

# EAGLE MOUNTAIN CITY



## PARKS AND OPEN SPACE MASTER PLAN

**June 2009**





## ACKNOWLEDGEMENTS

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# INTRODUCTION

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## Building a City Parks System

### PURPOSE

This Parks and Open Space Master Plan is an update to the Eagle Mountain City Comprehensive Plan. As identified in the 2005 Comprehensive Plan:

*Eagle Mountain City has become one of the fastest growing cities in the entire state of Utah. Many challenges accompany this growth and proper planning is essential to ensure that the shared goal of the citizens and elected officials becomes a reality. This plan is that the City will become Utah County's most desirable place to live. It includes the following elements:*

- *Healthy, well-designed communities supported by efficient and high-quality services and facilities, and providing a range of suitable master-planned housing options;*
- *A system of open spaces, parks, trails and greenbelts that provides opportunities for recreation and complements the built environment;*
- *Conservation and integration of the natural environment, including wetlands and streams, mountains and hillsides, wildlife habitat, water quality, natural resource activities and other sensitive lands due to topography;*
- *A vital and diversified economy with a range of economic activity that stimulates local job growth and provides market driven services for the City's residents;*
- *An efficient transportation system including roads and highways as well as opportunities for non-motorized travel that provides greater access and mobility throughout the City and its surrounding areas.*

### The Challenge

Eagle Mountain City has a huge land mass, massive future growth potential, varied existing development and park systems, insufficient facilities for the existing population and almost no way to regulate the unified development of the future parks and open space system.

The challenge is to provide a concise, yet encompassing, Open Space Master Plan for Eagle Mountain City that will provide the tools to educate and guide the city and future developers so that a unified system is built to provide for the needs of residents and preserve the qualities of the open space.

### Approach

Open space needs have been assessed through referencing national park standards and other master plans, and responding to city and resident input. Guidelines for the city have been established to further assess future needs, funding and development.



The annual Easter Egg Hunt brings the community together.





There is significant access to open space in and around Eagle Mountain City.



The rural landscape defines the character of Eagle Mountain City.

**VISION**  
**Planning Principles**

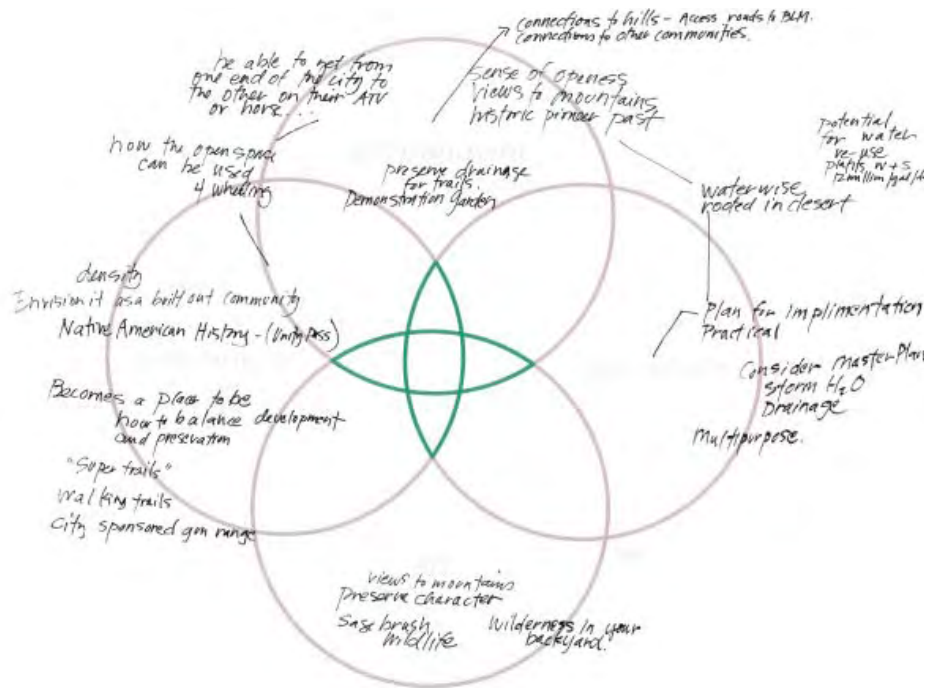
- Diverse park amenities are necessary to service the needs of an entire community.
- Varying scales of parks and trail systems with their accompanying accessible distance make a user-friendly and diverse open space system.
- Preservation, enhancement and development combined provide a rich and layered experience in open space.

**Critical Success Factors**

Critical success factors are items that must be addressed or present in order for the project to be considered successful. The Eagle Mountain City Planning Department determined key factors and direction for the project within the realms of Environment, Economics, Community, and Art/Aesthetics. The group listed the following as the critical success factors in each category for Eagle Mountain City:

*Environment*

- » Water Use
- » Alternative Energy
- » Hillside / Slope Protection
- » Antelope / Wildlife Corridors
- » Plant Palette
- » Tickville Wash



The DW Legacy Design™ Method Diagram as annotated by Eagle Mountain City

### *Economics*

- » Marketing Tool / Economic Development
- » Real Estate Value
- » Funding Source / Construction Maintenance
- » Acquisitions for City
- » Conservation Easements
- » Transfer of Development Rights (TDRs)

### *Community*

- » Archeological
- » Recreation
- » Bring Community Together “Unity Pass”
- » Equity in City
- » Rural vs. Urban
- » Provide for all

### *Art*

- » Pony Express
- » Western / Rural
- » Quiet
- » Clean Air
- » Stars
- » Military

### **Conclusions**

As Eagle Mountain City continues to grow, the following goals and objectives will guide the decision making for the community and future developers. From the foundation building efforts, principles were established to govern the planning and goals/objectives for the project.

### **Principles**

- Diverse park amenities are necessary to service the needs of an entire community.
- Varying scales of parks and trail systems with their accompanying accessible distance make a user-friendly and diverse open space system.
- Preservation, enhancement and development combined provide a rich and layered experience in open space.

### **Goals and Objectives**

- Retain the “small town” feel and openness of the current Eagle Mountain landscape.
- Provide recreation for all ages and user groups.
- Provide connections between residents, parks and trails.
- Provide Eagle Mountain City with the guidelines for furthering their information base, acquiring funding and implementing the Master Plan.



*Community events take place in the City's parks.*



*Petroglyphs are a significant cultural resource to Eagle Mountain City.*

## CRITICAL QUESTIONS

Future development, park planning, and implementation should address the following critical questions in each of the four realms of Environment, Economics, Community, and Art.

### Environment

- How can the open space system preserve, protect and/or enhance habitat for species of concern?
- How can the open space system enhance the connectivity of the community?
- Has a phasing plan been identified? Have strategies for acquiring open space been identified?
- Is there a strategy to inform and educate users about the project's on-going environmental goals?

### Economics

- How can the open space system contribute to the land value of the community?
- Can the open space system enhance the connectivity of the community to town centers, schools, and community facilities?
- How can the open space system contribute positively to the overall infrastructure of the community?
- Can the open space system be funded by referendums?
- What value is generated for the community from the open space?

### Community

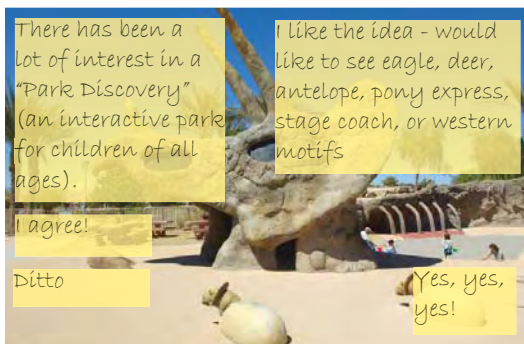
- What are the standards to evaluate how much open space per person is required?
- What are the demographics of the community and what are their open space needs?
- What kinds of community activities should we plan for in the open space?
- What are the places that people value?
- Does the proposed plan conserve land, promote livability, transportation efficiency and walkability?
- Are there currently informal spaces, other than parks, squares, etc. where people gather?

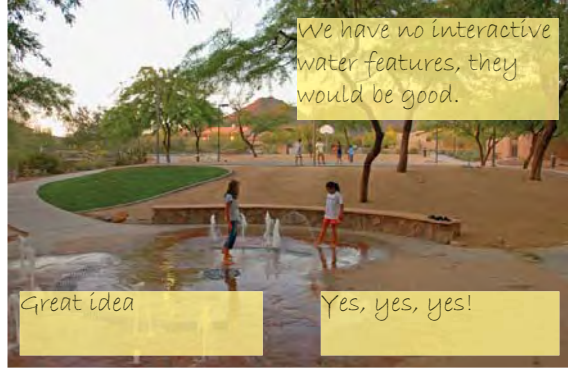
### Art

- How does the open space system contribute to the identity and character of the community?
- How does the open space system preserve important areas of meaning or sense of place in the community?
- How can the open space system capitalize on existing significant existing conditions that can create an experience unique to this place?
- How does the open space system capture the cultural context of its location? Does it reveal or interpret the culture of the place?

## VISUAL PREFERENCES

As part of the stakeholder workshop, participants were asked to respond to a set of images that portrayed various types of programming and character options. Following are the photographs that were presented to the stakeholders, along with the comments provided.







# PLANNING CONTEXT

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Eagle Mountain area context



## Planning Context

### PROCESS SUMMARY

The Eagle Mountain Parks and Open Space Master Plan process began in June 2008 and was developed through multiple phases. Initial research and public involvement components formed the foundation of the plan and guided the development of the planning maps as well as individual concept plans for three park typologies.

### Research

The purpose of the research phase resulted in an understanding of the work that has been completed to date by Eagle Mountain City. Additional documents available from Eagle Mountain City include:

- Development master plans
- Regional parks plans
- Region trail plans
- City codes
- General plan goals and policies

### Public Involvement

The general objective for this phase of the work is to develop a thorough understanding of the city of Eagle Mountain and its residents. This knowledge will inform the design team as they develop an understanding of the development program. Interviews with Eagle Mountain parks and trails stakeholders will comprise the majority of this work.

### Design and Planning Process

Data was collected from the stakeholder interviews will be analyzed with traditional site inventory resources in order to evaluate the multiple systems that will influence the parks and open space system in Eagle Mountain City.

Programming parameters were established along with the development of programming elements to provide conceptual master plan ideas and character. These conceptual site plans were developed to give a preliminary vision for how the design principles and programming elements can be applied to future park development.

An economic analysis will contribute to the master planning effort by quantifying how the parks, trails, and open space at Eagle Mountain could increase property values and sales premiums for nearby residential properties. The analysis is based upon industry research from around the country as well as an examination of how two to three comparable open space and trails initiatives in other communities have influenced residential values and the ability to attract employment centers.



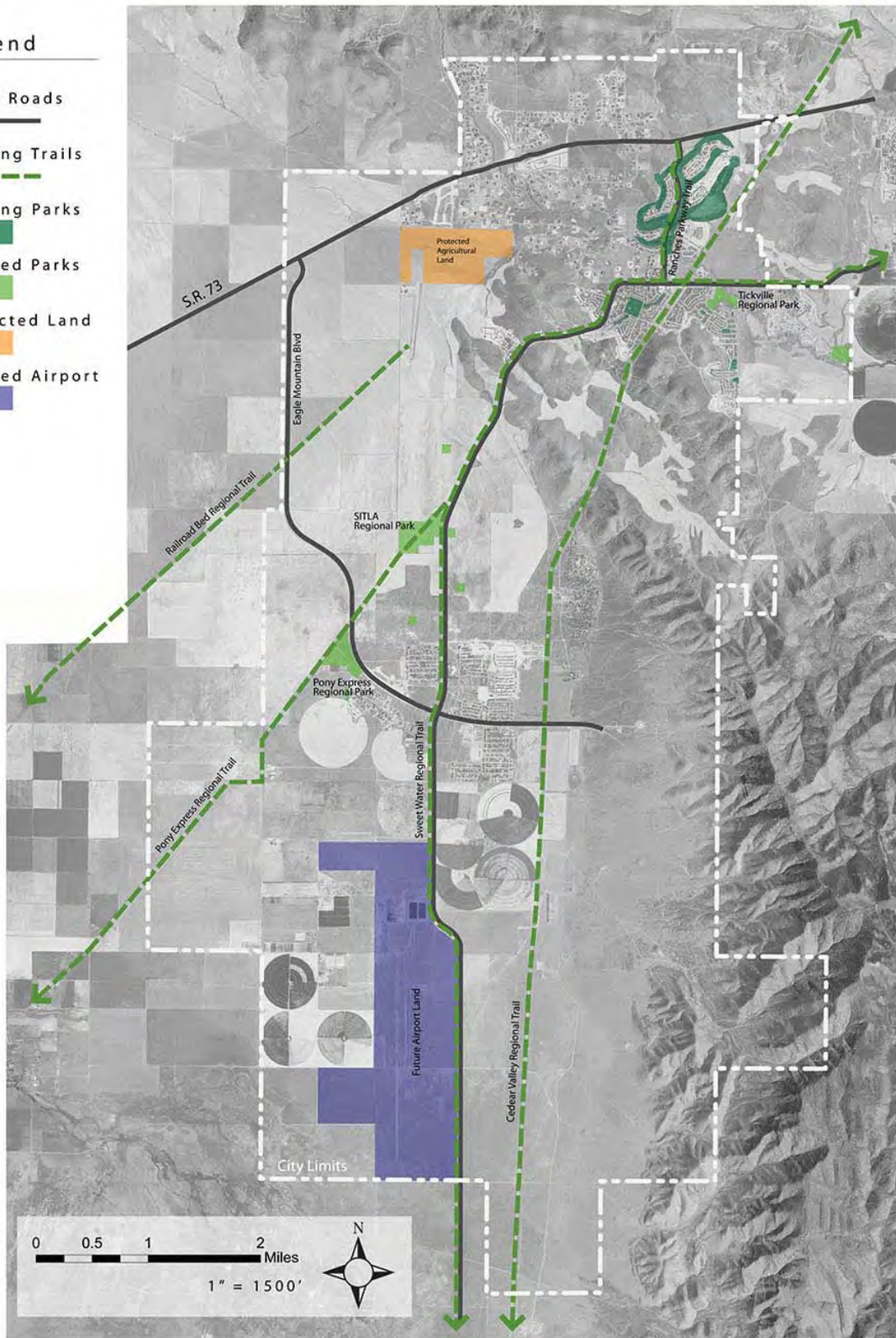
*The open landscape in the valley provides a sense of openness and long views.*



*The Ranches Golf Course is an open space asset to the northern reaches of the Eagle Mountain community.*

Legend

- Major Roads
- Existing Trails
- Existing Parks
- Planned Parks
- Protected Land
- Planned Airport



## SITE HISTORY

Eagle Mountain is a very young community. Originally incorporated in 1996, there were only 250 residents. The land was originally purchased by John Walden and Eagle Mountain Properties in 1994 and subsequently partnered with other developers to create a city. This City has grown significantly since its incorporation to a current population of approximately 22,000.

## POPULATION AND DEMOGRAPHICS

As of the census of 2000, there were 2,157 people, 532 households, and 502 families residing in the town. The population density was 20.0/km<sup>2</sup> (51.7/sq mi). There were 598 housing units at an average density of 14.3/sq mi (5.5/km<sup>2</sup>). The racial makeup of the town was 96.57% White, 0.32% African American, 0.37% Native American, 0.32% Asian, 0.05% Pacific Islander, 0.88% from other races, and 1.48% from two or more races. Hispanic or Latino of any race were 3.11% of the population.

There were 532 households of which 74.4% had children under the age of 18 living with them, 89.1% were married couples living together, 3.6% had a female householder with no husband present, and 5.6% were non-families. 3.9% of all households were made up of individuals and 0.4% had someone living alone who was 65 years of age or older. The average household size was 4.05 and the average family size was 4.18.

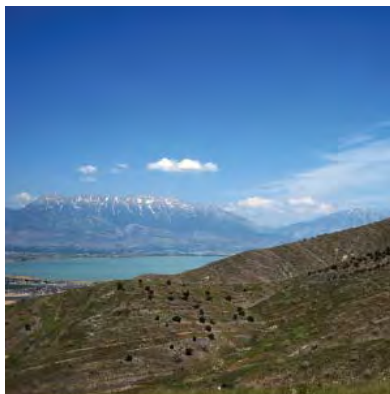
In the town the population was spread out with 47.4% under the age of 18, 11.9% from 18 to 24, 33.2% from 25 to 44, 6.3% from 45 to 64, and 1.3% who were 65 years of age or older. The median age was 21 years. For every 100 females there were 100.5 males. For every 100 females age 18 and over, there were 98.8 males.

The median income for a household in the town was \$52,102, and the median income for a family was \$52,434. Males had a median income of \$40,777 versus \$25,313 for females. The per capita income for the town was \$16,340. About 2.0% of families and 2.8% of the population were below the poverty line, including 3.1% of those under age 18 and none of those age 65 or over. (Source: [http://en.wikipedia.org/wiki/Eagle\\_Mountain,\\_Utah](http://en.wikipedia.org/wiki/Eagle_Mountain,_Utah))

In late 2008, the census was readjusted to reflect the significant growth in Eagle Mountain City. The new recorded population estimate is 19,890.

## DEMOGRAPHIC QUICK FACTS

- » Eagle Mountain's current population is estimated at 22,000 (4th fastest growing city in Utah in 2006).
- » Estimated Average Household Size 4.65 persons
- » Total Households approximately 4,500
- » Current Median Age 13.4 years
- » It is the third largest city in the state in land area at 47.1 square miles.



### Natural History

Cedar Valley is one of many valleys present in the Basin and Range Province of the western United States. The Basin and Range stretches from Utah to California, including large portions of Arizona and New Mexico, and is characterized by parallel mountain ranges separated by broad valleys.

### Cultural History

Two significant characteristics distinguish Eagle Mountain City: The Fremont Native American culture as well as the Pony Express Trail. Physical reminders of both are present in the community. Petroglyphs were created by the Fremont culture when they inhabited the area between AD 700 to 1300. The Pony Express Trail alignment transects northern Utah, and is mapped through the City. Several regional parks have given special recognition to the trail through the park programming.

### GEOGRAPHY QUICK FACTS

- » Eagle Mountain is located in northern Utah County
- » 35 miles south of Salt Lake City
- » 38.5 miles south of Salt Lake International Airport
- » 22 miles northwest of the Provo - Orem area



*Agricultural heritage is still visible in the area.*





# PARK & TRAIL FACILITIES

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## Park & Trail Facilities

This section includes an inventory of the existing parks, open space, and trail facilities at Eagle Mountain.



