in the region, will contribute incrementally to the continuing reduction in relatively natural, undisturbed open space areas and contribute to the progressive fragmentation of habitat areas and decline in species diversity throughout the region. **Given the Proposed Plan's policies** pertaining to land conservation, open space preservation, community gardens, and habitat conservation, the **Proposed Plan's** contribution to cumulative impacts are not expected to be significant.

In the cases of any impacts on biological resources identified in the future that could be significant, policy NE-1.12 would avoid, minimize and/or compensate for adverse effects such that the cumulative impact is less than significant.

CULTURAL, HISTORIC, AND TRIBAL CULTURAL RESOURCES

The Planning Area contains 105 historic buildings or structures. The State OHP Historic Property Directory (HPD), which includes listings of the CRHR, California State Historical Landmarks, California State Points of Historical Interest, and the NRHP, lists 315 recorded buildings or structures within the Planning Area. Almost all of the historic resources are clustered in the Downtown area. Two of the resources are listed on the NRHP: the Jackson Fay Brown House at 6751 Maine Prairie Road and the Dixon Carnegie Library at 135 E. B Street. Development and population growth under the Proposed Plan could result in cumulative impacts on historic resources, including demolition, alterations, and accidents caused by construction. However, at the time development or redevelopment projects are proposed, the project-level CEQA document would need to identify potential impacts on known or potential historic sites and structures. The CEQA Guidelines require a project that will have potentially adverse impacts on historical **resources to conform to the Secretary of the Interior's Standards for the Treatment of Historic Properties**. In conjunction with Proposed Plan policies requiring the preservation and maintenance of **historic resources, the Proposed Plan's contribution to this impact would not be cumulatively considerable.**

Prehistoric and historic archaeological resources have been found in the Planning Area, and there are sites in the Planning Area that may be sensitive for unrecorded resources, most notably anywhere there has been under occupation or use for at least 45 years. Anticipated development projects under the Proposed Plan may involve grading, excavation, or other ground-disturbing

activities, which could have a cumulatively considerable impact on unknown archaeological resources. Given compliance with proposed General Plan policies, as well as applicable local, state and federal laws, the Proposed Plan's contribution to this impact would not be cumulatively considerable.

All development projects allowed under the Proposed Plan would be required to comply with state laws pertaining to the discovery of human remains and disposition of Native American burials; therefore, the Proposed Plan would have a less than cumulatively considerable contribution to impacts related to human burials.

While there are no recorded Native American resources within the Planning Area, development projects allowed under the Proposed Plan may result in the identification of unrecorded tribal cultural resources given the historic occupation of the area. Future projects that would not otherwise qualify for an exemption under CEQA would be required to comply with the provisions of AB 52 to incorporate tribal consultation into the CEQA process. Proposed Plan policies would further address impacts to tribal cultural resources by requiring the City of Dixon to conduct cultural resource assessments prior to the approval of development proposals and requiring developers to halt work if cultural resources are encountered during excavation or construction. Therefore, the Proposed Plan's **contribution to this cumulative impact** is not cumulatively considerable.

GEOLOGY, SOILS, SEISMICITY, AND PALEONTOLOGY

The Planning Area is located within a geographic area that is considered active or potentially active by the California Geological Survey and contains expansive soils. The cumulative increases in population and development that would result from implementation of the full buildout would **increase the number of residents and employees exposed to the region's known seismic hazards**; however, conformance with the California Building Code and proposed General Plan policies would preserve building integrity during a seismic event, and other regulatory measures would reduce geohazards impacts to a less-than-significant level. As a result, cumulative impacts would be minimized and would be less than significant.

Sixty seven percent of the Planning Area is located on soils with a moderate to high risk of erosion, though a majority of this area is on previously developed land. Implementation of the Proposed Plan could have a significant impact due to soil erosion or loss of topsoil if associated construction and development activities could expose soils to the effects of erosion, which could hinder proper drainage and stormwater management. However, all development occurring under the Proposed Plan would be required to obtain a permit from the Building Official with approval from the City Engineer. Compliance with the Dixon Municipal Code and NPDES permit requirements, as well as **policies contained within the Proposed Plan**, would ensure that the Proposed Plan's contribution to this cumulative impact is not cumulatively considerable.

The City of Dixon provides domestic wastewater collection and treatment for land within the jurisdictional boundary as well as some unincorporated areas in the Northeast Quadrant. Most other areas of unincorporated Solano County utilize individual septic systems. While the Proposed Plan does not anticipate additional growth within the SOI, all soils in the Planning Area have a very limited or somewhat limited ability to accommodate the use of septic tanks. However, the Solano

County code specifies that a site evaluation is required prior to construction of any on-site sewage disposal system or expansion, alteration, or replacement of an existing system which includes one or more soil evaluations within the boundaries of the absorption area of the on-site sewage disposal system proposed for construction, expansion, alteration, replacement, or repair. Compliance with this policy, as well as policies within the Proposed Plan pertaining to investment in wastewater **treatment and sewer planning, would ensure that the Proposed Plan's contribution to this cumulative impact is not cumulatively considerable.**

Numerous paleontological resources have been discovered throughout the Sacramento Valley and Solano County regions, including Vacaville and Putah Creek. While no paleontological resources have been discovered within the Planning Area to-date there is potential that resources could be found in the future. Future development projects anticipated by the Proposed Plan may involve grading, excavation, or other ground-disturbing activities, which could destroy unknown paleontological resources. Consequently, the Proposed Plan may have the potential to contribute to cumulative impacts on paleontological resources. However, with implementation of Proposed Plan policies, as well as applicable local, state and federal laws, and MM-GEO-1, the Proposed Plan's **contribution to this cumulative impact is not cumulatively considerable.**

HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

Projected population and employment growth in the Planning Area would increase the number of people potentially exposed to impacts from hazardous material transportation, the increased use of hazardous household, commercial, and industrial materials, as well as a cumulative increase in exposure to risk associated with the accidental release of hazardous materials into the environment and development of hazardous sites. However, compliance with local, State, and federal regulations pertaining to the production, use, and transportation of hazardous materials would apply to development throughout the region; therefore, the Proposed Plan's contribution to this potential cumulative impact is less than cumulatively considerable.

No Very High Fire Hazard Severity Zones (VHFHSZ) are present within the Planning Area. Implementation of the Proposed Plan would therefore not result in development located within VHFHSZs or State Responsibility Areas (SRA). Additionally, adherence to Chapter 16.02 of the Dixon Municipal Code and California Strategic Fire Plan would reduce the fire risk of new development and ensure that development would not be cumulatively considerable.

Proposed Plan policies would support the City of Dixon's commitment to providing emergency services and coordinating with regional agencies and would therefore ensure that proposed development would have less than cumulatively considerable impacts on the implementation of emergency response plans.

Projected population growth and development anticipated by the Proposed Plan would increase the number of people exposed to pollutant concentrations associated with the spread of wildfire. Compliance with Proposed Plan policies related to the protection of sensitive receptors would ensure that impacts on project occupants would be less than cumulatively considerable. Given that the Proposed Plan locates areas of potential development away from VHFHSZs and SRAs, compliance with proposed General Plan policies aimed at mitigating fire risk and existing local and

regional regulations and programs would have a less than cumulatively considerable contribution to fire risk.

HYDROLOGY AND WATER QUALITY

Future development under the proposed General Plan could result in impacts on water quality, hydrology, flooding, or other inundation hazards; however, federal, State, and local regulations, as well as policies in the Proposed Plan would ensure that impacts would be less than significant.

The City of Dixon is entirely dependent on groundwater drawn from the Solano Groundwater Subbasin. The City of Dixon is a participant in the Solano Subbasin Groundwater Sustainability Agency (SSGSA), which is required to complete and maintain a plan for long term sustainability of the Solano Subbasin. Compliance with the SGMA legislation ensures that the groundwater draws will be carefully managed and sustainably used, and that cumulative impacts would be less than significant.