Eagle Mountain Existing Parks & Facilities, July 2008

Location	Park Name	Size (acres)	Current Facilities / program
<b>City Center</b>			
	Waldon Park	11.81	Pavilion Tot Lot Basketball Court Garbage Cans
	Eagle Park	2.08	Pavilion Tot Lot Swings Tetherball
	Overland Park	2.17	Pavilion Tot Lot Jogging Trail Horseshoes
	Eagle Point C	4.81	Pavilion Tot Lot
	Pioneer Park	9.22	Pavilion Tot Lot Volleyball Basketball Court Garbage Cans
	Eagle Point A	0.9	
	Eagle Point B	2.3	
	Pony Express Park	4.42	Baseball Diamond Tot Lot Skate Park Pavilion
Total for City Center	8	37.71	Pavilion 6 Tot Lot 6 Basketball Court 2 Volleyball 1 Baseball Diamond 1 Swings 1 Tetherball 1 Skate Park 1 Jogging Trail 1 Horseshoes 1 Garbage Cans 2

Location	Park Name	Size (acres)	Facilities
Ranches			
	Nolan Park	9.26	Pavilion Tot Lot Restroom Garbage Cans Baseball Diamond (A) Baseball Diamond (B)
	Silver Lake Amphitheater	5.63	Amphitheater Pavilion Tot Lot Restroom Garbage Cans
	Kiowa Valley	1.594	
	Fremont Springs	0.489	Tot Lot Picnic Tables Benches
	Porters Crossing	1.41	Picnic Tables Pavilion Tot Lot Volleyball BBQ
	Saddleback	1.07	Picnic Tables Tot Lot (Lg) BBQ
	Castle Rock	0.346	
	Rush Valley A	0.368	Tot Lot
	Liberty Farm	0.365	Tot Lot Picnic Tables Benches
	Eagle Gate A	0.933	Pavilion Tot Lot Picnic Tables Benches BBQ

	Rush Valley B	0.504	
	Chimney Rock	4.195	Pavilion Benches
	Ruby Valley A	0.306	
	Ruby Valley B	0.672	Picnic Tables Tot Lot Benches
	Eagle Gate B	1.843	Volleyball Tot Lot Benches BBQ Picnic Tables
	Mt. Airey Park	1.458	
	<b>SUM TOTAL</b>	<b>0</b>	
Total for The Ranches	17	30.443	Pavilion 5 Tot Lot 10 Volleyball 2 Baseball Diamond 2 Amphitheater 1 Restrooms 2 Picnic Tables 7 BBQ 4
Location	Park Name	Size (acres)	Facilities
<b>Other Development Areas</b>			
Sage Valley	Sage Valley	3.8	Tot Lot Volleyball Pavilion
	Parks	Acres	Facilities
Total for Sage Valley	1	3.8	Pavilion 1 Tot Lot 1 Volleyball 1

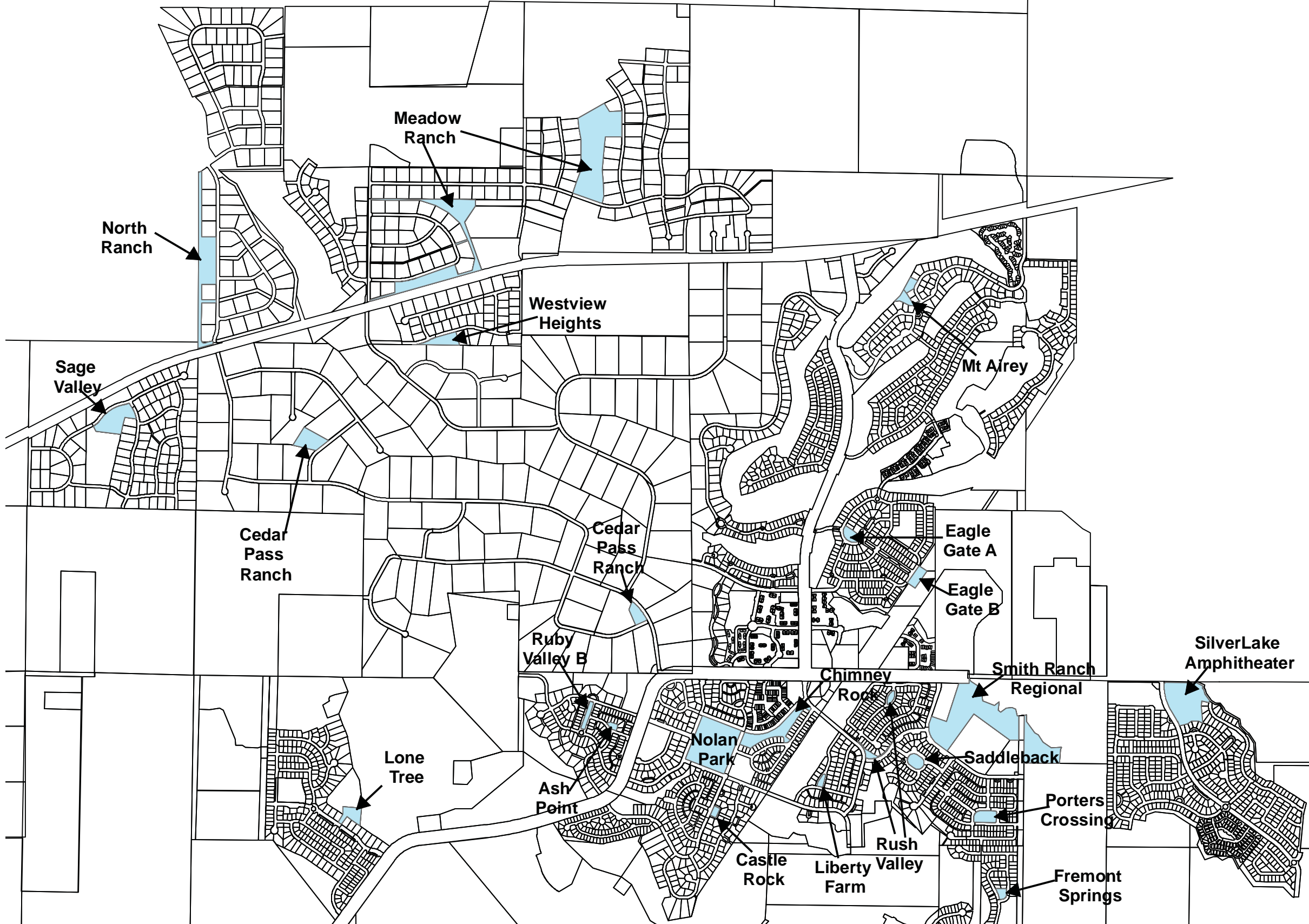
Meadow Ranch	Meadow Ranch Park A	0.9	Bike Racks	
	Meadow Ranch Park B	0.61	Tot Lot	
			Bike Racks	
			Garbage Cans	
	Meadow Ranch Short Street	0.43		
	Parks	Acres	Facilities	
Total for Meadow Ranch	3	1.94	Bike Racks	2
			Tot Lot	1
			Garbage Cans	1
North Ranch	Westview Heights	1.73	Play Area	
			Picnic Tables	
	Parks	Acres	Facilities	
Total for North Ranch	1	1.73	Play Area	1
			Picnic Tables	1
Cedar Pass	Cedar Pass A	2.1		
	Cedar Pass B	0.5		
	Parks	Acres	Facilities	
Total for Cedar Pass	2	2.6		
Proposed Mid Valley Development	Mid Valley Regional Park			
	1	0		

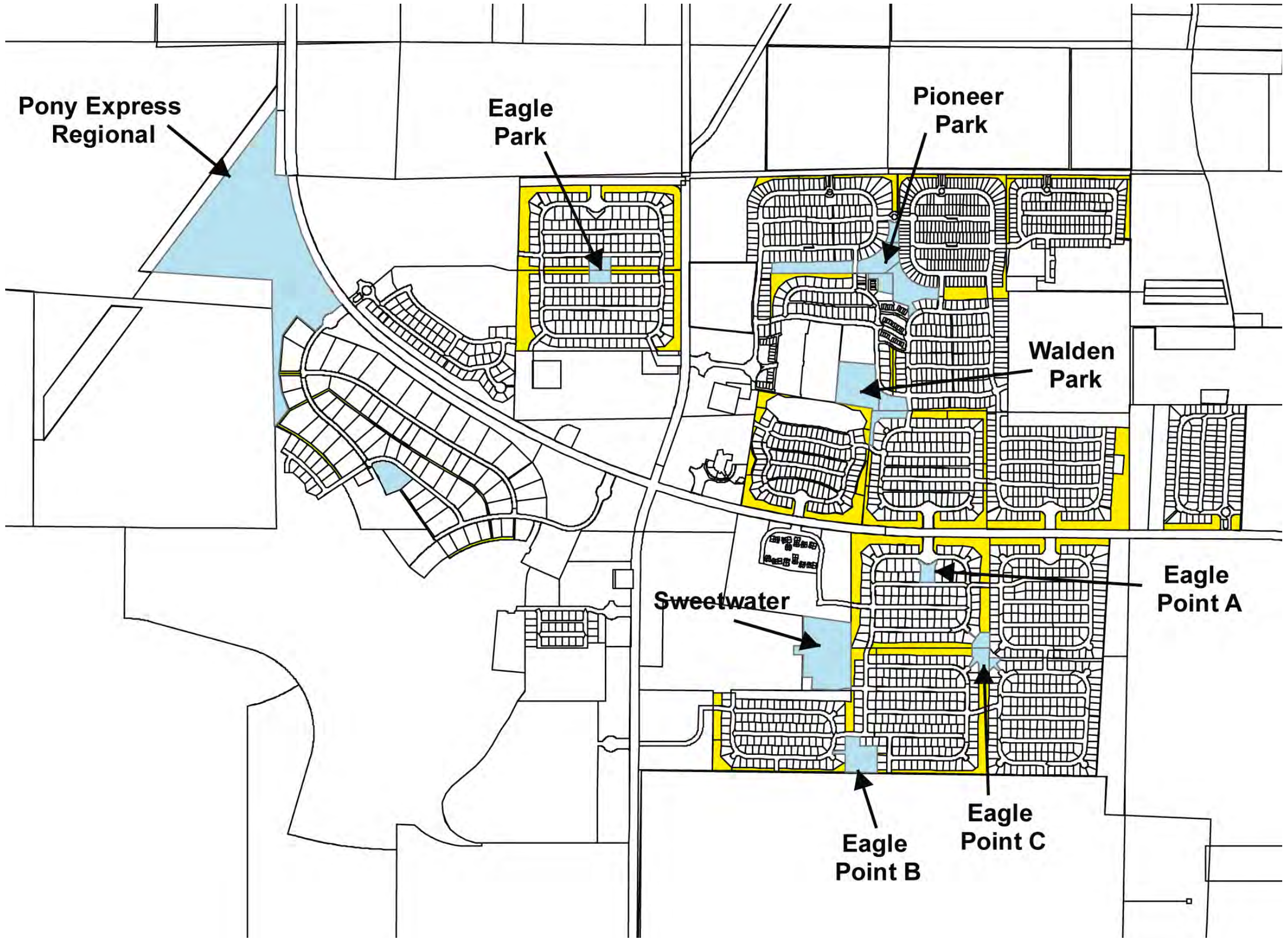
	Parks	Acres	Facilities	
Total for Eagle Mountain	33	78.223	Pavilion	12
			Tot Lot	18
Total Park Acreage		247.08	Basketball Court	2
			Volleyball	4
			Baseball Diamond	3
			Swings	1
			Tetherball	1
			Garbage Cans	5
			Amphitheater	1
			Restrooms	2
			Picnic Tables	8
			BBQ	4
			Benches	6
			Play Area	1
			Bike Racks	2
			Jogging Trail	1
			Horseshoes	1
			Skate Park	1

Existing Open Space Areas -  
North Eagle Mountain City

Legend

- Designated Park -
- Undeveloped or
- Developed





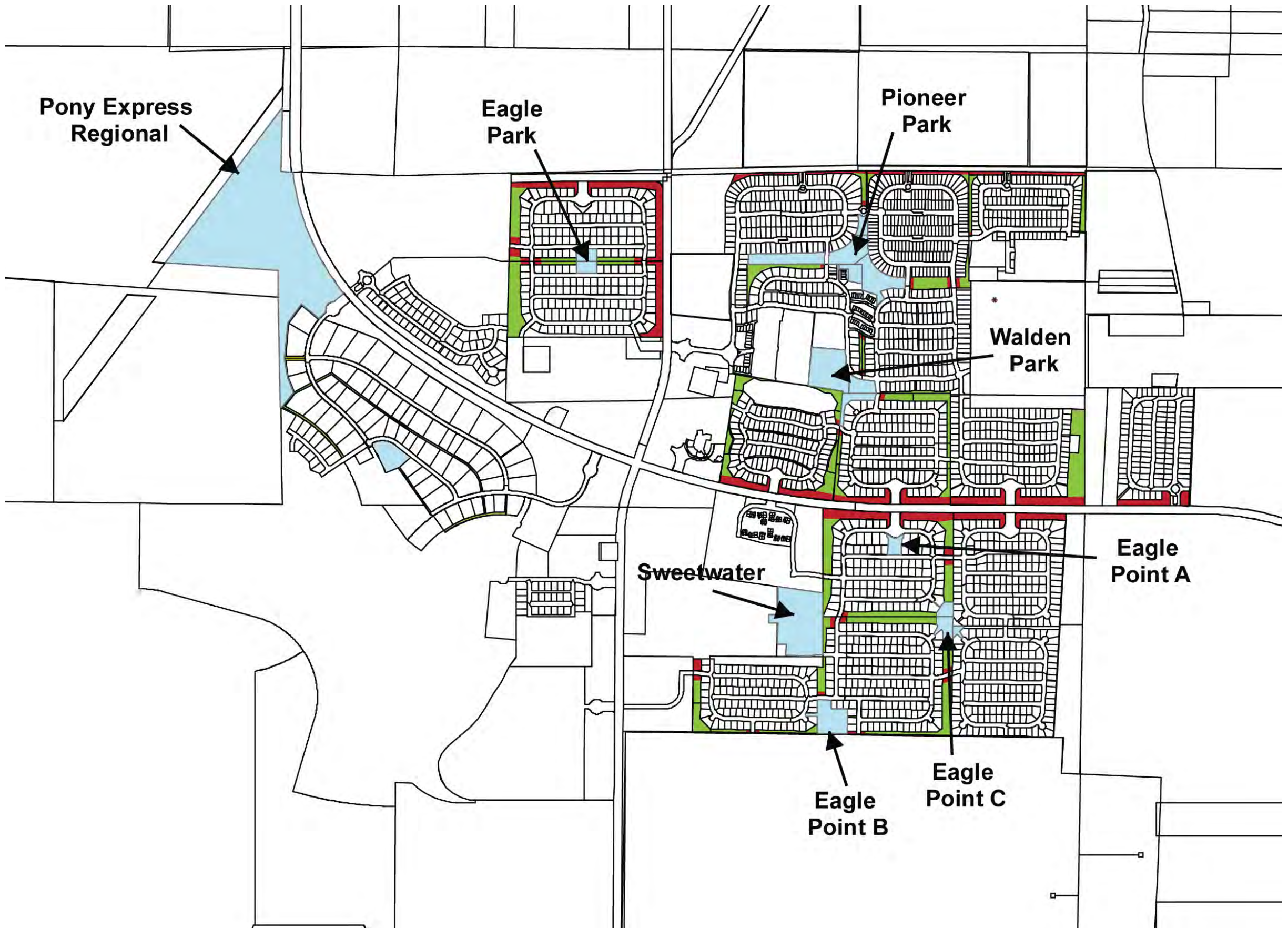
Existing Open Space Areas - City Center

Legend




- Designated Park - Undeveloped or Developed
- City Center Open Space Corridors



Space Typologies










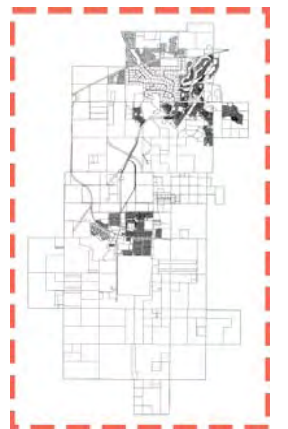
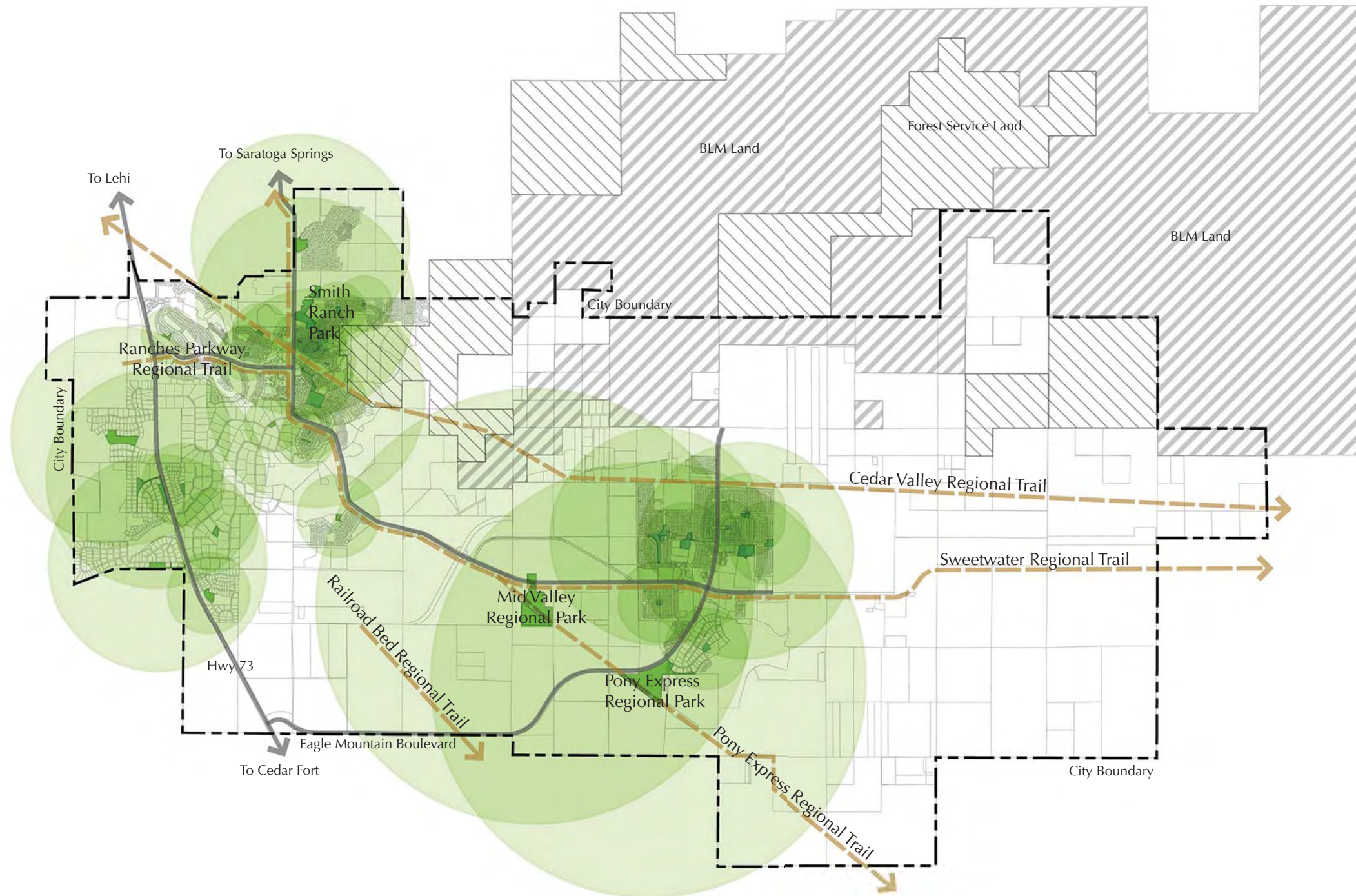
Legend

-  Designated Park -  
Undeveloped or  
Developed
-  **Street Frontage Corridor Space**  
High Visibility = High Priority  
Minimum 10' Wide Planting Strip  
along edge  
Suggested Uses:  
Demonstration Gardens  
Native Plantings  
Street Trees / Streetscape
-  **Behind Lots Corridor Space**  
Low Visibility = Low Priority  
Suggested Uses:  
Community Gardens  
Tot Lots / Play Areas  
Passive Recreation

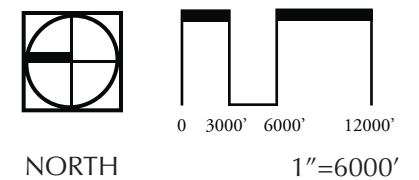
### Eagle Mountain City Existing Park Analysis

#### Legend

-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Existing or Planned Park Area
-  Park Radius - Level of Service



Key Map



NORTH

1"=6000'

City Center Existing Park Analysis



**Legend**

- Regional Trails
- Major Roads
- Existing or Planned Park Area
- Park Radius - Level of Service



Key Map






NORTH

0 500' 1000' 2000'

1"=1000'

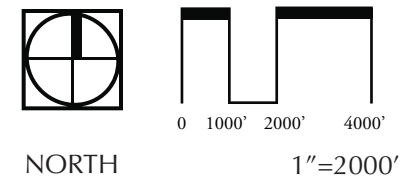
### North Eagle Mountain City Existing Park Analysis

#### Legend

-  City Boundary
-  Regional Trails
-  Major Roads
-  Existing or Planned Park Area
-  Park Radius - Level of Service



Key Map





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# PARKS & OPEN SPACE PROGRAMMING



Faced with significant growth, Eagle Mountain City has the opportunity to allow for its open space system to shape the growth patterns. There are many sizes and types of parks that form a parks and open space system for the community and serve a variety of recreation and gathering needs.

## PARKS AND OPEN SPACE TYPOLOGIES

The Eagle Mountain parks and open system will link the village center, neighborhoods and public institutions in the community. A goal is to remove the traditional suburban barriers of walls, disconnected walks and local streets to create a truly interconnected community. To this end, parks, urban plazas, open-space corridors, parkways, boulevards, streets, drainages, and school grounds will be linked into a single system. Together they will bring nature into the community and provide places for people to meet, recreate, participate in their community and provide the option to walk. The difference from traditional suburban patterns will be obvious and influence the beauty, cultural and economic values in the community.