Buildout of the Proposed Plan is expected to generate an increase in impervious surfaces. Unless properly treated, runoff from these surfaces could include various pollutants, such as asbestos, oils, solvents and other pollutants that could be transported through drainage channels and ultimately the Sacramento River. By implementing these long-term changes to streetscapes and pedestrian walkways, increasing parking spaces, building new residential developments, and otherwise introducing new impervious surfaces, implementation of the Proposed Plan could create or contribute polluted runoff. This additional runoff could also exceed the capacity of existing or planned stormwater drainage systems within the City of Dixon. However, storm drain improvements are planned for the Planning Area. These improvements, in addition to adherence to existing regulations, ensure that impacts on the stormwater system will be less than significant.

No significant development will occur within FEMA's 100-year flood hazard area. The entirety of Dixon and its SOI are in the flood inundation zone of the federally-owned Monticello Dam and have a risk of major loss of life and damage to property if a catastrophic event were to occur. However, the potential for dams to fail and inundate the city is low due to oversight from the Bureau of Reclamation. Policies within the Proposed Plan would further ensure the safety of Monticello Dam and its environs, ensuring that impacts will be less than significant.

LAND USE AND HOUSING

Projects that could have the effect of physically dividing an established community – such as a major new road, highway, or similar infrastructure – tend to have a singular rather than cumulative impact. Similarly, impacts from plans and projects in the region that could conflict with existing plans, including habitat conservation plans, are not cumulative in nature.

However, potential impacts related to population and housing can be cumulative in nature. Population growth, by itself, is not an environmental impact; however, the direct and indirect effects, such as housing and infrastructure needs that are related to population growth can lead to physical environmental effects. Growth-inducing impacts associated with population growth are discussed above in Section 5.1. The majority of developed land in the Planning Area is comprised of residential uses, which are not anticipated to undergo significant land use changes under the

Proposed Plan. The Proposed Plan anticipates that the overall number of dwelling units will increase by prioritizing mixed-use and infill development in vacant and underutilized areas in Dixon, while seeking to preserve existing neighborhoods, providing housing to serve the diverse needs of the community at various socioeconomic levels, and encouraging the development of new jobs and businesses while fostering existing ones. Therefore, the Proposed Plan would have a less than cumulatively considerable contribution to impacts on land use and housing.

NOISE

The noise analysis represents cumulative analyses of issues through the Proposed Plan because it combines the anticipated effects of the Proposed Plan with anticipated effects of regional growth and development. By its nature, the noise analysis represents a cumulative analysis, because the effects specific to the Proposed Plan cannot reasonably be differentiated from the broader effects of regional growth and development. Thus, the noise analysis reflects not just growth in the Planning Area, but growth elsewhere in the region as well. Consequently, the impact significance conclusions discussed in Chapter 3.11 are representative of cumulative impacts.

The Proposed Plan would result in both short-term and long-term changes to the existing noise environment in the Planning Area. Long-term operational noise from traffic would increase compared to existing conditions. The Proposed Plan requires that adverse noise and vibration impacts associated with rail corridors and truck routes be minimized within the vicinity of sensitive land uses. This policy would ensure that impacts are less than significant.

Impacts of new traffic noise on existing sensitive receptors such as residences near major roadways would be less than significant, given that noise levels along these roadway segments would increase by at most 3.6 dBA CNEL in 2040 under the Proposed Plan. Therefore, new traffic noise would not result in a cumulative impact on existing sensitive receptors. As with noise, construction and operation vibration impacts of the Proposed Plan would result in less than significant impact, and therefore, would not result in a cumulative impact. The Proposed Plan would result in no impact from airport noise, and therefore, would not result in a cumulative impact.