### Regional Parks

Regional parks are destinations within a city. They are vital elements of the open space system that serve a large area (2 mile radius) and provide for the city's broad spectrum of needs. The majority of programming activities that have large spacial requirements will be best suited in Regional Parks. Such activities typically include multiple sports fields, indoor recreation centers and swimming facilities as well as areas within the park dedicated to passive recreation. Sports fields should respond to adjacent land uses with buffers or lighting guidelines as needed to minimize noise and light spillage. Parking requirements should be filled by sharing uses with civic or religious facilities where possible and/or utilizing grass block technology to minimize paving surfaces. Passive recreation in Regional Parks can serve many educational purposes and display wise ways to conserve water, use water-wise plant material in attractive ways, etc. Regional parks are great locations for hosting large events and larger city-wide functions or festivals such as Pony Express Days.

### Community Parks

Community parks are destinations of open spaces that serve community-wide needs. Their large scale allows for the incorporation of a wide variety of programmatic elements for active and passive recreation. Each park is sized to accommodate, if desired, one or more sports fields. The design of each park should be based on its context and the needs of the community. Community parks are also good locations for events like music, movies in the park, or local festivals. Where possible, community recreation parks should be associated with schools so that sports facilities can be shared and maintenance costs are diffused between multiple parties. Since these parks are community-wide destinations, they should include amenities that serve large numbers of people, and amenities that smaller neighborhood parks do not have. Parking, rest rooms, night lighting, and recreational fields are just a few of the amenities these parks hold.



*Community gatherings and festivals are ideal in regional parks.*

## REGIONAL PARK DESIGN PRINCIPLES

- » Sports fields should be lighted under the guidelines of night sky ordinances as well as their proximity to adjacent land uses.
- » Wherever possible, shared parking with other uses such as places of worship and schools should be encouraged.
- » Overflow parking for tournaments and other events should utilize grass block technology to minimize paving.
- » The parks will conserve water through plant material, recycling, and watering times.

## COMMUNITY PARK DESIGN PRINCIPLES

- » Community parks should be sized to provide active and passive recreation programming.
- » Where possible, community parks should be associated with schools so facilities and maintenance costs can be shared.
- » Links to other parks, open space, and trails should be integrated to provide user clarity and ease.

## NEIGHBORHOOD PARK DESIGN PRINCIPLES

- » Neighborhood parks should be located within a half-mile radius of surrounding neighborhood districts.
- » Neighborhood parks should be linked to trails for pedestrian and cyclist connectivity.
- » Play areas should cater to the aesthetics of the neighborhood as well accommodating the community needs.



Alternative play structures encourage imagination for children.



Interaction with nature is an opportunity to learn and develop a dedication to stewardship.

## Neighborhood Parks

Neighborhood parks are dispersed throughout the community to provide all residents access within a 1/2 mile walk of their home. Neighborhood parks will accommodate tot-lots, playgrounds, sitting areas and informal turf areas intended for informal games and activities. These parks are intended to be the family rooms of each neighborhood and attract a wide variety of age groups. They are the building blocks of the community where residents can meet informally and come to know one another. The landscape treatment will be a continuation of enhanced native desert, regionally ornamental and a small pocket of cultivated garden. The landscape treatments will enhance the sense of place while remaining water-wise.

Neighborhood parks differ than community parks in that they serve as the recreational and social focus of the neighborhood. Smaller in scale and amenities, they are a collection of residential-scale green spaces located at frequent intervals throughout the community. From playgrounds to barbecues, residents and guest of the community can congregate and enjoy family festivities. These smaller-scale parks form an integral part of the neighborhood fabric, and connect to the larger context of open space bringing green space within easy reach of every home. These parks add relief and variety to the network of streets and homes and create inviting, social outdoor areas for people to enjoy. Neighborhood parks should also help to create a social awareness between parents and youth to become familiar with their neighbors. Roads adjacent to parks should be designed for slower speeds allowing people to cross safely. Homes will face each park to help define the space and provide “eyes” on the street to increase vitality and safety.

Program: The potential neighborhood parks program elements include:

- |                                       |                                 |
|---------------------------------------|---------------------------------|
| » Play structures                     | » Individual and group shelters |
| » Court games                         | » Horseshoes*                   |
| » Multi-use play field                | » Bocce ball*                   |
| » Open space                          | » Volleyball courts*            |
| » Internal trails                     | » Basketball courts*            |
| » Picnic sitting areas                | » Water element features        |
| » Seating and ‘people watching’ areas | » Garden areas                  |
| » Off-street parking                  |                                 |

\* One of these facilities will be provided in every neighborhood park but not all four facilities may be provided in every neighborhood park. They will be distributed through the community based on demographics of adjoining neighborhood.

## Pocket Parks

These are small parks serving the informal needs of the neighborhood residents and providing relief, interest and gathering places that can be accessed within a 1/4 mile walk from one’s home.



They can include tot-lots, benches or seating areas or simply a gathering place for children to play. Pocket parks are to be located and sized to fit the unique characteristics of the neighborhood design. Their location, program and design should respond to the following principles:

1. They are to be integrated into the design of the street and residential lot pattern.
2. Pocket parks will not exceed 1-acre each. However they can be any configuration that adds amenity and identity to the neighborhood.
3. Pocket parks should provide the greatest accessibility by pedestrians.
4. Homes surrounding pocket parks must face a side onto the park.
5. The community association or local homeowners association will maintain the mini-parks.

Pocket parks typically have minimal programming. The typically passive uses include:

1. Grass area for children’s play;
2. Shady seating area provided by a shade structure or grove of trees;
3. Parking on adjacent street;
4. Additional uses, such as tot-lots, at the discretion of the builder/developer that fit the needs of the surrounding neighborhood.

### Plazas

Plazas provide flexible, active, and vibrant places that welcome the community to the retail and office environments in town centers. They provide human-scaled environments that are inviting and break down the scale of surrounding buildings. Plazas and courtyards should be designed to be as easily accessible and comfortable throughout the year as possible. Climate conditions should be considered in the design of spaces. Options should be provided for people to sit in shaded or sunny areas and provide adequate air circulation (and wind protection when necessary). Distinctive plantings can be used to create memorable experiences. Plantings should distinguish themselves from other property plantings though their height, massing, ornamental color, or other distinctive features.

Amenities in plazas can include site furnishings, as well as art and water features. Public art should be utilized to enhance the pedestrian experience. Though each art piece can be individually considered, it should relate in some way to its physical or cultural context. Water fountains and water features can enhance a courtyard and serve as a destination and gathering location. The scale of the fountain or water feature should be consistent with the plaza or courtyard in which it is located. Water features and fountains should be designed to have aesthetic value when water is not present (i.e., during winter months or maintenance periods).

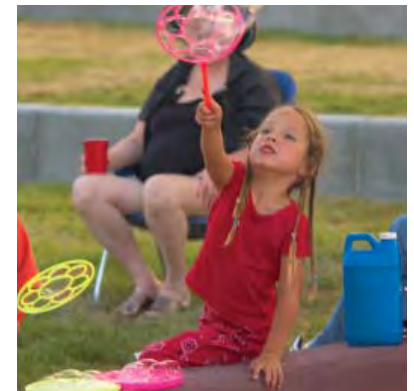
## PARK AND OPEN SPACE CONSIDERATIONS

### Lighting

Lighting in parks should be decided with care. The use of parks at night is desirable, but must not

### POCKET PARK DESIGN PRINCIPLES

- » Pocket parks shall be integrated into the design of the street and residential lot pattern.
- » Pocket parks will not exceed 1-acre each. They can be any configuration that adds amenity and identity to the neighborhood.
- » Pocket parks should provide the greatest accessibility by pedestrians.
- » Homes surrounding pocket parks must face a side onto the park.



*Small gatherings for families are possible in Pocket Parks.*



*Plazas, parks and vegetation can frame views to distant mountain ranges.*



*Community gardens can become the heart of a neighborhood.*



*Community gardens provide community members with fresh, local produce.*

## COMMUNITY GARDEN GUIDELINES

- » Community garden plots should be a maximum of 4' wide to provide easy access to the entire plot width.
- » Length of plots can vary, with a typical length being 8' long. This should be adjusted to community demand and space availability.
- » Storage space should be provided for users to store tools.
- » Water is usually provided by the city and the cost is included in the price to rent or lease the plot space.

be obtrusive to neighboring residential development. According to the activities provided in each, it is likely that Regional and some Community Parks will have lighting for amenities and playing fields. Most Neighborhood and Pocket parks will not require large amenity lighting. For safety purposes, a minimum lighting standard shall be required for every park and trail at hazards and intersections. Hazards and intersections include grade changes in pathways such as steps or ramps and intersections of paths, trails and streets.

### Park and Open Space Location

Where possible, parks shall be located adjacent to schools. This connection allows the advantageous sharing of spaces, amenities, parking and playing fields. The use of these amenities by differing users groups generally occurs at different times, so scheduling is generally not a problem.

### PRODUCTIVE LANDSCAPES

It is common to think of landscape design as primarily an aesthetic exercise. Productive landscapes can accomplish several things for the community including habitat enhancement, stormwater cleaning, carbon sequestration, and provide the interaction of residents that results in a strong social fabric. Following is a discussion of additional programming options for the parks and open space system for Eagle Mountain City.

### Community Gardens

Agriculture is part of the heritage in Utah, and community gardens can provide a renewed connection to that history. Community gardens are typically owned by local governmental nonprofit organizations. These gardens serve the community as social networks that are independent of outside sources, crops and vegetables while providing food security, recreation, and healthier environments. They are established in open green space areas where local gardeners can come together to create an educational experience amongst the youth in the community. Young people can work alongside their families to share their interest in growing food. Such common places can be organized by plots of land, abandoned areas, or areas in need of character. Although the sole purpose for this productive process would be food production, residents can maintain these spaces as personal liberties or areas of beautification. The soulfulness and art of producing an edible product will be a way to enhance natural areas or maintain the upkeep of native vegetation. These areas of production will help the region maintain unity and productiveness in the community. Community gardens can be a great gathering place if a comfortable environment is provided with seating and shade.

There are many national resources to help communities establish their own community gardens, including the American Community Garden Association. Local resources in the Wasatch Front and northern Utah region include Wasatch Community Gardens ([www.wasatchgardens.org](http://www.wasatchgardens.org)). A wide spectrum of classes are offered for individuals interested in making their own property a contributor to productive landscapes as well as for those who are interested in developing community gardens of their own.

### School Gardens

The young population of Eagle Mountain yields a high number of schools. Nutrition is very important in everyone's life. Especially in a child's life, eating healthy foods can be a "daily dosage" for future achievement. Aside from serving the purpose of nutrition, school gardens build relationships between children, nature, plants, and the outdoors. Learning about sciences through growing and production give youth an opportunity to learn while being outdoors. Energy levels become long lasting and children often have more focus through this productive learning process. While the children learn about nutrition and health necessities they are also being informed about a productive landscape in an outside classroom. Children are often more engaged in and receptive to this type of interactive education, ensuring that the lessons are more meaningful and lasting. Although the school year does not correspond perfectly to the growing season, there is still much that children could do to participate in school gardens. Day camps and summer classes could tend the gardens throughout the summer break until the students return to regular classes in time to harvesting fall-ripening produce. Through this process children will learn about their own nutrition and health as the functioning of the world around them.

### Town Orchards

Orchards provide aesthetic and mass production to a landscape. Filled with fruit and nut producing trees, orchards can be developed for commercial uses that fulfill the needs of the community or region, or serve as a non-commercial use for residents. In the instance that orchards will be produced for non-commercial use, these orchards may consist of small backyard gardens created by residents. For productive purposes, food production can become a well organized element within the area producing edibles for Farmer's Markets or even seeds for other gardens in the area. Such an array of edible vegetation can create an educational lab for families across the district. Along with nurseries, orchards can be a complement to phasing the development over years to come.

### OPEN SPACE AND TRAILS

The open-space and trails system consists of drainage ways and storm-water detention areas planted with water-conserving vegetation to maintain bird and wildlife habitat. This open-space system crisscrosses the community from border to border, incorporating native ecosystems from the surrounding landscapes into the community. Several regional trails wind their way through Eagle Mountain City, with special recognition of the Pony Express Trail. The Pony Express trail offers additional interpretive experiences and historic connections. As trails are developed, it should be determined which will accommodate motorized vehicle use and which will be dedicated to strictly non-motorized use. The Pony Express Trail is recommended to be established for non-motorized use north of the trailhead within the Pony Express Park. South of this point, both motorized and non-motorized uses should be combined within the trail right of way with sufficient distance between them to separate the uses. Other trails may lend themselves more readily to motorized use, such as the Powerline Corridor Regional Trail.



*Interaction with neighbors at farmers' markets builds community solidarity.*



*Trails provide an opportunity to interact with the native landscape.*



*Stormwater harvesting areas provide ecological benefit in the form of habitat and water quality.*



### Drainage Ways and Stormwater Detention Areas

Green infrastructure serves two purposes in water conservation: water harvesting (and reduction of storm-water runoff quantity) and water-quality management. Presented below are several techniques that address both water harvesting and water-quality management to be used in the spirit of innovation and as a model for urban sustainability.

#### *Water Harvesting*

Water harvesting has many significant benefits. The restoration of soil moisture through the use of water harvesting technologies and alternative paving materials recharges aquifers. Other positive effects include the support of trees, shrubs, and other vegetation that provide shade to pedestrians, habitat for small mammals, and oxygen to the atmosphere. Additionally, porous paving surfaces typically absorb and store less heat than traditional asphalt, thereby reducing the heat-island effect in urban areas.



The use of potable water to clean sidewalks, parking areas, plazas, and other hard surfaces should be minimized. Water is acceptable to clean such surfaces only in the event of sanitation hazards in the interest of public health and safety. Plazas, in general, should be swept clean.

#### *Water Quality*

Permeable and porous paving systems are recommended in parking lots or other paved pedestrian areas and installing them to allow storm-water infiltration into appropriately prepared subsoils. Permeable paving and water harvesting are two techniques that mitigate the effects of runoff from impervious surfaces and address the requirements of NPDES regulations.

Techniques to improve water quality include grassed swales, infiltration buffers, and permeable paving technology. A number of porous paving products are commercially available including:

- Porous asphalt
- Plastic modular block pavements that allow storm-water to filter through voids in the plastic matrix (e.g., Grasspave, Gravelpave)
- Concrete grid pavers

### URBAN LANDSCAPE THEMES

Urban landscape themes are usually incorporated into streetscapes and roadways to enhance the city's overall landscape character. These contribute to the parks and open space network by providing both trail connections and aesthetic contributions to the community and valley. Several different typologies include: urban interchanges, rural highways and interchanges, arterials, collectors, local streets, plazas and parking areas.

#### **Urban Interchanges, Rural Highways and Gateways**

Strong landscapes at urban interchanges can increase the sense of arrival to a city. They should be designed to reflect the desired architectural and cultural character of the community and create

distinctive, high-quality experiences for vehicle and pedestrian traffic. Urban interchanges should be safe, attractive and create a consistent, pleasant walking experience for pedestrians. In general, plantings should occur in large masses rather than individual plants in order to create a presence at the entryway.

As rural highways travel through communities, the function of the road changes as land use and development varies. Areas of scenic quality and designation transition to a community interface. The scenic qualities of the rural and agricultural landscape should be celebrated but require a high level of visual management. Buildings are farther back from the right-of-way, and the landscape materials are primarily composed of native vegetation and landforms. Other unique scenic, cultural, or historic elements may be incorporated to complement the natural qualities of the valley landscape. Scenic viewsheds of significance should be protected and preserved and outdoor advertising should be minimized.

Gateways should be established to clearly express the community and neighborhood identities of Eagle Mountain City. Signage should be clear and be used in conjunction with landscape materials consistent with the regional aesthetic.

### Arterial Streets

Arterial Streets provide for regional connectivity. They typically carry the largest volumes of automobiles and occupy the widest rights of way within the community. In urban areas, these streets and avenues are large enough to support large-scale buildings. In rural areas, they may serve as divided highways and parkways. Arterial streets provide shade trees and treat their own stormwater through multi-functional landscape features. Different functions in the street section (travel lanes, bike lanes, and pedestrian walks) are distinguished by appropriate paving types, patterns, and colors. Street landscapes may reflect the character and design of adjacent land uses or be a continuous boulevard-like expression for the entire length of the street in order to act as a consistent connector between various parts of the city.

### Collector Streets

Collector streets serve as the primary streets in each neighborhood and act as the local nerve center for movement and activity. Urban applications of this street type include both mixed-use and multi-family residential. Rural examples tend to be medianized or have deep tree lawns/rain gardens, thereby reinforcing their place in the communities street hierarchy. As densities increase, the collector may become a boulevard or a parkway edge with a single lane of parking. In all cases landscaping plays a major role in expressing the hierarchy of the street and character of the neighborhood as well as providing appropriate context to move local traffic while enhancing the pedestrian and biker experience.

Collector streets provide shade trees and treat their own stormwater through multi-functional landscape features. Different functions in the street section (travel lanes, bike lanes, and pedestrian walks) are distinguished by appropriate paving types, patterns, and colors.





Simple trail markers increase user comprehension.



Interpretive signs serve as valuable teaching resources.



Trail signs can match materials and character of surrounding built elements.

### Local Streets

Local streets provide the primary neighborhood address and include both residential and neighborhood center streets. In its most urban form, the street supports two and three story buildings comfortably. Single-family detached building types predominate at the lower end of the density spectrum.

Local streets provide shade trees and treat their own stormwater through multi-functional landscape features. Different functions in the street section (travel lanes, bike lanes, and pedestrian walks) are distinguished by appropriate paving types, patterns, and colors.

### Plazas and Parking Areas

Plazas are convergence points for pedestrian traffic and funnel all user movement into just a handful of locations. This creates a significant opportunity to impact the user's experience from a landscape point of view. Distinctive plant materials that are representative of the local climate and character should be utilized where possible. These plants are often the best performers in their climate and serve to connect to the regional environmental and cultural context. Plazas should function to provide gathering and/or waiting areas, create a pedestrian-scaled environment, and break down the scale of the surrounding building facades.

Landscaping in parking areas should serve to visually break up large expanses of asphalt, screen parked cars, provide pockets of shade to provide relief from the heat-island effect common to parking areas in hot weather, and to enhance the overall landscape scheme of the property. Trees may be spaced to create a continuous canopy throughout an entry driveway that focuses attention on the entry drive while screening surrounding parking areas.



Signs that match local character and are made out of local materials increase open space system and community unity.

## OPEN SPACE SIGNAGE AND WAYFINDING

Signage and wayfinding systems that are well designed will serve to unify the communities within Eagle Mountain City and provide a distinctive identity to the area, as well as enhance user experience and comprehension.

### Principles

In order to achieve the desired quality signage for the parks and open space system, the following principles should be applied.

- Reflect the character of the region while responding to site specific conditions.
- Design theme must be flexible, applicable for the entire system and adaptable over time.
- Create a recognizable identity that is not overbearing or overly thematic.
- Use consistent design, color, materials, logos, typography and size relationships.
- Facilitate circulation and public safety throughout the community through visual and verbal cues.
- Express a high standard of quality.
- Utilize sustainable and durable design, materials, and construction.
- Provide a unified and distinctive palette of design elements.
- Enhance the visual environment of the community.

### Materials and Character Precedents

- **Local Materials:** Material choices can be effective tools in reflecting the local character. Select indigenous or regional materials whenever possible. For example, using local stone for a signage wall is a good way to decrease construction costs while automatically linking the built environment to the natural one.
- **Color:** Choosing a signature color helps provide a unifying theme and allows users to easily make connections between different areas within the system.
- **Walls:** In addition to providing function for retaining earth, signature walls can also be very strong identity-giving elements throughout the community. Walls can act as entry features, wayfinding elements and landscape features.

### Anticipated Parks & Open Space Sign Types

Sign requirements vary by location and need. The following provide typical signage for a parks and open space system, but may not address all future situations.

- **Destination Identification:** The destination sign identifies features and amenities within the community. It can identify parks, open space and schools. This is a freestanding sign and single or double-sided depending on orientation to the road.
- **Vehicular Directional (Primary Trailblazer & Secondary Proximity):** The primary vehicular trailblazer sign directs vehicles to key destinations prior to decision making intersections. This sign contains 3 to 4 destinations or messages with corresponding directional arrows. The secondary proximity sign is a smaller- scaled version directing vehicles as



*Trailhead signs give valuable information to system users.*



*Interpretive signs can enhance user understanding by providing relief and different textures.*



*Interpretive signs can be fun and creative.*

they are closer to their destination. This sign has one message or destination with a directional arrow. Both signs are single-sided located perpendicular to roads.