PUBLIC FACILITIES AND RECREATION

Future development and population growth anticipated by the Proposed Plan would generate additional demand for public services and public facilities including parks and recreational facilities. Policies included in the Proposed Plan related to increasing firefighter staffing levels, fire education, and public safety programs would help to keep service demand increases to a minimum. The Proposed Plan would support objectives and function of the Dixon Police Department by **encouraging regular updates of the City's Municipal Services Review and requiring fiscal impact analyses** as well as other financing tools to fund and maintain facility improvements that help to provide services adequate for development and growth.

Dixon Unified School District has experienced modest increases in student enrollment since the 2014-2015 school year, a trend that is anticipated to continue and may be exacerbated by buildout of the Proposed Plan. However, developer payment of standard school impact fees would also cover a fair share of any need for new or altered school facilities, and as provided by California

Government Code Section 65996, the payment of such fees is deemed to fully mitigate the impacts of new development on school services.

Population growth under the Proposed Plan may increase demand for library services. However, the Proposed Plan contains a comprehensive suite of policies that would ensure the integrity of the library building and services. The financial impact of such changes is mitigated through Solano County Public Facilities Fees, and as these additions do not necessitate physical alteration of the facility, they do not generate environmental impacts. Impacts would therefore be less than cumulatively considerable.

The Proposed Plan would not provide sufficient park access to all residents within the Planning Area, and projected population growth may result in a cumulatively considerable impact on parkland. However, policies and implementing actions in the Proposed Plan could significantly contribute to park and recreational needs of the community. Impacts would thus be less than cumulatively considerable.

TRANSPORTATION

By its nature, the transportation analysis presented in Chapter 3 represents a cumulative analysis of transportation conditions through 2040. As a result of the amount of development anticipated by the Proposed Plan, the Proposed Plan's travel demand and VMT is the cumulative condition for CEQA purposes. Under the Proposed Plan cumulative scenario, VMT is expected to increase compared to existing conditions. Per CEQA Guidelines section 15064.3, this constitutes a considerable contribution to the significant impact regarding VMT.

The Proposed Plan would have a less than cumulatively considerable contribution towards conflicts with programs and plans that address the circulation system given that the Proposed Plan includes multiple policies that improve multi-modal mobility and would expand the existing bicycle and pedestrian facilities while accommodating vehicle traffic. Additionally, the Proposed Plan would have a less than cumulatively considerable impact on hazards and emergency access.

UTILITIES AND SERVICE SYSTEMS

Future development anticipated by the Proposed Plan would generate additional demand for water and wastewater, stormwater, and solid waste services, as well as generating additional solid waste.

The use of private wells could impact the available groundwater supply. However, Solano County is a participant in the Solano Subbasin Groundwater Sustainability Agency (SSGSA) for the purpose of working collaboratively to develop a Groundwater Sustainability Plan (or plans) for the Solano subbasin. Through participation in the SSGSA, Solano County will help to manage and sustain the Solano Subbasin groundwater supply. Consequently, there are no cumulative water supply impacts.

The only cumulative development that could feasibly be connected to the City's sewer system and WWTF is the County's AISA development. However, AISA development is using individual wastewater treatment and disposal systems and would not be connected to the City's sewer system and WWTF without approval by the City. The City would not accept wastewater flows from the AISA development without preparing a study to identify the sewer and WWTF facilities needed to

accept the wastewater. The City would also require the AISA property owners to pay their fair share of the needed infrastructure. Consequently, there are no cumulative sewer or WWTF impacts.

The only cumulative development that could feasibly affect the City's and the downstream drainage systems is the County's AISA development. However, AISA development, along with the City's development) is currently being evaluated to identify the needed infrastructure to prevent drainage impacts in a drainage study by the Dixon Regional Watershed Joint Power Authority and in a study being sponsored by the Solano County Water Agency. Consequently, there are no cumulative storm drainage impacts.

There could be cumulative impacts related to solid waste, as additional population will produce additional solid waste, and the Hay Road Landfill, also used by the cities of Vacaville and San Francisco, could reach its capacity faster due to increased population. However, the Proposed Plan mandates strong waste reduction measures, and, in concert with State waste reduction targets, the cumulative impacts will be less than significant.

Cumulative development would be subject to compliance with federal, State and local regulations. Therefore, implementation of the Proposed Plan would not result in a considerable contribution to cumulative impacts on utilities and service system.

5.3 Significant and Unavoidable Impacts

Significant unavoidable impacts are those that cannot be mitigated to a level that is less than significant. According to CEQA Guidelines 15126.2(b), an EIR must discuss any significant environmental impacts that cannot be avoided under full implementation of the proposed program, including those that can be mitigated, but not to a less-than-significant level. The analysis in Chapter 3 determined that the Proposed Plan would result in impacts related to agricultural resources and transportation that, even with implementation of mitigation measures, would remain significant and unavoidable. These impacts are summarized below:

Air Quality: The Yolo-Solano Air Quality Management District area is currently classified as a federal and state nonattainment area for ozone, a federal nonattainment area for PM_{2.5}, and a state nonattainment area for PM₁₀. Construction of individual projects associated with implementation of the Proposed Plan could temporarily emit criteria air pollutants through the use of heavy-duty construction equipment, vehicle trips generated from workers and haul trucks, and demolition and various soil-handling activities. Operation of the Proposed Plan would generate criteria air pollutant emissions from Plan-generated vehicle trips traveling within the City, energy sources such as natural gas combustion, and area sources such as landscaping equipment and consumer products usage. A quantitative analysis found that operational emissions for the Proposed Plan would exceed project-level regulatory thresholds for ROG, PM₁₀, and PM_{2.5}.

Mitigation is required to ensure that future development projects incorporate measures to reduce emissions from construction activities, and would reduce NO_x and VOC impacts on a project-by-project basis. However, the exact emissions from construction of the Proposed Plan cannot be quantified without full detail of the development projects to be implemented and the extent to which mitigation, including Mitigation Measures AQ-1 and AQ-2, can be applied. Therefore,

short-term regional construction emissions would be significant and unavoidable. Future development would be required to comply with State and local regulations, Title 24 energy efficient standards, and Proposed Plan policies to reduce operational emissions. However, there is no way to determine the extent to which these regulations will be implemented nor their effectiveness. Mitigation Measure AQ-3 requires all development with the potential to create point-source air quality impacts to receive Yolo-Solano AQMD review prior to approval. However, the total criteria air pollutant emissions from operation of future development under the Proposed Plan is likely to be substantial and could contribute to increases in concentrations of air pollutants, which could contribute to ongoing violations of air quality standards. Because the detail of future projects allowed under the Proposed Plan cannot be known at this time, long-term regional operational emissions would also be significant and unavoidable. As discussed, impacts to air quality would be cumulatively considerable.

As discussed, level of service impacts at three intersections under the Proposed Plan meet the screening criteria utilized by Yolo-Solano AQMD to provide a conservative indication of whether project-generated traffic will cause a potential CO hot spot. As discussed in Chapter 3.3-13, signalization of these intersections is not recommended. Mitigation Measures AQ-4, AQ-5, and AQ-6 are proposed to reduce potential impacts to sensitive receptors from mobile source TACs. However, implementation of Mitigation Measures AQ-1 through AQ-6 would not be sufficient to reduce the significant and unavoidable impact on sensitive receptors from CO hotspots.

Agricultural Resources: Conversion of FMMP Prime and Unique Farmland would occur under the Proposed Plan. In total, the Proposed Plan would allow for development on 883 acres and 736 acres of FMMP Prime or Unique Farmland within City limits and in the SOI, respectively. The Proposed Plan does not leave any land with an agricultural land use designation. Numerous proposed policies would help reduce the impact. However, even with the implementation of these policies, the impact could remain significant and unavoidable. As discussed above, impacts to agricultural resources would be cumulatively considerable.