- Pedestrian Directional: The pedestrian directional is located in public areas of gathering and directs pedestrians to major destinations.
- Trailhead Sign: The trailhead sign usually consists of trail identification, trail rules and/or a trail map. It is important to identify and differentiate each trail “loop” within the community for clarity and ease of wayfinding.
- Interpretive Trail Sign: The interpretive trail sign is a narrative of features, history, plant and/or animals located on the trail within the community.
- Trail Mile Marker: The mile marker identifies ½ mile increments on the trail within the community. It can also reinforce trail name and rules with symbols.

Note: All signs must comply with The Americans With Disabilities Act (ADA) Guidelines and all applicable code requirements.

### Parking Ratios for Outdoor Sports Facilities

Sport	Suggested Minimum parking for normal use
* Archery	1/target
* Badminton	2/court
* Baseball	15+ /diamond-player
* Baseball	20/diamond-spectator
Basketball	8/court
* Bowling, lawn	2/green lane
* Croquet	2/court
* Football, touch	10/field
* Golf	8/green
* Golf	1/practice tee
* Horseshoes	1/court
Playground	4/playground
* Shuffleboard	2/court
Soccer	20/field
* Softball	15/diamond
Splash Pad	4/pad
* Tennis, deck	2/court
* Tennis, lawn	2/court
Tot Lot	2/Lot
* Trap shooting	2/range
* Volleyball	6/court

\*Time Saver Standards for Landscape Architecture, 2nd Edition, Table 210-1a, p 210-13

### Parking Requirements for Land Uses

#### Public Building

Auditoriums, theaters, stadiums	1.0 / 4 seats
Museums & Libraries	1.0 / 300 s.f. GFA
Public utilities & offices	1.0 / 2 employees

#### Recreation

Swimming pools	1.0 / 30 s.f.
Athletic fields and courts	1.0 / 3000 s.f.
Golf courses	1.0 / acre

#### Churches

Churches	1.0 / 4 seats
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*Time Saver Standards for Landscape Architecture, 2nd Edition,*

### Spacing of Street Trees

Mature Height	Planting Interval
<30 ft	15-25 ft
30-45 ft	~40 ft
>45 ft	50-70 ft

*Parking Spaces, by Mark Childs, 1994, Table 7.4, pg 126*



**Parks Classification**

Parks Classification Table					
Classification	Description / Use	Location / Recommended Service Criteria	** Desirable Size	Desirable Characteristics	* Responsibility to Build & Maintain
Pocket Park	Small and frequent, generally with passive recreation that ensures walkable green space access for everyone. May contain specialized facilities that serve a concentrated or limited population or specific group such as tots or senior citizens.	1/4 mile radius	Between .5 acre and 1 acre	Within neighborhoods and in close proximity to apartment complexes, townhouse development or housing for the elderly.	* Developer / HOA
Community Gardens	May be a separate open space classification or incorporated into a park with sufficient size to handle demand. Plot sizes should be approximately 4' wide by 8' long. 4' width is maximum to allow easy access to middle of row. Length can vary.	100 plots per 1200 housing units	Variable according to demand	Plots available for local citizens to grow food - generally for a nominal fee. Water for irrigation must be supplied. Other possible facilities include: greenhouse, tool shed, compost piles.	* Developer / HOA
Neighborhood Park	Neighborhood park remains the basic unit of the park system and serves as the recreational and social focus of the neighborhood. Focus is on informal active and passive recreation.	1/4 - 1/2 mile distance and uninterrupted by non-residential roads and other physical barriers.	3-5 acres optimal.	Suited for intense development. Easily accessible to neighborhood population - geographically centered with safe walking and bike access. May be developed as a school-park facility.	* Developer / HOA
Community Park	Serves broader purpose than the neighborhood park. Focus is on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces. May include areas suited for intense recreational facilities, such as athletic complexes, large swimming pools. May be an area of natural quality for outdoor recreation, such as walking, viewing, sitting, and picnicking. May be any combination of the above, depending upon site suitability and community need.	Determined by the quality and suitability of the site. Usually serves 2+ neighborhoods. 1 mile radius service area.	As needed to accommodate desired uses. Usually between 10-20 acres.	May include natural features, such as water bodies, and areas not suited for intense development. Easily accessible to neighborhoods served.	City
Regional Park	Serves a broader purpose than community parks and are used when community and neighborhood parks are not adequate to serve the needs of the community. Focus is on meeting community-based recreation needs, as well as preserving unique landscapes and open spaces.	Determined by the quality and suitability of the site. Usually serves the entire community and a radius of 2 miles.	As needed to accommodate desired uses. Usually a minimum of 20 acres.		City
Sports Complex	Consolidates heavily programmed athletic fields and associated facilities to larger and fewer sites strategically located throughout the community.	Strategically located community-wide facilities.	Determined by project demand. Usually a minimum of 25 acres, with 40 to 80 acres being optimal.		City
Special use	Covers a broad range of parks and recreation facilities oriented toward single-purpose use. Areas for specialized or single purpose recreational activities, such as golf courses, nature centers, marinas, zoos, conservatories, arboreta, display gardens, arenas, outdoor theaters, gun ranges, or downhill ski areas. Also areas that preserve, maintain and interpret buildings, sites, and objects of archeological significance. Plazas or squares in or near commercial centers, boulevards, parkways may also be included here.	Variable - dependent on specific use.	Variable.		Varies - City or Private developer

\* Where no HOA exists to maintain developer-built parks, parks must be dedicated to the city for maintenance and operations.

\*\* These sizes are general recommendations and not specific regulations. Park sizes will vary depending on population needs, projected uses, available land, etc. and should be determined through planning, design and coordination in each specific situation.

**Recommended Trail Standards**

Use	Layout	Length	Clearing Width	Clearing Height	Tread Width	Trail Surface	Turning Radius	% Grade	Sight Distance	Compatible Uses	Incompatible Uses	Facilities
ADA	Loop trails with cutoffs make trails feasible for a variety of different abilities.		Refer to the Americans with Disabilities Act for specific details									
Hiking	Loop system works well to provide variation in distances for day users. Vary landscape type and user experience.	<ul style="list-style-type: none"> <li>Day use: 1/4 -5 miles (1/2 day) 5-15 miles (full day)</li> <li>Backpacking: 25 or more miles</li> </ul>	<ul style="list-style-type: none"> <li>Light use: 4-6 feet (one-way traffic)</li> <li>Heavy use: 8-12 feet (two-way traffic)</li> </ul>	8 feet	<ul style="list-style-type: none"> <li>Light use: 2-3 feet (one-way traffic)</li> <li>Heavy use: 4-8 feet (two-way traffic)</li> </ul>	<ul style="list-style-type: none"> <li>Light use: Natural surface with gravel in wet areas</li> <li>Heavy use: Natural if possible, woodchips or gravel</li> </ul>	Not critical, avoid sharp-angled turns if possible to prevent short-cut trails from occurring.	Desired: 0 - 5% Max: 15% sustained, 40% shorter than 50 yards Outslope: 4% max	Not critical except with multi-use or intersections.	<ul style="list-style-type: none"> <li>Winter: Snowshoeing and cross-country ski, or snowmobiling.</li> <li>Summer: Equestrian (low use), accessibility trails.</li> </ul>		Parking area, picnic area, resting areas, overlooks, water, info board, signs.
Cross-Country Skiing	Always favor loop over linear trails. Several short loops connected with one-way direction is preferred. Favor northeast facing slopes.	<ul style="list-style-type: none"> <li>Avg speed: 2-8 mph. Desired trip is 2-4 hours with trails of 4-8 miles.</li> <li>Provide several short loops ranging from 1/2 -3 miles long.</li> </ul>	<ul style="list-style-type: none"> <li>Light use: 8 feet (one-way traffic)</li> <li>Heavy use: 12-14 feet (two-way traffic)</li> </ul> Double the width at intersections and runouts on downhill sections.	8-10 feet above expected snow depth (anticipate sagging branches from snow).	<ul style="list-style-type: none"> <li>Light use: 5-6 feet (one-way traffic)</li> <li>Heavy use: 7-8 feet (two-way traffic)</li> <li>Uphill climbs: 10-12 feet</li> </ul>	Requires regular grooming when snow depth is 6-12" and after every snowfall.	<ul style="list-style-type: none"> <li>Gradual curves. Never locate turns at the base of a downhill slope.</li> <li>Desired: 100 feet</li> <li>Min: 50 feet</li> </ul>	Grade variations enhance the experience if slopes are not too steep. Desired: 0-5% Max: 10% (sustained), 15-25% (<50 yards), 25-40% (<50 yards experts only) Outslope: 0-2% preferred	Not critical except intersections.	<ul style="list-style-type: none"> <li>Winter: Snowshoeing</li> <li>Summer: Hiking, bicycling and accessibility trails.</li> </ul>	Snowmobiling	Parking, resting areas, benches, trail shelters, info board, signs.
Bicycling	Single direction trails favored. Loop or linear destination trail.	<ul style="list-style-type: none"> <li>Avg speed: 8-20 mph.</li> <li>Min length is 1 mile, most bicyclists cover 10-20 in a single day, experienced riders up to 50 miles.</li> <li>Day use: 5-10 miles (1/2 day), 10-20 miles (full day)</li> </ul>	<ul style="list-style-type: none"> <li>Mountain bicycle: 6-8 feet</li> <li>Touring bicycle: 8 feet (one way traffic), 10-14 feet (two-way traffic)</li> </ul>	8-10 feet	<ul style="list-style-type: none"> <li>Mountain bicycle: 2-3 feet</li> <li>Touring bicycle: 4-6 feet (one way traffic), 8 feet (two-way traffic)</li> </ul>	<ul style="list-style-type: none"> <li>Mountain bicycle: Natural surface.</li> <li>Touring bicycle: 2" asphalt surface with a 3-4" base of compacted gravel.</li> </ul>	Wide, gentle curves are ideal, tight turns require run outs and warning signs. <ul style="list-style-type: none"> <li>Mountain bicycle: 4 feet (min), 8 feet + (desired)</li> <li>Touring bicycle: <math>R = (1.25 \times V) + 1.5</math> [Where R = radius of curvature in feet, V = velocity in mph.]                     </li> </ul>	Switchbacks with barriers and run outs can be utilized on steep slopes. Intersections with motorized roadways should be located on level grades. <ul style="list-style-type: none"> <li>Desired: 0-3%</li> <li>Max: 5-10% (sustained), 15% (&lt;50 yards)</li> <li>Outslope: 2-4% max</li> </ul>	100 feet or more critical at motorized road crossings and two-way trails. Desired: 100 feet Min: 50 feet	Winter: Snowshoeing and cross-country skiing, or snowmobiling. Summer: Hiking and accessibility trails.	Equestrian	Parking area, bicycle racks, information board, signs.

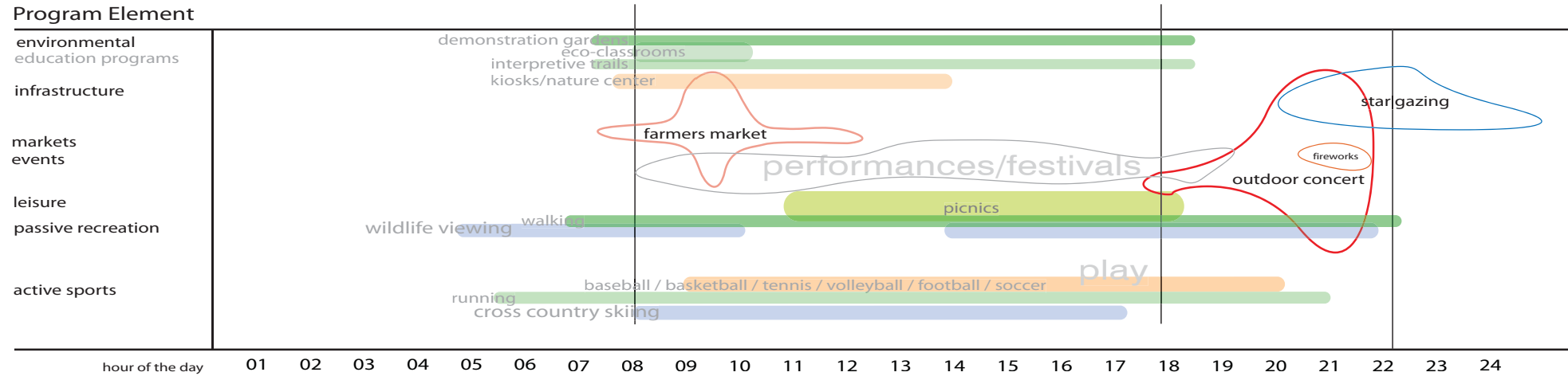
Trail Standards

Recommended Trail Standards

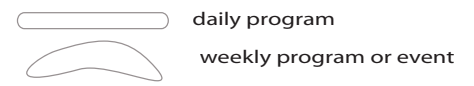
Use	Layout	Length	Clearing Width	Clearing Height	Tread Width	Trail Surface	Turning Radius	% Grade	Sight Distance	Compatible Uses	Incompatible Uses	Facilities
<b>Equestrian</b>	Single direction loops or multiple loops. Water and motorized crossings should be kept to a minimum.	<ul style="list-style-type: none"> <li>Avg speed: 4-8 mph.</li> <li>Day use trails can be 5-25 miles.</li> </ul>	<ul style="list-style-type: none"> <li>Light use: 8 feet (one-way traffic)</li> <li>Heavy use: 12 feet (two-way traffic)</li> </ul>	10-12 feet	<ul style="list-style-type: none"> <li>Light use: 2-4 feet (one-way traffic)</li> <li>Heavy use: 5-10 feet (two-way traffic)</li> </ul>	Natural surfaces are favored, avoid asphalt or concrete. Corduroy base with soil or woodchips for erodible or poorly drained areas.	Not critical, avoid sharp-angled turns.	<ul style="list-style-type: none"> <li>Desired: 0 - 10%</li> <li>Max: 10% sustained, 20% shorter than 50 yards</li> <li>Outslope: 4% max</li> <li>Provide resting grades (4% or less) for 500 feet at regular intervals.</li> </ul>	Not critical except for 2-directional flow or sharing trails with hikers (50-100 feet.) 100-200 feet advance of motorized crossing.	<ul style="list-style-type: none"> <li>Winter: Snowshoeing and cross-country ski, or snowmobiling (if not used by horses in winter).</li> <li>Summer: Hiking if not heavily used equestrian.</li> </ul>	Bicycling ATV	Parking area with space for trailers, hitching post, water.
<b>Snowmobiling</b>	One-way direction is best. Avoid sensitive plant or wildlife habitats.	<ul style="list-style-type: none"> <li>Avg cruising speed: 30-40 mph, 50 mph max.</li> <li>Day use: 50-80 miles</li> </ul>	<ul style="list-style-type: none"> <li>Light use: 12-14 feet (one-way traffic)</li> <li>Heavy use: 14-16 feet (two-way traffic)</li> </ul>	<ul style="list-style-type: none"> <li>Min: 8 feet above expected snow depth</li> <li>Desired: 10-12 feet above expected snow depth</li> </ul>	<ul style="list-style-type: none"> <li>Light use: 8-10 feet (one-way traffic)</li> <li>Heavy use: 10-14 feet (two-way traffic)</li> </ul>	Smooth, compacted snow base of 2-3". Occasional grooming on heavily used trails.	Gradual curves. <ul style="list-style-type: none"> <li>Desired: 100 feet</li> <li>Min: 50 feet with run-outs of 15 feet on outside of curves</li> </ul>	<ul style="list-style-type: none"> <li>Trail should cross contours at right angles, avoid slopes that could cause the snowmobile to roll (&gt;25%).</li> <li>Desired: 0-25%</li> <li>Max: 25% (sustained), 40% (shorter than 50 yards)</li> <li>Outslope: 0-2%</li> </ul>	Varies with max speed. Post signs 100 feet before hazards and intersections. Desired: 100 feet + Min: 50 feet	Summer: Horseback riding, hiking or bicycling	Cross-country skiing, snowshoeing	Parking area with space for trailers, shelters or rest stops, rest rooms, info board, signs.
<b>ATV</b>	Looped configurations with varying conditions preferred. Natural setting is important element of experience.	Avg 4-5 hours riding time, 18-26 miles for average rides, 26-40 for longer rides.	7-13 feet 1-2 feet downhill side 1.5-3 feet uphill side. 0-1.5 feet each side if cross slope <15%	8-9 feet	4.5-8 feet Widen .5-2 feet on switchbacks or where side slopes >50%.	Natural surface. For easy trail - relatively smooth with few obstacles, for most difficult - relatively rough, up and own, with some sand and mud.	Easy flowing curves for easy trail, with tighter curves that require some maneuvering for difficult trails.	Varies with difficulty. <ul style="list-style-type: none"> <li>Desired: 1-15% (sustained)</li> <li>Max: 25% (sustained), 40% (shorter than 50 yards)</li> <li>Outslope: 0-2%</li> </ul>	<ul style="list-style-type: none"> <li>100 feet before hazards and intersections.</li> <li>Desired: 70 feet (one way), 100 feet (two-way)</li> <li>Min: 20 feet (one-way), 35 feet (two-way)</li> </ul>	Winter: Snowshoeing and cross-country skiing, or snowmobiling.	Summer: Equestrian, Hiking, Bicycle	Parking area with space for trailers, shelters or rest stops, rest rooms, info board, signs.
<b>Multi-Use</b>	Design varies depending on context: greenway or river trail, paved urban trail, rail-to-trail, or roadside separated pathway.	Varies	14-26 feet	<ul style="list-style-type: none"> <li>Pedestrian/Bicycle: 8 feet</li> <li>Equestrian: 12 feet</li> </ul>	<ul style="list-style-type: none"> <li>Pedestrian/Bicycle: 6-12 feet. If narrower nature pathway, provide passing areas.</li> <li>Equestrian: 4-10 feet</li> <li>Buffer: 4 feet</li> </ul>	Can be combination of paved and natural surface depending on bike/jogging use. Soft surface optimal for equestrian, hiking and mountain bicycle.	Varies	<ul style="list-style-type: none"> <li>Desired: 1-10%</li> <li>Max: 10% (sustained), 20% (&lt;50 yards)</li> </ul>	50-100 feet	<ul style="list-style-type: none"> <li>Winter: Snowshoeing and cross-country skiing, or snowmobiling.</li> <li>Summer: Hiking, equestrian and accessibility trails. Biking may be incorporated if there is sufficient trail width.</li> </ul>	<ul style="list-style-type: none"> <li>Winter: Cross-country skiing, snowshoeing</li> <li>Summer: ATV, Equestrian</li> </ul>	Parking area with space for trailers, picnic area, water, bicycle racks, shelters or rest stops, rest rooms, info board, signs.