Climate Change and Greenhouse Gases: While the Proposed Plan would reduce greenhouse gas emissions to 182,813 MTCO₂e per year in 2040, a 15 percent reduction over existing conditions, it does not achieve the 60 percent reduction below 1990 emissions levels. As this percentage reduction target is based on Statewide GHG reduction goals established in SB 32 and EO S-3-05, attainment of this target would be considered “substantial progress” towards the 2050 statewide milestone. The Proposed Plan’s failure to meet this target indicates an inability to feasibly reach this milestone. Furthermore, per capita emissions under the Proposed Plan in 2040 (6.3 MTCO₂e per capita) would not be consistent with CARB Scoping Plan per capita reduction targets designed to be consistent with SB 32, which are 6 metric tons CO₂e per capita by 2030 and 2 metric tons CO₂e per capita by 2050. As such, operational GHG emissions from full buildout of the Proposed Plan in 2040 could conflict with the GHG emissions reduction trajectory for 2050 under SB 32 and EO S-3-05. Per capita passenger vehicle emissions would increase under the Proposed Plan and therefore would not be consistent with the SB 375 GHG reduction targets of 10 percent and 19 percent by 2020 and 2035, respectively, relative to 2005 per capita passenger vehicle emissions.

While Mitigation Measure GHG-1 would require the City to develop a Climate Action Plan that specifies a GHG reduction goal in line with the State’s targets, as well as quantifiable and implementable policies, additional federal and State measures would be necessary to reduce GHG

emissions to meet the long-term GHG reduction goals under Executive Order B-30-15, which identified a goal to reduce GHG emissions to 40 percent of 1990 levels by 2030, and Executive Order S-03-05, which identified a goal to reduce GHG emissions to 80 percent of 1990 levels by 2050. Despite implementation of numerous relevant policies and mitigation, impacts to the environment through the generation of GHG emissions and conflicts with plans and regulations adopted for the purpose of reducing GHG emissions would remain significant and unavoidable. As discussed, impacts to greenhouse gases and climate change would be cumulatively considerable.

Transportation: Vehicle Miles Travelled (VMT) is expected to increase under implementation of the Proposed Plan. While the Proposed Plan will reduce the VMT per service population to 30.4, an almost 12 percent reduction over existing conditions, and shows greater VMT reduction than the No Build condition, it does not achieve 15 percent reduction required to avoid a potentially significant impact. Numerous proposed policies would help reduce the impact. However, even with implementation of these policies, the impact could remain significant and unavoidable. As discussed above, impacts to transportation would be cumulatively considerable.

5.4 Significant Irreversible Environmental Change

CEQA Guidelines require an EIR to consider whether “uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely” (CEQA Guidelines Section 15126.2(c)). “Nonrenewable resource” refers to the physical features of the natural environment, such as land or waterways, and resources that are renewable only over long time spans, such as soil productivity. A resource commitment is considered irretrievable when the use or consumption of the resource is neither renewable nor recoverable for use by future generations. Irreversible changes and irretrievable commitments of non-renewable resources anticipated by the Proposed Plan include the following issues. The Proposed Plan would involve two types of resources: (1) general industrial resources including fuels and construction materials; and (2) project-specific resources such as land, biotic and cultural resources at the building sites.

IRREVERSIBLE CHANGES FROM ENVIRONMENTAL ACCIDENTS

Existing and future commercial development projects in the Planning Area may transport, use, or dispose of hazardous materials; and hazardous materials could be accidentally released into the environment during these activities. Accidents, such as the release of hazardous materials, may trigger irreversible environmental damage. In most circumstances, the potential risks posed by hazardous materials use and storage are primarily local and, therefore, limited to the immediate vicinity of such use. Moreover, the transport, use, and disposal of hazardous materials are heavily regulated. Compliance with existing federal, State, and local laws and regulations that are administered and enforced by the City would reduce risks associated with the routine use, storage, and transportation of hazardous materials in connection to acceptable levels, and would ensure that no significant irreversible changes from accidental releases would occur.

COMMITMENT/CONSUMPTION OF NON-RENEWABLE RESOURCES

Implementation of the Proposed Plan could result in the long-term commitment of various resources to urban development. While the Proposed Plan itself would not directly entitle or result in any new development, it is reasonably foreseeable that the Proposed Plan, which acts as a blueprint for growth and development in the Planning Area over the next 20 years, could result in significant irreversible impacts related to the commitment of non-renewable and/or slowly renewable natural and energy resources, such as:

Air Quality: Increases in vehicle trips resulting from buildout of the Proposed Plan would potentially contribute to long-term degradation of air quality and atmospheric conditions in the region. Technological improvements in automobiles, including the growth of the electric vehicle market share, may lower the rate of air quality degradation in the coming decades. Nonetheless, vehicle trips resulting from implementation of the Proposed Plan could result in the irreversible consumption of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for non-electric automobiles and long-term degradation of air quality.

Water Consumption: To the extent that the Proposed Plan would accommodate new population and jobs, it would increase the demand for water and place a greater burden on water supply. While additional residents and workers would use more water, the City is expected to have adequate water to meet demand in normal and wet years in 2040. Despite the change in demand resulting from the Proposed Plan being marginal, the increase would represent an irreversible environmental change, as use of this resource would increase.

Energy Sources: Residential and non-residential developments use electricity, natural gas, and petroleum products for lighting, heating, and other indoor and outdoor power demands, while cars use both oil and gas. New development anticipated by the Proposed Plan would result in increased energy use for the operation of new buildings and for transportation. This new development would therefore result in an overall increased use of both renewable and nonrenewable energy resources. To the extent that new development uses more nonrenewable energy sources, this would represent an irreversible environmental change.

Agricultural Resources: While the Proposed Plan prioritizes development in downtown infill areas, it would allow for development on 1,619 acres of FMMP Prime or Unique Farmland. Thus, if implemented, the Proposed Plan would lead to the development of land currently designated as Prime Farmland or Unique Farmland, as classified by the California Farmland Mapping and Monitoring Program. These designations identify high quality agricultural resources, and the loss of these resources due to conversion of designated land to non-agricultural uses may be considered an irreversible environmental change.

CONSTRUCTION-RELATED COMMITMENTS

Irreversible environmental changes could also occur during the course of constructing development projects anticipated by the Proposed Plan. New construction would result in the consumption of building materials (such as lumber, sand and gravel), natural gas, and electricity, water, and petroleum products to process, transport and build with these materials. Construction equipment running on fossil fuels would be needed for excavation and the shipping of building

materials. Due to the non-renewable or slowly renewable nature of these resources, this represents an irretrievable commitment of resources.

However, development allowed under the Proposed Plan would not necessarily result in the inefficient or wasteful use of resources. Compliance with all applicable building codes, as well as existing and Proposed Plan policies and standard conservation features would ensure that natural resources are conserved to the maximum extent feasible. It is possible that new technologies or systems will emerge, or become more cost-effective or user-friendly, to further reduce the reliance upon non-renewable natural resources. Nonetheless, future activities related to implementation of the Proposed Plan could result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobiles and construction equipment.

5.5 Impacts Found Not to Be Significant

CEQA requires that an EIR provide a brief statement indicating why various possible significant impacts were determined to be not significant. Chapter 3 of this EIR discusses all potential impacts, regardless of their magnitude in all issue areas except forestry and mineral resources, which were determined to have negligible or no impacts as such resources generally do not occur in the Planning Area.

- Forestry: Forestry resources do not occur in the Planning Area and, therefore, would not be affected by the land use changes in the Proposed Plan.
- Mineral Resources: Other than a few existing idle oil wells, there are no mineral resources identified in the Planning Area and, therefore, no potential impacts on this type of resource. It does not appear that there are any active oil wells in the vicinity of proposed new development or redevelopment.

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