Programming Opportunities

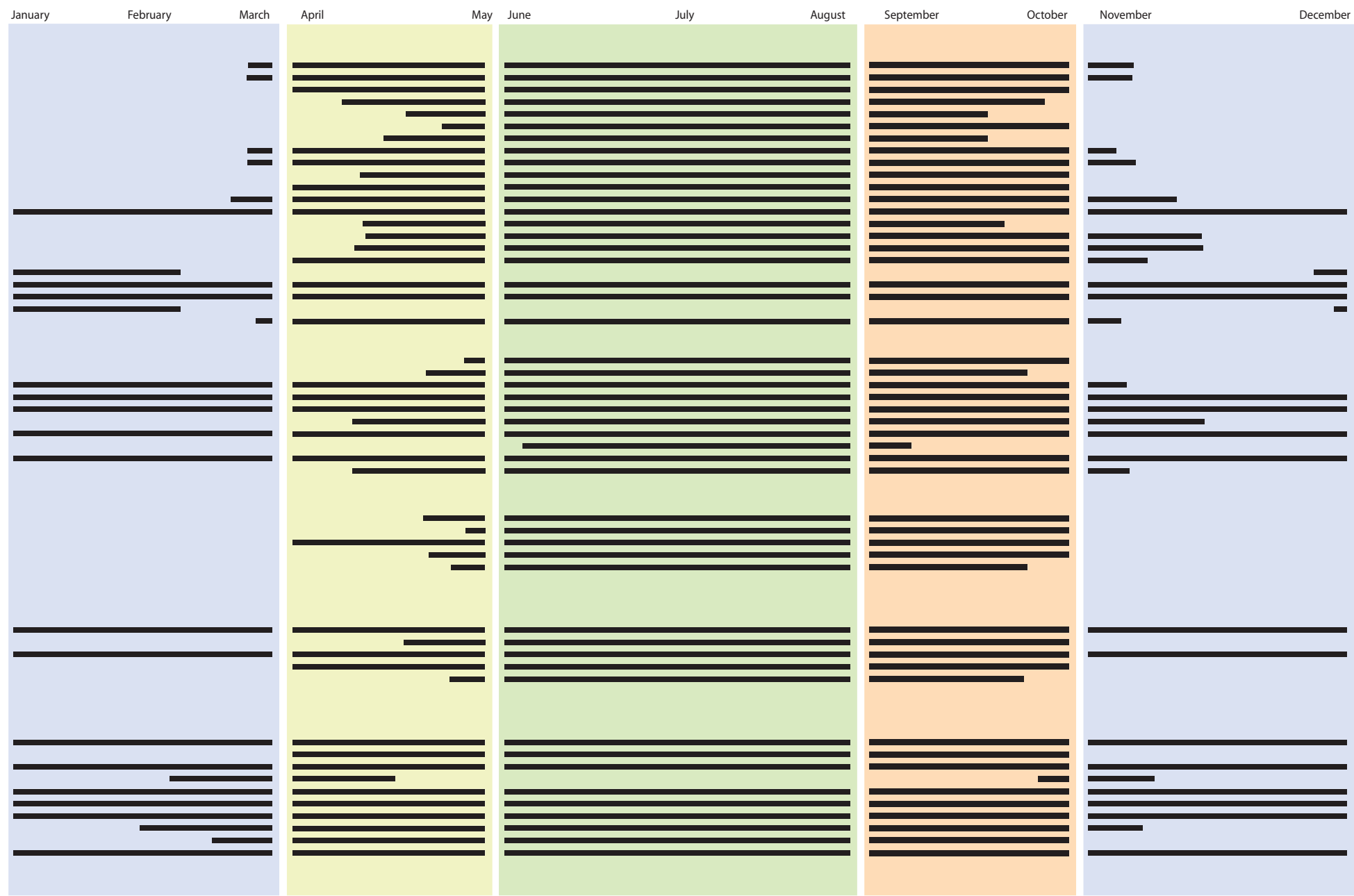
daily



Legend



seasonal



TYPOLOGIES

	Park	Pocket Park	Neighborhood Park	Community Park	Regional Park
<b>COMMUNITY</b>					
ACTIVE					
Football					■
Soccer					■
Basketball			■	■	■
Volleyball					■
Bocce	■	■	■	■	■
Tennis					■
Horseshoe Pits	■	■	■	■	■
Playground	■	■	■	■	■
Play lawn	■	■	■	■	■
Tee Ball					■
Tot Lot	■	■	■	■	■
Neighborhood Gatherings	■	■	■	■	■
Dog Park				■	■
Kite Flying				■	■
Frisbee Golf Course				■	■
Roller Blading				■	■
Adrenaline Park (e.g. Skatepark)				■	■
Sledding			■	■	■
Running					■
Hiking					■
Cross-country Skiing					■
Golf					■
Splash Pad			■	■	■
PASSIVE					
Community Gardens	■			■	■
Chess/ Checkers Tables		■	■	■	■
Picnicking	■	■	■	■	■
Seating	■	■	■	■	■
Shelter	■	■	■	■	■
Reading	■	■	■	■	■
Walking			■	■	■
Sunbathing			■	■	■
Interpretive Areas			■	■	■
Labyrinth		■	■	■	■
<b>ECONOMICS</b>					
Comm. Supported Agriculture				■	■
Farmers Market				■	■
Festivals				■	■
Concerts				■	■
Fireworks					■
<b>ART</b>					
Public Art	■	■	■	■	■
Water Feature/Fountain		■	■	■	■
Art Exhibits			■	■	■
Cultural Performances				■	■
Fireworks					■
<b>ENVIRONMENT</b>					
Interpretive Areas			■	■	■
Plant Demonstration Garden	■	■	■	■	■
Seasonal Plant Interest	■	■	■	■	■
Wildlife Migration				■	■
Wildlife Habitat	■	■	■	■	■
Viewing Tower				■	■
Environmental Education	■	■	■	■	■
Stormwater Management	■	■	■	■	■
Water Harvesting	■	■	■	■	■
Nature Center					■

Park Level of Service

<b>Eagle Mountain City Projected Build-out</b>	
Size: 47 sq. mi. Acres: 30,080	
Projected Population:	190,381

Level of Service Standards (Acres/Population)	Service Area	Area Requirements (Acres)	Recommended Acreage at Eagle Mountain City	Recommended # of Units at Eagle Mountain City
*Based on standards from the Eagle Mountain City Comprehensive Plan				

Pocket Park	.5 / 1,000	1/4 mile radius	0.5+	95.19	190
Neighborhood Park	1.75 / 1,000	1/4 - 1/2 mile radius	3-5 acres	333.17	83
Community Park	2 / 1,000	1 mile	10 - 20 acres	380.76	25
Regional Park	5 to 10 / 10,000	2 miles	20+	142.79	4
School Park	Variable				
Sports Complex	Variable				
Natural Amenity Areas	Variable				
Greenways/Trails (Trails may include separated trails or sidewalk connections)	Variable (recommended access to trail within 1/2 mile)				

Active Sport Complexes	Recommended Units / Population	Service Area	Recommended #	
	Baseball Complex ( 4 Adult/4Youth)	1/50,000	4	
	Tennis Complex (8 courts)	1/25,000	8	
	Soccer/Football Complex (3 Fields)	1/50,000	4	
	Hockey/Ice Facility (1 Indoor Rink)	1/100,000	1/2 - 1 hour	2
	Equine Facility	1 for entire development		1
	Golf (18 Holes)	1/50,000	1/2 - 1 hour	4
	Water Park (Indoor)	1 for entire development		1
Swimming Pool (Indoor)	1/20,000	15-30 minute	10	

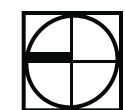
Active Sport Facilities	Recommended Units	Service Area	Recommended #	
	Basketball Court	1 unit/5,000	1/4 - 1/2 mile	38
	Tennis Court	1 unit/2,000	1/4 - 1/2 mile	95
	Soccer	1 unit/10,000	1-2 miles	19
	Football	1 unit/20,000	15 - 30 minute travel time	10
	Volleyball	1 unit/5,000	1/2 - 1 mile	38
	Baseball Little League	1 unit/5,000	1/4 - 1/2 mile	38
	Baseball Adult	1 unit/5,000	1/4 - 1/2 mile	38
Softball	1 unit/5,000	1/4 - 1/2 mile	38	

Specialized Recreation	Recommended Units	Service Area	Recommended #
	Skateboard/ Rollerblade Park	1/50,000	4
	Dog Park	1/10,000	19
	Elderly/Handicapped Facilities	1/50,000	4
	BMX Dirt Course	1 for entire development	1
	Community Gardens	1 (= 100 plots) / 1200 units	44
Water Recreation	1/Usable reservoir	1	

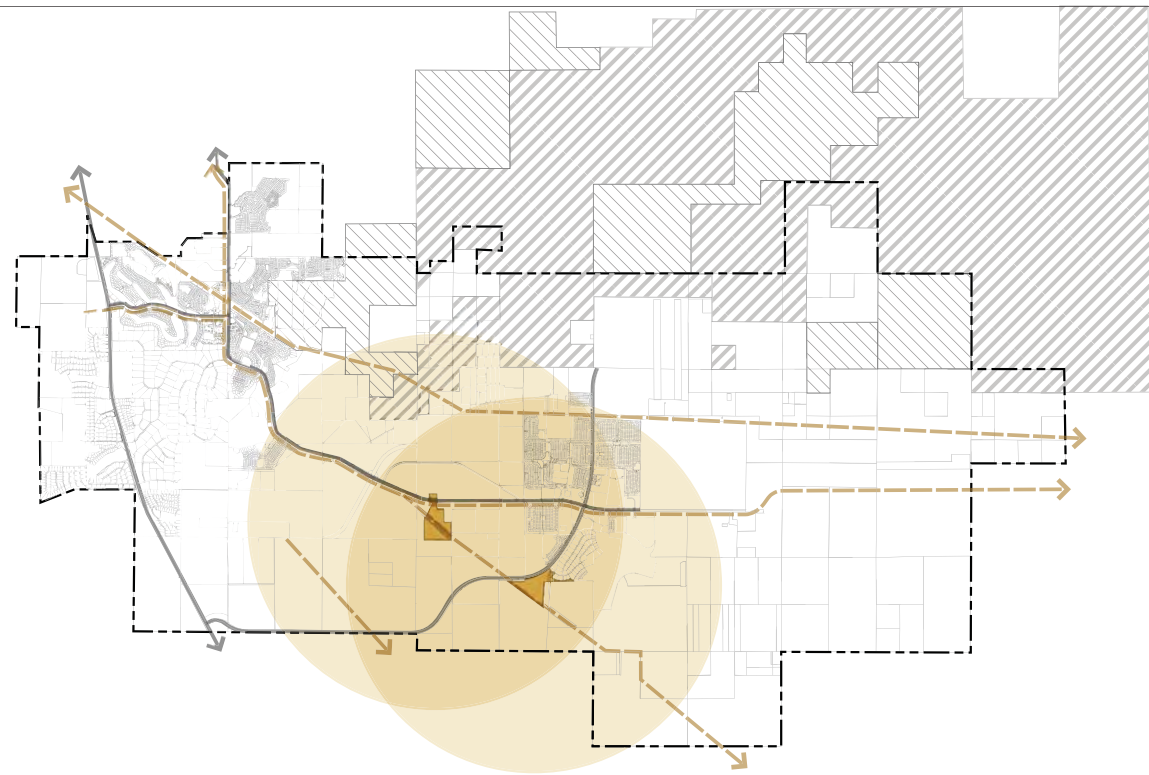
Existing Parks by Level of Service

Legend

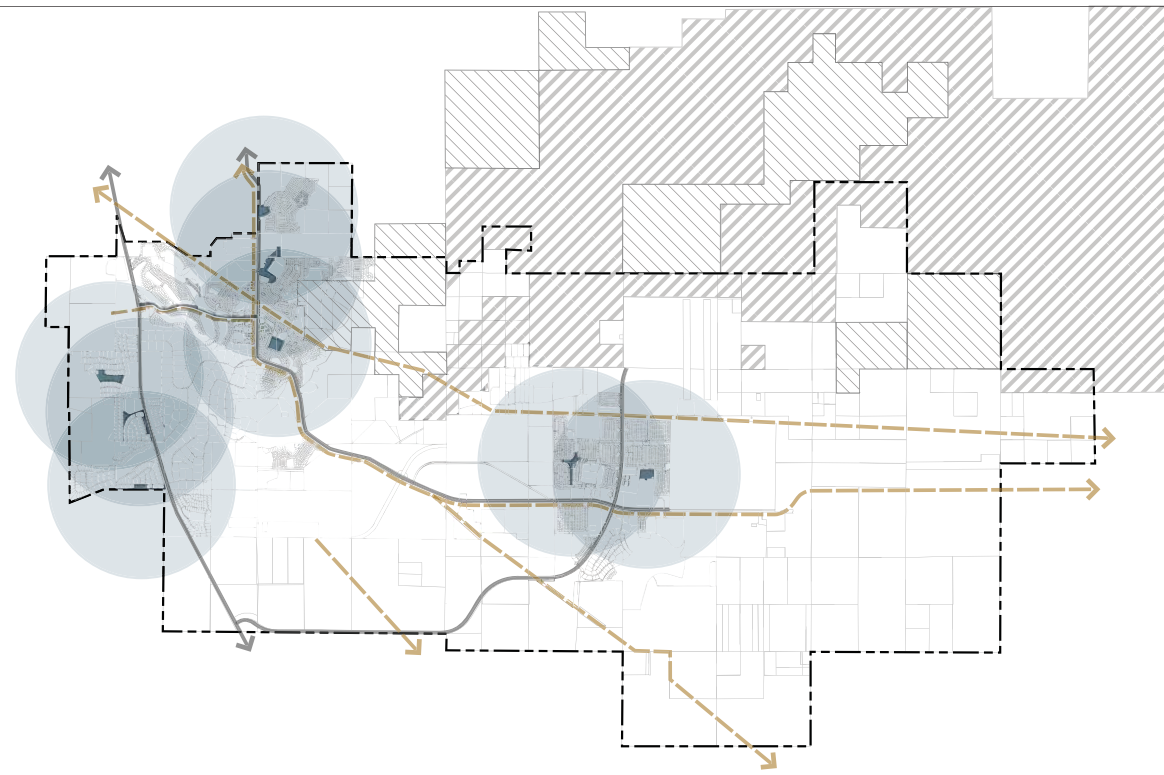
- City Boundary
- Regional Trails
- Major Roads
- Forest Service Land
- BLM Land
- Existing or Planned Regional Park
- Existing or Planned Regional Park Level of Service
- Existing Community Park
- Existing Community Park Level of Service
- Existing Neighborhood Park
- Existing Neighborhood Park Level of Service
- Existing Pocket Park
- Existing Pocket Park Level of Service



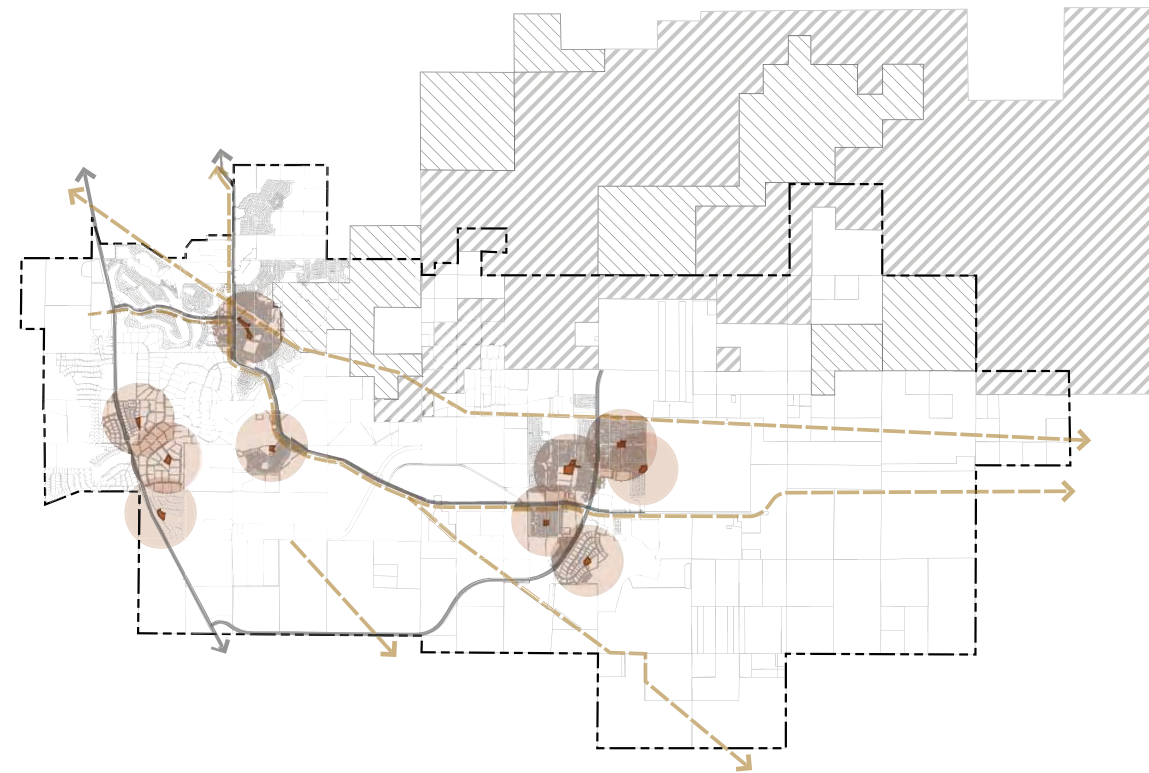
NORTH



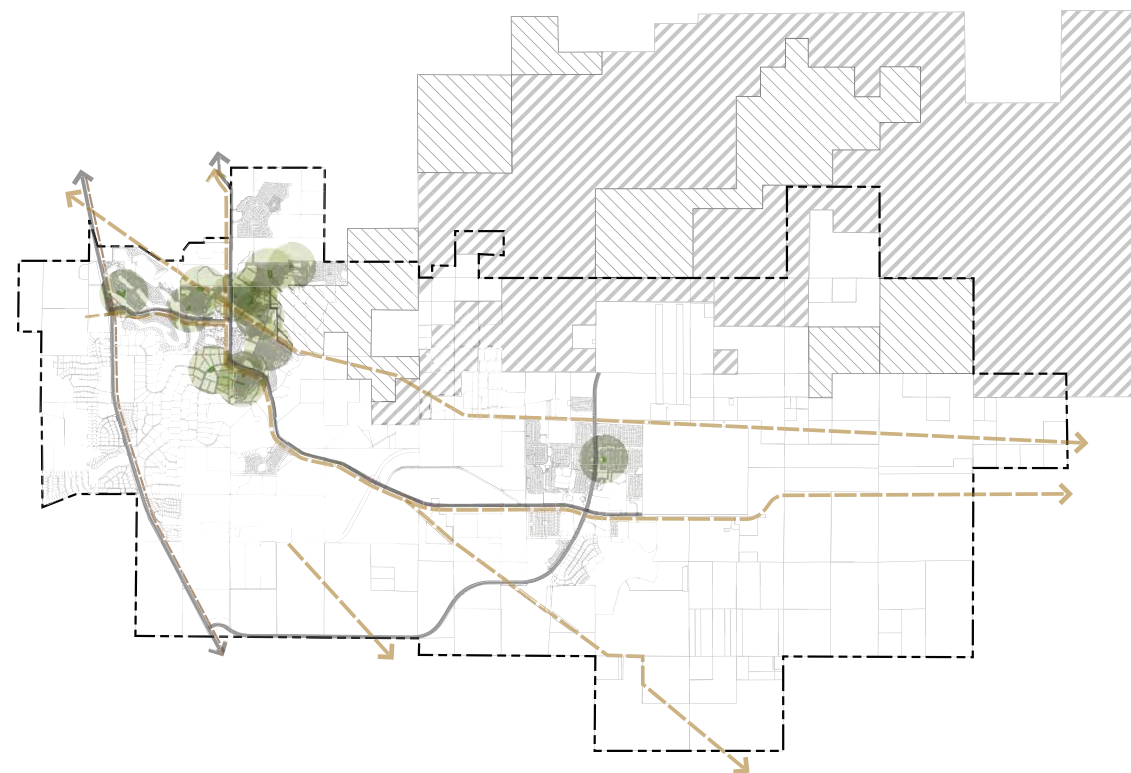
EXISTING REGIONAL PARKS - 2 MILE LEVEL OF SERVICE



EXISTING COMMUNITY PARKS - 1 MILE LEVEL OF SERVICE



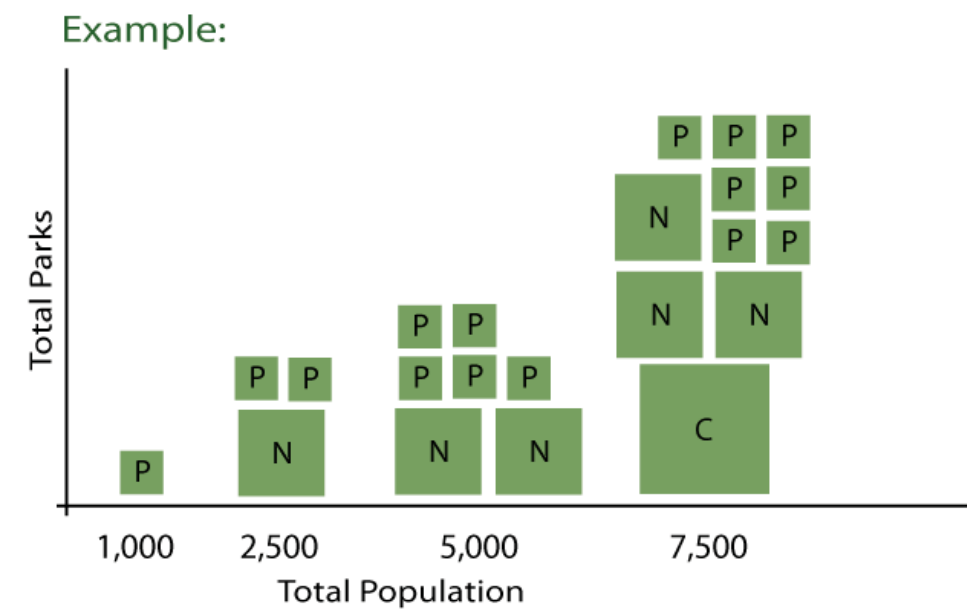
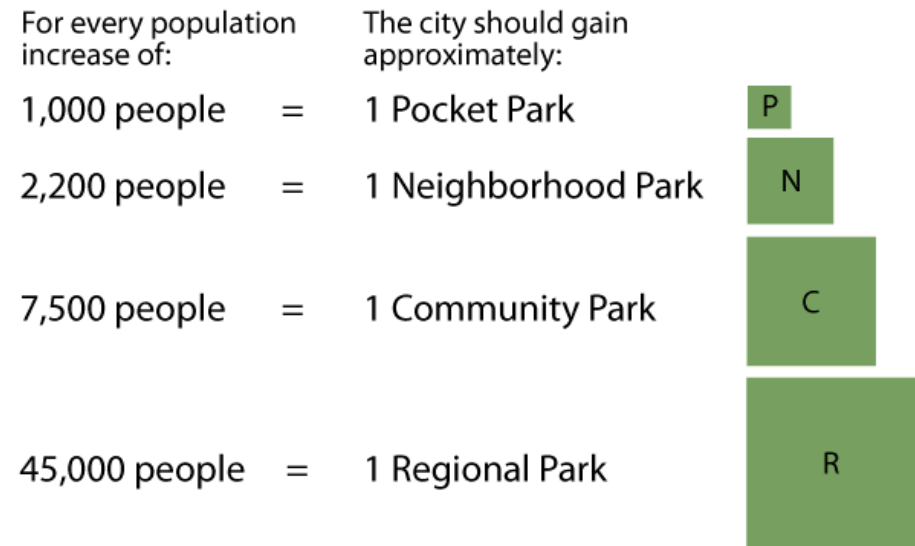
EXISTING NEIGHBORHOOD PARKS - 1/2 MILE LEVEL OF SERVICE



EXISTING POCKET PARKS - 1/4 MILE LEVEL OF SERVICE

Legend

Parks & Open Space Phasing is determined by the location and amount of population growth, rather than by time.



Existing Eagle Mountain City Parks Compared to Current Population Recommendations

Existing or Planned Parks	Recommendations	Deficiency	
Pocket	14	24	10
Neighborhood	10	10	0
Community	8	3	+
Regional	2	1	+

(+ exceeds recommendation)

Eagle Mountain Parks Phasing by Population








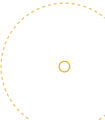
Population (increments of 7,500)	Number of Recommended Parks				Total
	Pocket	Neighborhood	Community	Regional	
20,000	20	9	3	0	32
27,500	28	12	4	1	45
35,000	35	15	5	1	56
42,500	43	19	6	1	69
50,000	50	22	7	1	80
57,500	58	25	8	1	92
65,000	65	28	9	1	103
72,500	73	32	10	2	117
80,000	80	35	11	2	128
87,500	88	38	12	2	140
95,000	95	42	13	2	152
102,500	103	45	14	2	164
110,000	110	48	15	2	175
117,500	118	51	16	3	188
125,000	125	55	17	3	200
132,500	133	58	18	3	212
140,000	140	61	19	3	223
147,500	148	65	20	3	236
155,000	155	68	21	3	247
162,500	163	71	22	3	259
170,000	170	74	23	4	271
177,500	178	78	24	4	284
185,000	185	81	25	4	295
192,500	193	84	26	4	307

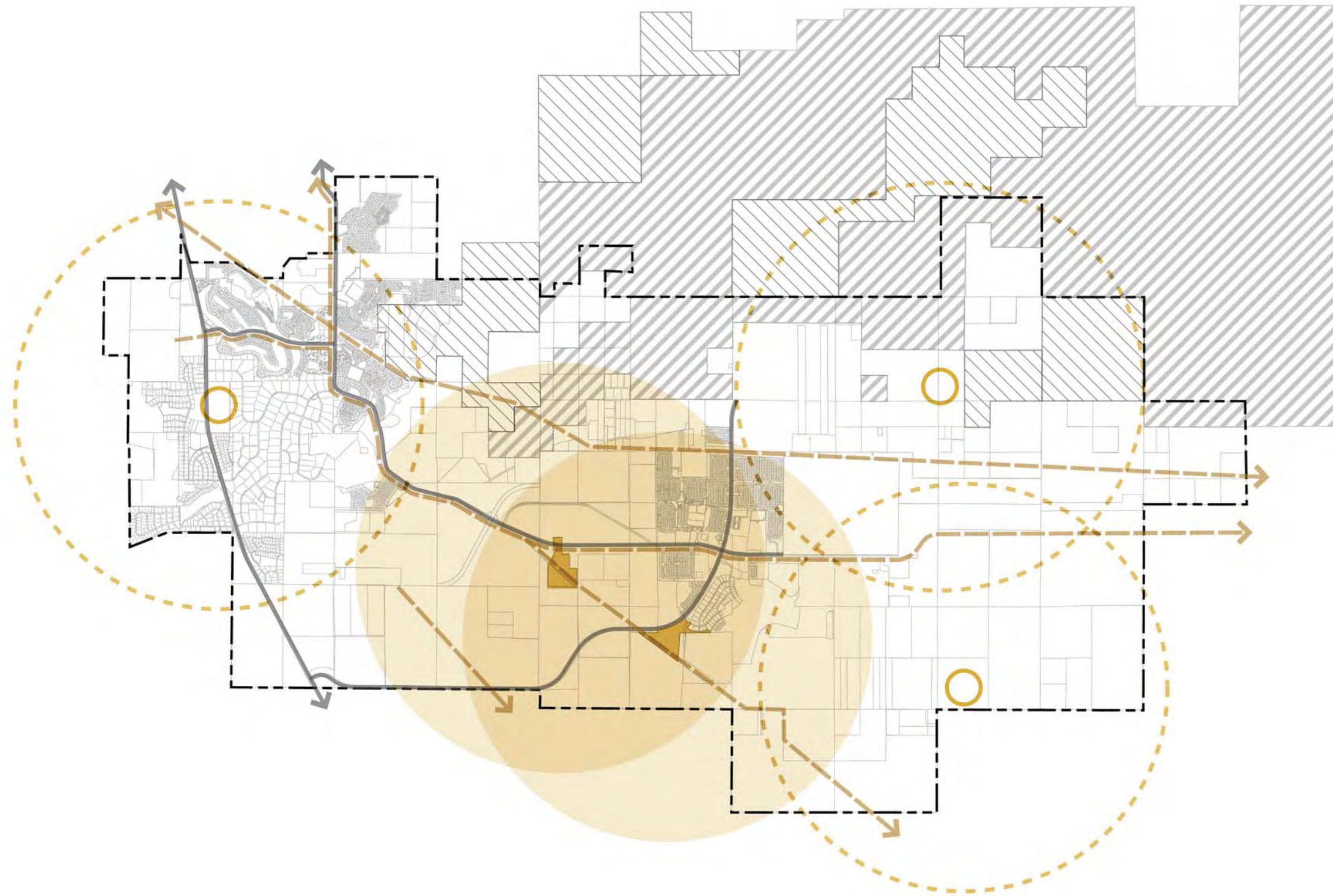
(approx. buildout population)

Note: The numbers above round up, showing the need for an additional park when the population exceeds half the threshold.

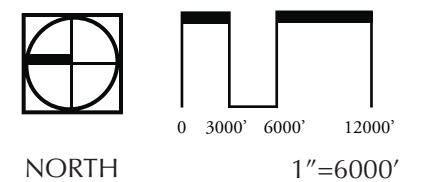
**Recommended Regional Park Distribution**

**Legend**

-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Existing or Planned Regional Park
-  Existing or Planned Regional Park Level of Service
-  Proposed Regional Park Location & Level of Service



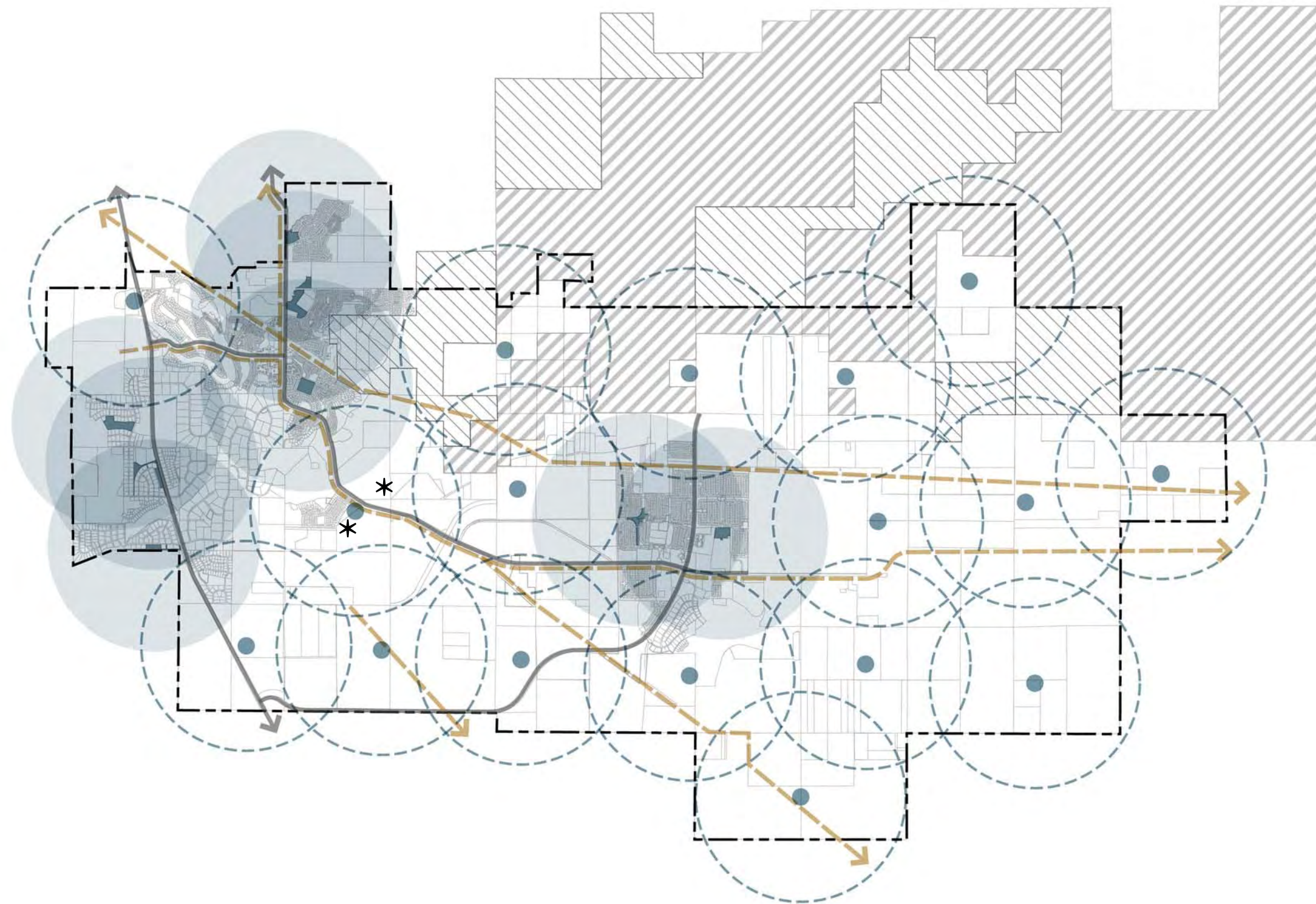
Note: Proposed park locations shown here are general guidelines and not exact configurations. Specific sizes and locations of parks will be determined in the future based upon population densities, terrain, land use, and other factors.







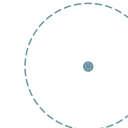





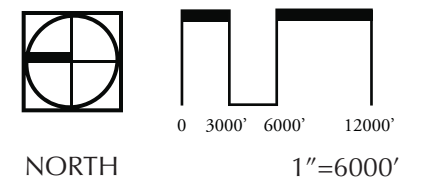
Recommended Community Parks Distribution

Legend










-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Existing Community Park
-  Existing Community Park Level of Service
-  Proposed Community Park Location & Level of Service
-  Existing Petroglyphs to be Preserved  
*(location approximated)*

Note: Proposed park locations shown here are general guidelines and not exact configurations. Specific sizes and locations of parks will be determined in the future based upon population densities, terrain, land use, and other factors.

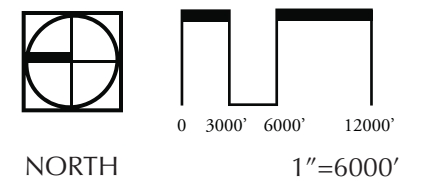
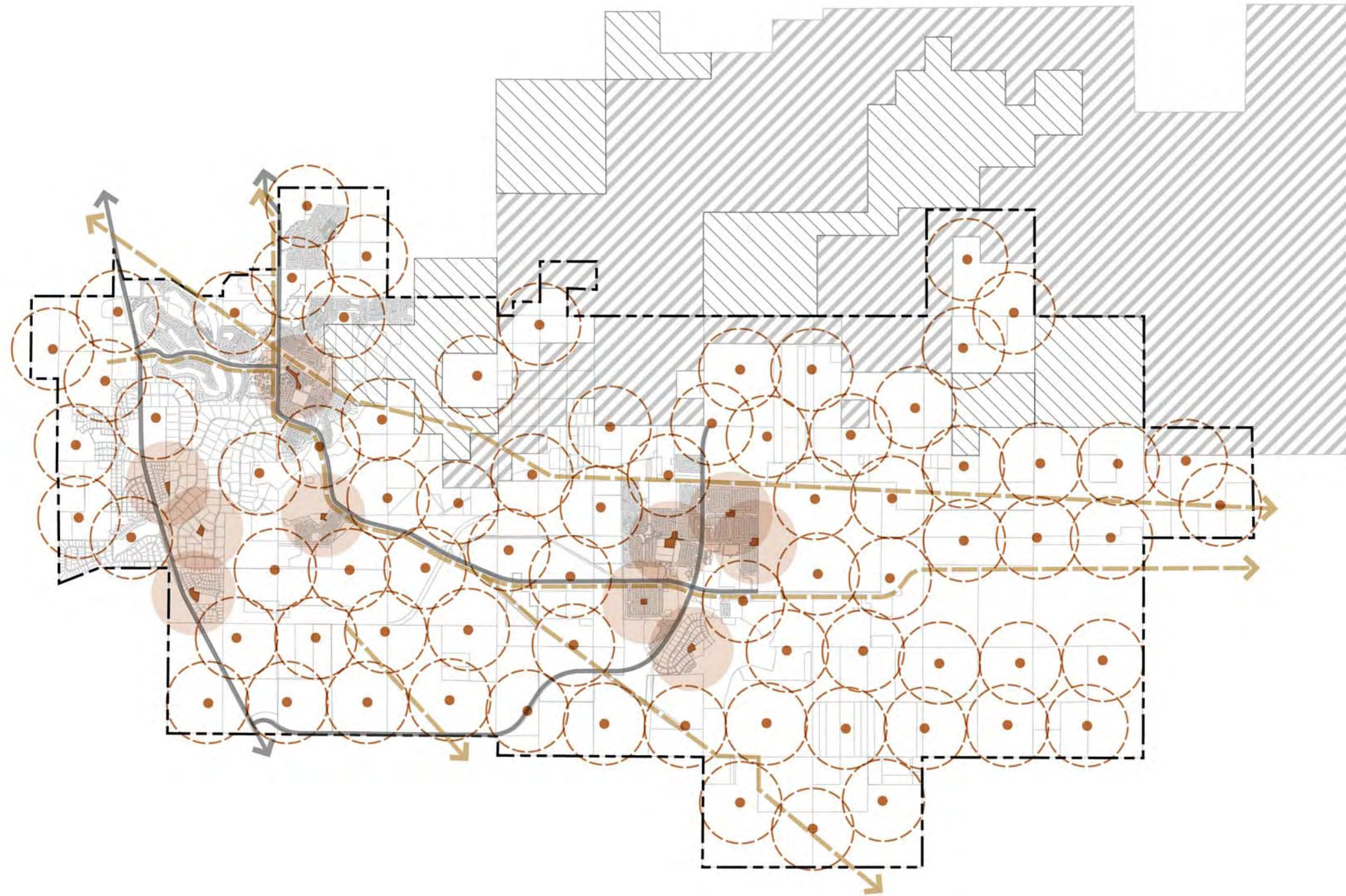


**Recommended Neighborhood Park Distribution**

**Legend**









-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Existing Neighborhood Park
-  Existing Neighborhood Park Level of Service
-  Proposed Neighborhood Park Location & Level of Service

Note: Proposed park locations shown here are general guidelines and not exact configurations. Specific sizes and locations of parks will be determined in the future based upon population densities, terrain, land use, and other factors.

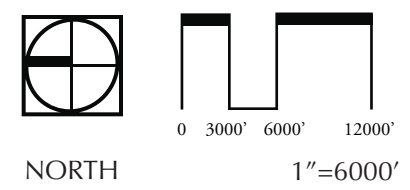
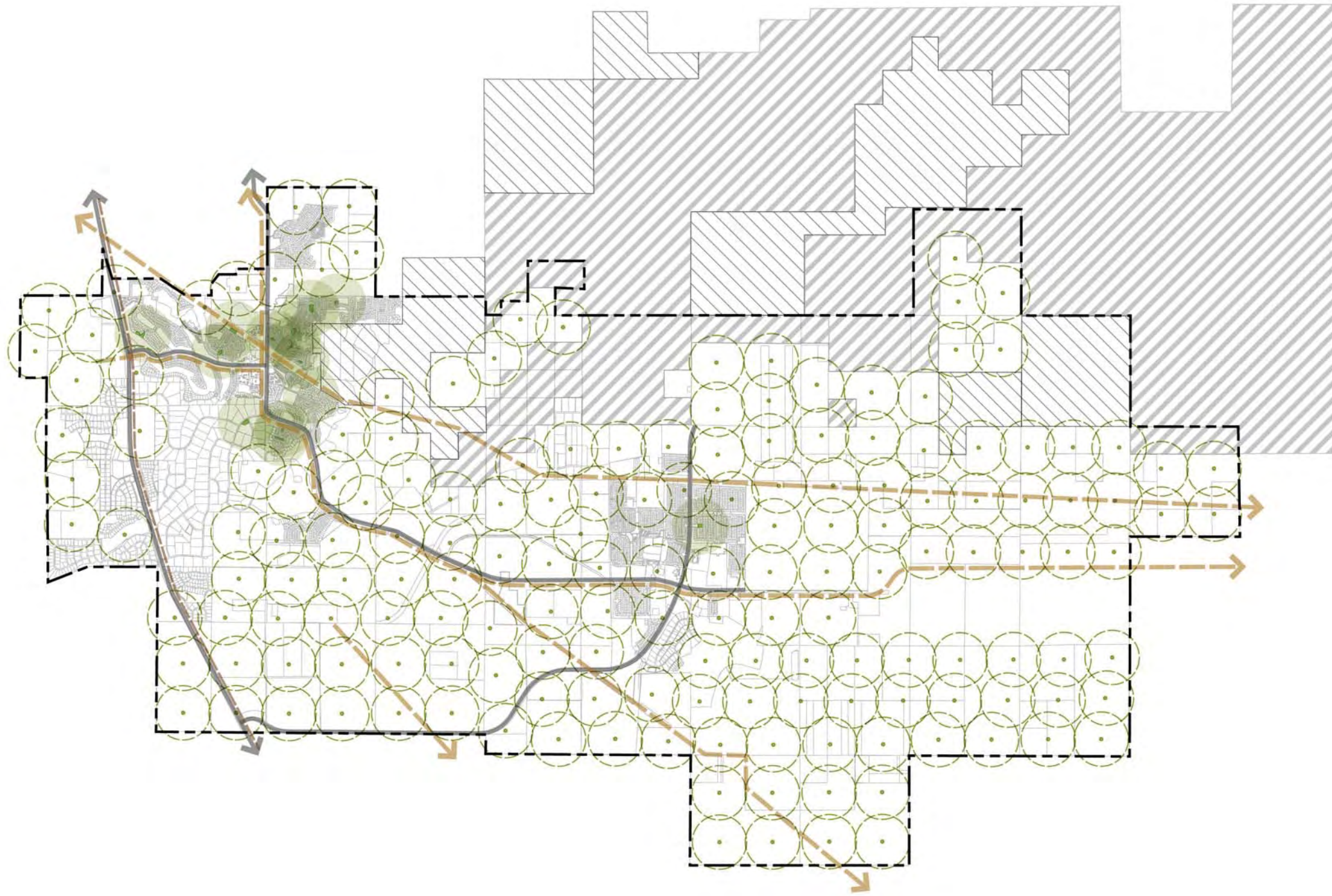


**Recommended Pocket Park Distribution**

**Legend**

-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Existing Pocket Park
-  Existing Pocket Park Level of Service
-  Proposed Pocket Park Location & Level of Service

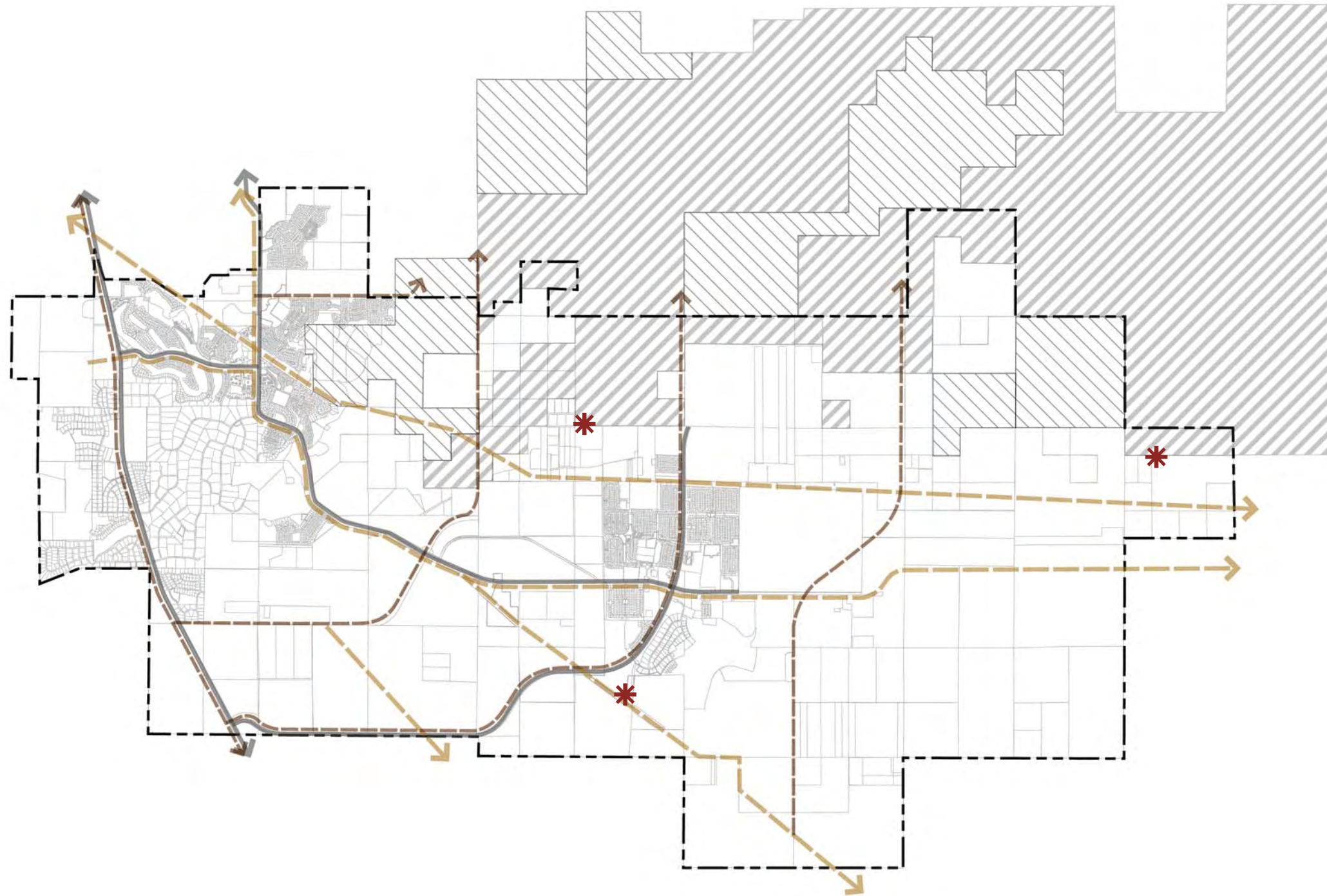
Note: Proposed park locations shown here are general guidelines and not exact configurations. Specific sizes and locations of parks will be determined in the future based upon population densities, terrain, land use, and other factors.



**Recommended Trail Network**

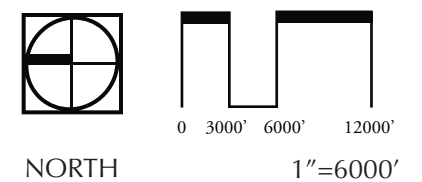
**Legend**

-  City Boundary
-  Regional Trails
-  Major Roads
-  Forest Service Land
-  BLM Land
-  Proposed Trails
-  ATV Trailhead



Trail Lengths	
Total Length	
Trails Along Existing Streets	99,664
Trails Along Proposed/Future Streets	84,841
Trails Not Along Streets	84,871
<b>Total (Linear Feet)</b>	<b>269,376</b>



Note: Trailhead locations and trail alignments shown here are general guidelines and not exact configurations. Specific locations will be determined in the future based upon population densities, terrain, land use, and other factors.





### Pony Express Regional Park Existing Conditions

#### Legend

#### Circulation

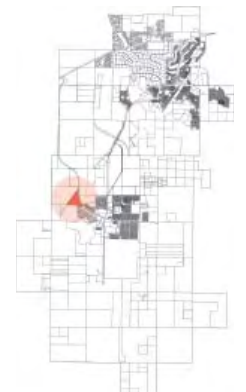
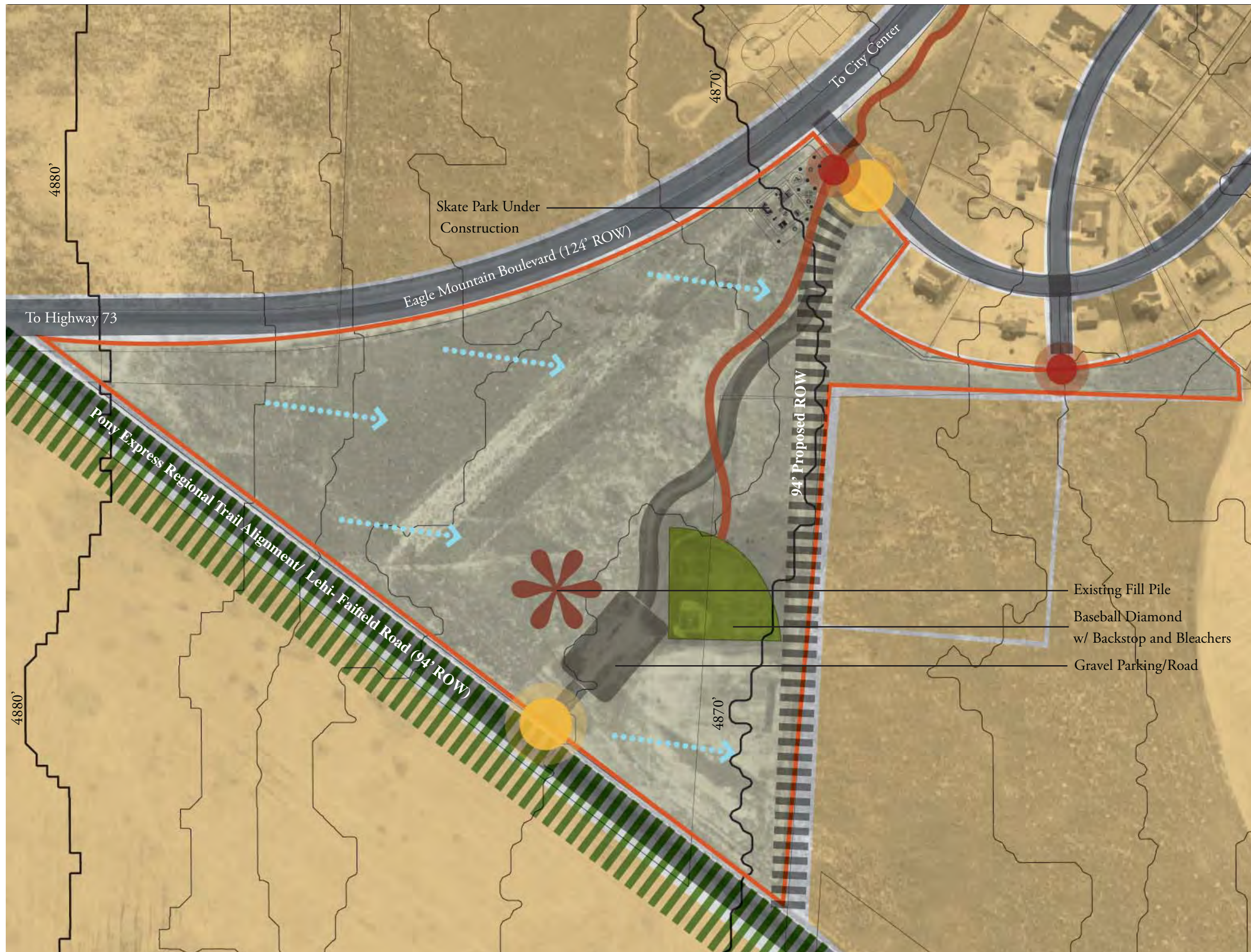
-  Public Auto Access
-  Pedestrian Access

#### Land Use

-  Institution
-  Mid to High Density Residential

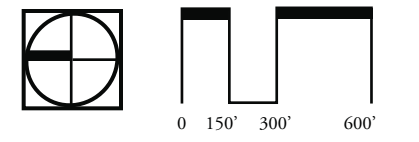
#### Site Features

- Total Acreage - 65.60
-  Drainage
-  Pedestrian Path



Key Map

2' Contour Interval





NORTH 1"=300'

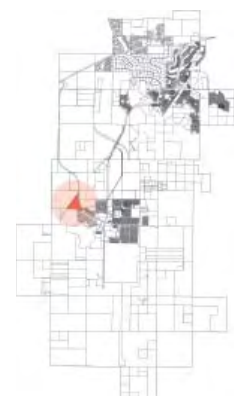
### Pony Express Regional Park Recommendations

#### Legend

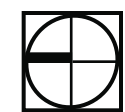
#### Circulation

-  Public Auto Access
-  Pedestrian Access

#### Potential Program

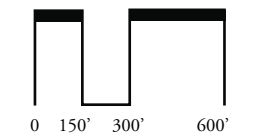


Key Map



NORTH

2' Contour Interval



1"=300'

**Pony Express Regional Park Concept Sketch**

**Legend**

- » Four soccer fields
- » Four baseball diamonds
- » Four basketball courts
- » Eight tennis courts
- » Nature trails
- » Interpretive signage (Pony Express)
- » Demonstration gardens
- » Water harvesting / rain gardens
- » Picnic
- » Parking
- » Skate Park
- » Lookout Point
- » Restrooms/concessions
- » Splash Pad
- » Park Lighting- safety and welfare
- » Ball Field Lighting-baseball

**Conceptual Opinion of Probable Cost**

- » Total Cost as shown      \$18,300,000\*
- » Average Cost /sq ft      \$6.57

\* Does not include the cost of Ball Field Lighting.  
 Note: Probable cost estimates based on January 2009 pricing and are subject to change due to economic circumstance and inflation.

\* Non motorized use recommended for the Pony Express Trail to the north of the ATV Trail-head, with motorized use allowed on the portion of the trail to the south.

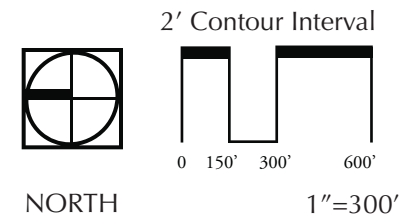


Articulated bands of water-wise plantings function as stormwater detention, demonstration gardens, and visual connections to the existing landscape in the valley.

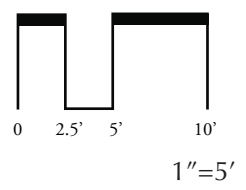
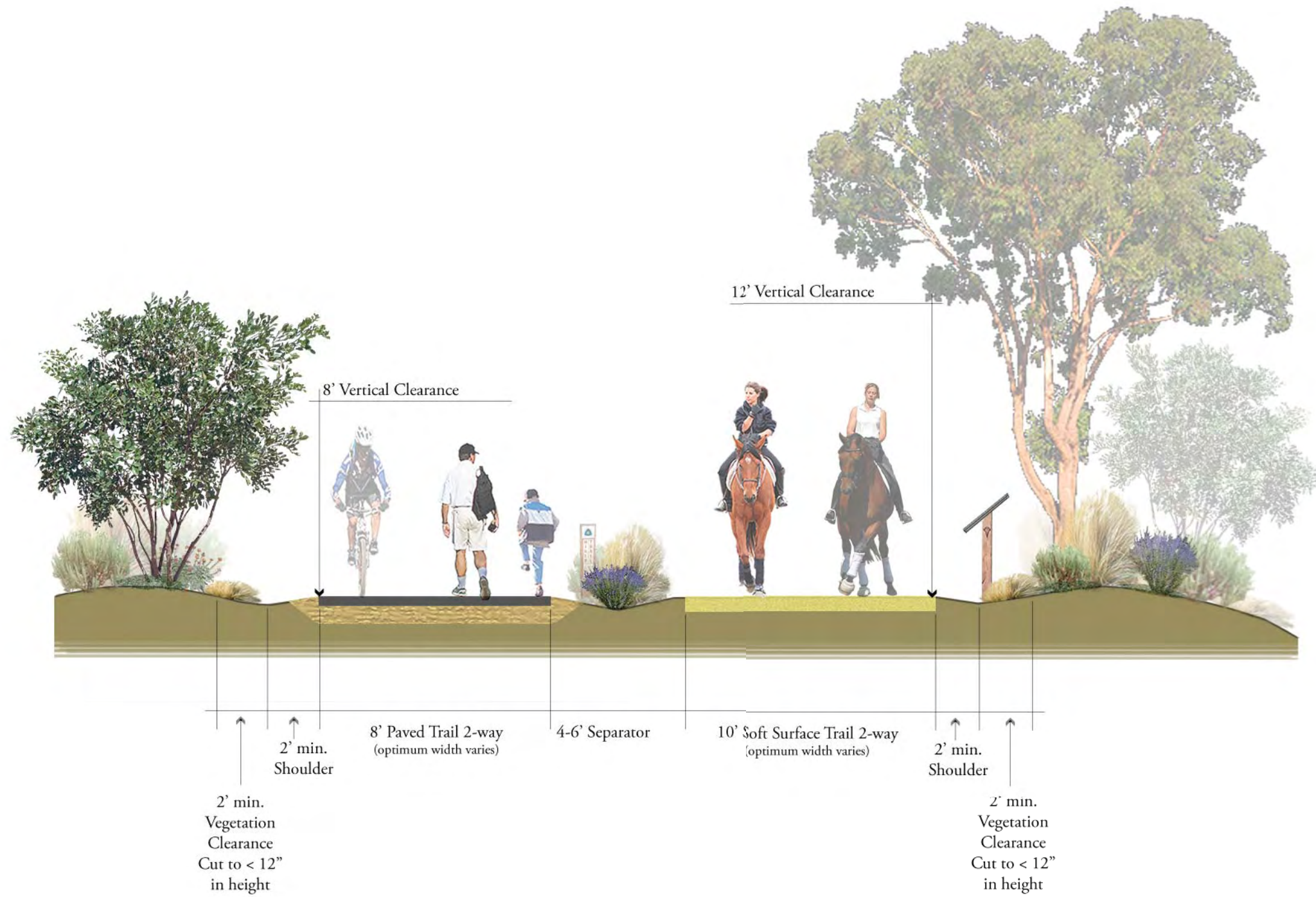
Cultural landscape patterns inspired these abstraction of windrows to block wind blowing from the north and south.

A pavilion and gathering area serve as an "oasis" along the Pony Express Trail.

A pedestrian oriented drive lane flanked with on-street parking gives access to park amenities.

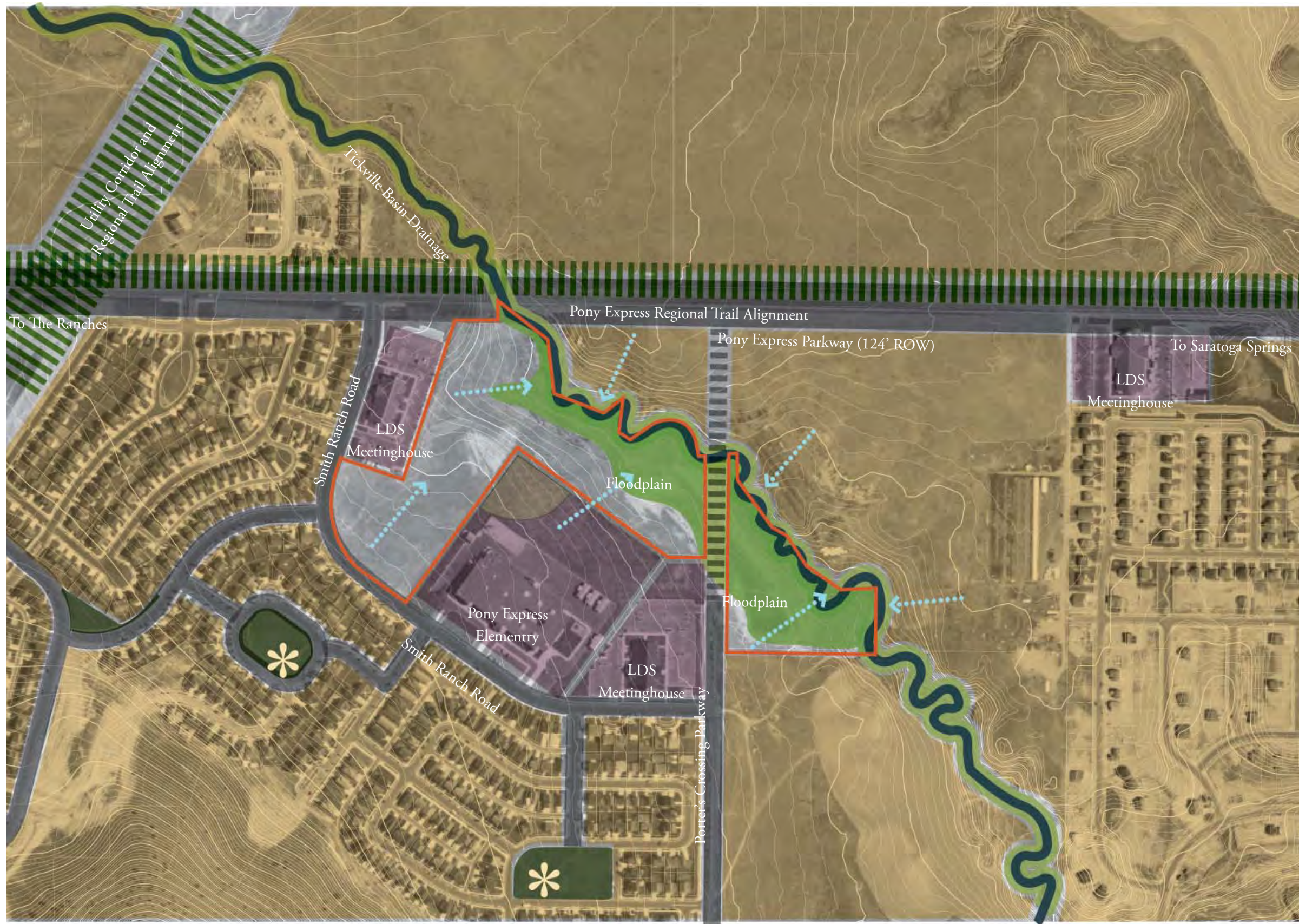


Typical Trail Section





### Smith Ranch Regional Park Existing Conditions



#### Legend

##### Circulation

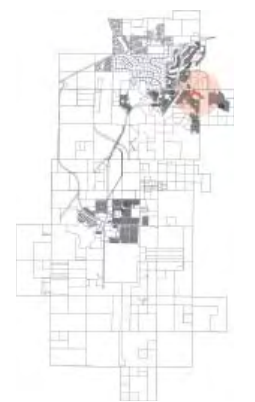
- Public Auto Access
- Pedestrian Access

##### Land Use

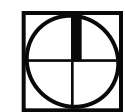
- Institution
- Mid to High Density Residential

##### Site Features

- Total Acreage - 20.95
- Drainage
- Playground

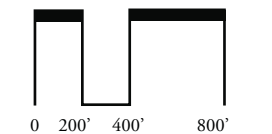


Key Map



NORTH

2' Contour Interval



1"=400'

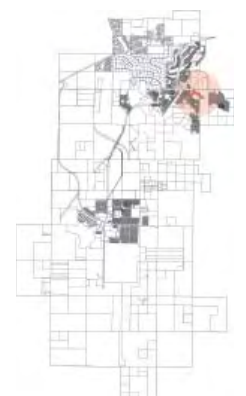
### Smith Ranch Regional Park Recommendations

#### Legend

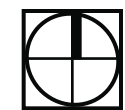
##### Circulation

-  Public Auto Access
-  Pedestrian Access

##### Potential Program

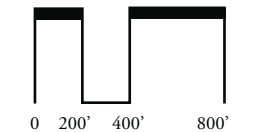


Key Map



NORTH

2' Contour Interval



1"=400'

**Smith Ranch Park Concept**



**Program**

- » Two soccer fields\*
- » Two baseball diamonds\*
- » Nature trails
- » Interpretive signage
- » Demonstration gardens
- » Water harvesting / rain gardens
- » Active recreation parking - 60 spaces
- » Trailhead parking - 20 spaces
- » Tennis/basketball
- » Picnic
- » Small outdoor classroom / storytelling
- » Lighting- safety and welfare

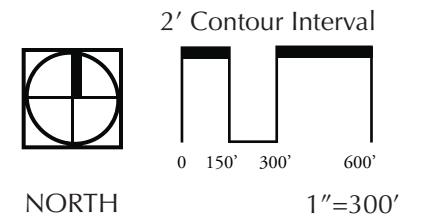
**Conceptual Opinion of Probable Cost**

- » Total Cost \$5,500,000
- » Average Cost /sq ft \$6.03

*Note: Probable cost estimates based on January 2009 pricing and are subject to change due to economic circumstance and inflation.*

*\*Note: we recommend that Eagle Mountain City collaborate with the school district in order to maximize the active play opportunity for this park.*

*Due to the site constraints, we also recommend that this park be re-classified as a "Community Park" instead of a Regional Park. The size, shape, and environmental constraints of this park prevent the appropriate level of service for a Regional Park as defined by this study.*





**City Center Paseo  
Existing Conditions**



**Legend**






**Circulation**

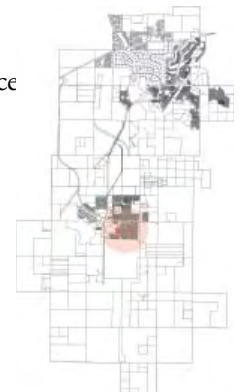
-  Public Auto Access
-  Pedestrian Access

**Land Use**

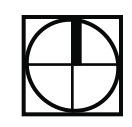
-  Open Space
-  City Park
-  Mid to High Density Residential

**Site Features**

-  Drainage
-  Pedestrian Path
-  Playground
-  Picnic Shelter
-  Discontiguous Fence Aesthetic

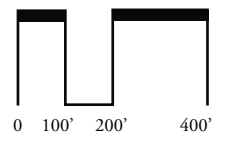


Key Map



NORTH

2' Contour Interval





1"=200'


**City Center Paseo Recommendations**

**Legend**

**Circulation**

-  Public Auto Access
-  Pedestrian Access

**Land Use**

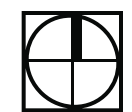
-  Improve Open Space- Low Priority
-  Improve Open Space- High Priority
-  Recommend Complementary Fence Style and Construction
-  Planted Screen

**Potential Program**

- » Fruit trees
- » Active recreation (basketball, volleyball)
- » Water harvesting
- » Picnic
- » Tot lots

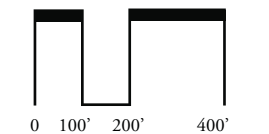


Key Map



NORTH

2' Contour Interval



1"=200'

**Paseo Park Concept Sketch**

**Program**

- » One grass volleyball
- » Two horseshoe pits
- » Two half court basketball
- » Inter-park trail linkages
- » Fruit orchard
- » Water harvesting / stormwater management
- » Active recreation parking - 7 spaces
- » Picnic
- » Benches
- » Nature Gardens
- » Lighting- safety and welfare

**Conceptual Opinion of Probable Cost**

- » Total Cost as shown      \$1,150,000
- » Average Cost /sq ft      \$7.32

*Note: Probable cost estimates based on January 2009 pricing and are subject to change due to economic circumstance and inflation.*

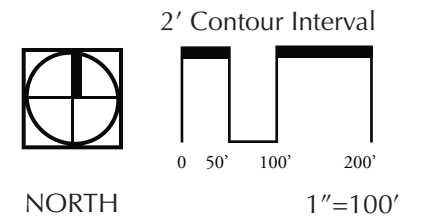
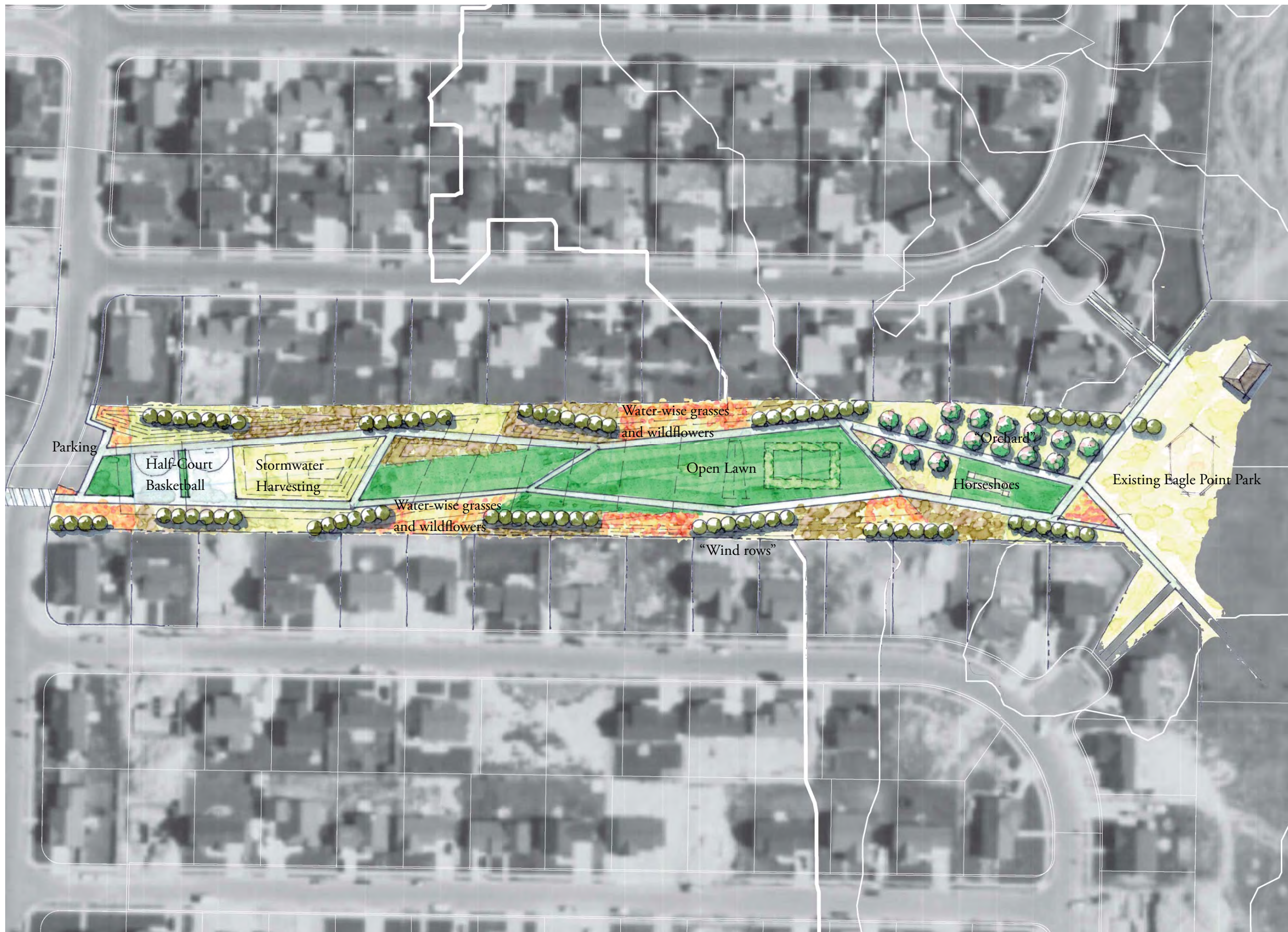










































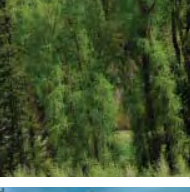

















Image	Botanical, Common Name, Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name, Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name, Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)
<b>Deciduous Trees</b>						<b>Deciduous Trees (cont.)</b>						<b>Evergreen Trees</b>					
	<i>Acer glabrum</i> Rocky Mountain Maple			25	15		<i>Prunus virginiana</i> Chokecherry			20-30	10-25		<i>Abies concolor</i> White Fir			60-80	25
	<i>Acer grandidentatum</i> Bigtooth Maple			20-30	15-20		<i>Quercus gambelii</i> Gambel Oak			10-30	15-20		<i>Juniperus communis</i> Common Juniper			5-12	8-10
	<i>Betula occidentalis</i> Water Birch			20-30	15-20		<i>Quercus macrocarpa</i> Burr Oak			70	60		<i>Juniperus scopulorum</i> Colorado Red Cedar			25-40	4-20
	<i>Forestiera neomexicana</i> Desert Olive			6-10	6-8		<i>Robinia pseudoacacia</i> 'Purple Robe' Purple Robe Locust			10-30	15-20		<i>Picea engelmannii</i> Engelman Spruce			35-70	10-15
	<i>Gymnocladus dioica</i> Kentucky Coffee Tree			50	35								<i>Pinus edulis</i> Pinyon Pine			10-30	15
	<i>Populus angustifolia</i> Narrow Leaf Cottonwood			60	20-35								<i>Pinus flexilis</i> Limber Pine			40	30
	<i>Platanus acerifolia</i> Sycamore			60	40												

**Legend**

Sun Exposure:  Full Sun,  Partial Shade,  Full Shade








Salt Tolerant: 

Water Requirement:  Dry,  Moist,  Wet

Indigenous Species: 

Botanical Name	Common Name

Plant Characteristics: 

Season	Predominant Seasonal Color
Spring	
Summer	
Fall	
Winter	
Year Round	
	
	

Shrubs						Shrubs (cont.)						Perennials						Legend				
Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Indigenous Species	Plant Characteristics
	<i>Amelanchier alnifolia</i> Saskatoon Serviceberry				4-8	6		<i>Chrysothamnus nauseosus</i> Rubber Rabbitbrush				4-8	4-8		<i>Antennaria dioica rosea</i> Pussy Toes, Everlasting				1-1.5	3		
	<i>Amelanchier utahensis</i> Utah Serviceberry				4-8	8-10		<i>Rhus trilobata</i> Oakbrush Sumac, Skunkbrush				6	5		<i>Epilobium angustifolia</i> Fireweed				3-7	3-7		
	<i>Artemisia tridentata</i> Big Sagebrush				1-3	3		<i>Ribes aureum</i> Golden Currant				4-6	3-5		<i>Erigeron speciosus</i> Oregon fleabane, Mountain daisy				2	1		
	<i>Artemisia tridentata var. wyomingensis</i> Wyoming Big Sage				3	4		<i>Shepherdia argentea</i> Silver Buffaloberry				6-12	6		<i>Eriogonum umbellatum</i> Sulphur Flower Buckwheat				5-1.5	1		
	<i>Atriplex canescens</i> Fourwing Salt Bush				3	4		<i>Symphoricarpos albus</i> Common Snowberry				4	5		<i>Geranium viscosissimum</i> Sticky Geranium				1.5	1		
	<i>Cercocarpus ledifolius</i> Curleaf Mountain Mahogany				10	8									<i>Iris missouriensis</i> Rocky Mountain Iris				1	.75		
	<i>Cercocarpus montanus</i> True Mountain Mahogany				6	6									<i>Linum lewisii</i> Perennial Blue Flax				.5	2.5		



Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	Image	Botanical, Common Name	Seasonal Interest, Color	Water Requirement	Sun Exposure	Height (ft.)	Spread (ft.)	
<b>Perennials (cont.)</b>							<b>Ornamental Grasses</b>							<b>Groundcovers</b>							
	<i>Penstemon palmeri</i> Palmers penstemon				3	1		<i>Bouteloua curtipendula</i> Side Oats Grama Grass				2	1		<i>Antennaria sp.</i> Pussy toes				.25	1	
	<i>Penstemon strictus</i> Rocky Mt. Penstemon				2	1		<i>Erianthus ravennae</i> Ravenna Grass				4-5	4-5		<i>Fragaria vesca</i> Wild Strawberry				.75	3	
	<i>Penstemon whippleanus</i> Whipple's Penstemon				1-2	1-1.5		<i>Festuca idahoensis</i> Idaho fescue				1-3	1		<i>Mahonia repens</i> Creeping Oregon Grape				1.5	3-4	
	<i>Pulsatilla vulgaris</i> Pasque Flower				.5-1	.5-1		<i>Helictotrichon sempervirens</i> Blue Oat Grass				2-3	2-3		<i>Sedum acre</i> Stonecrop				.5	2	
	<i>Ratibida columnifera</i> Mexican Hat				2	1		<i>Miscanthus sinensis</i> Maiden Grass				3-7	3-4		<i>Thymus sp.</i> Thyme				.5	1	
	<i>Viguiera multiflora</i> Showy Goldeneye				1.5	1.5		<i>Panicum virgatum</i> Switch Grass				4-7	2-3								
								<i>Stipa tenuissima</i> Mexican Feather Grass				1.5	1.5								

**Legend**

Sun Exposure: Full Sun, Partial Shade, Full Shade

Salt Tolerant:

Water Requirement: Dry, Moist, Wet

Indigenous Species: 

Botanical Name	Common Name

Plant Characteristics: 

Season	Color
Spring	
Summer	
Fall	
Winter	
Year Round	

Predominant Seasonal Color:

White, Dormant

All plant material was selected for its adaptability to Eagle Mountain City's environmental conditions, an aesthetic that expresses the city vision, and its local availability. Visit Progressive Plants Inc. for further information.

Progressive Plants Inc.  
 ph. 801-565-7333  
 10252 South Hwy. U-111, Copperton, Utah 84006  
<http://www.progressiveplants.com>





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# VALUE OF PARKS AND OPEN SPACE

The following is a summary of research efforts regarding the effects that parks and open space systems have on surrounding property values. The information compiled is a combination of research from sources including publications discussing John Crompton's work on parks and economic development ("Parks and Economic Development", Planning Advisory Service Report Number 502) and articles published by the National Recreation and Parks Association (NRPA). Additionally, a primary research effort was conducted for select new community developments in the metropolitan Denver area.

### **OVERVIEW**

The earliest documentation exploring the relationship between real estate values and public parks and open space dates back to the late 1800's when Olmsted, the visionary responsible for convincing New York City to invest \$14 million to construct Central Park, developed the proximate principle. Olmsted's principle demonstrates that the increase in property values on real estate surrounding parks and open space results in a subsequent increase in property taxes that is often sufficient to pay the annual debt service on bonds used to acquire and develop the parks.

The underlying principle – real estate in proximity to parks and open space experiences an increase in property values – is still apparent today. In fact, an economic method known as the hedonic pricing technique has been developed to enable the estimation of residential property values within proximity to green space. Additionally, the edge effect is widely accepted in the construction of today's parks. This theory refers to the ability to gain increased access to frontage lots in a linear, rather than circular park construction.

Aside from the direct fiscal impact on real estate in a community, parks and open space bring additional benefits to an area. For example, the incorporation of parks and open space in a community offers a comparative advantage in attracting future businesses and desirable residential relocators (such as retirees). There is also an increase tax base associated with increased property values that can be reinvested in the community.

In some cases open spaces can have a negative effect on property values. Studies that have been conducted have found that most of these cases are related to spaces used for athletic activities (e.g. a baseball field) and that these negative effects can be tied to the associated light pollution, increased traffic or circulation and risk of vandalism of these spaces.

### **STUDY RESULTS**

The following information presents findings regarding the effect on property values for parks/open space, greenways and golf courses.

## PARKS

Area surrounding a park can be divided into zones extending from the perimeter of the park. It is important to understand that the influence the park has on the surrounding real estate changes across zones that extend from the park's perimeter. A study of four parks (containing total of 219 acres) in Worcester, Massachusetts, revealed that the zones' influences extended to a distance of 2,000 feet from perimeter of the park. The following offers information on property value variations for real estate in the park's zone influence:

- In general, the park's effect seems to have substantial impact up to 500 feet for smaller parks and for larger, community-size parks, the effect is extended to 2,000 feet. The greatest premiums occur for homes within 800 feet of a park.
- Property values can experience as high as a 20 percent impact for abutting or fronting properties.
- When a park is large (over 25 acres) with mainly passive use, premiums are likely to be low.
- When a park is small and embraces active use, premiums are likely to be high.
- If the park is heavily used with athletic fields or swimming pools, the abutting properties are likely to experience low property value increases, but properties two to three blocks away can reach premiums of up to 10 percent.

In Rock Hill, South Carolina, the city found that a \$12 million plan for the 70 acre Manchester Meadows soccer complex and associated park would produce an annual economic benefit of \$2.5 to \$3.5 million for the City.

## GREENWAYS

Real estate surrounding greenways experience slightly different effects on property values than do parks and open space. In addition, these effects are largely driven by the nature and use of the adjacent greenway system. In general, studies have demonstrated a 6 to 12 percent increase in value for homes adjacent to greenway systems that consist of gently undulating topography with mature trees and open grassy areas. It is important to realize, however, that greenway systems with landscape to steep to navigate and covered by dense scrubs can actually contribute to price decreases in home values.

A study in Boulder, CO found that a greenbelt was associated with an increase in property values in the surrounding neighborhood of \$5.4 million. Property values were correlated closely with proximity to the greenbelt, decreasing by \$4.20 for every foot of distance from the greenbelt, up to 3200 feet. On the other hand, researchers studying housing developments around Philadelphia's Pennypack Park found that property next to active recreation facilities had slightly lower values. This was attributed to noise and increased pedestrian activity.





A study in Indianapolis examined the effects on real estate for three different greenway categories. The results are presented below:

- Category 1: Monon Trail, the most heavily used facility in the city. Properties within one-half mile experienced a significant positive increase in property values of up to 15 percent.
- Category 2: Public accessible multi-use trails. Properties did not experience a significant premium.
- Category 3: “Conservative corridors”, mostly privately owned land which does not provide public access. These corridors experienced a much lower premium, only 2 percent.

**GOLF**

Today, golf course development is almost synonymous with real estate development. In fact, the construction of golf courses has become quite sophisticated in regards to designing courses in order to increase the real estate lot frontage on the course. Much of the interest in living adjacent to golf courses lies in the visual quality of open space (increased views as a result of the openness of the area), rather than interest in playing the sport. In fact, evidence suggests that only 30 to 40 percent of golf course community residents actually participate in the activity.



- Early studies suggest that golf course frontage could result in a 5 to 10 percent premium in property values. Recent studies indicate that these premiums now can range from 5 to 21 percent, depending on proximity.
- Greatest premiums include properties within 200 feet of golf course, but typically premiums can occur on homes within 1,500 feet of the course.

Community	Builder	Type of premium	Range of premium	Additional Comments
<i>Back Nine at Reunion</i>				
Reunion, CO	Morrison Homes	adjacent to open space	\$ 15,000	
<i>Stapleton</i>				
Stapleton, CO	Wonderland	adjacent to park	\$ 10,000	premium prior to completion of park, 2 years hence
<i>Stapleton</i>				
Stapleton, CO	McStain	adjacent to / fronting park	\$30,000 - \$52,000	
<i>Lowry West</i>				
Lowry, CO	Landmark Urban Community	fronting park (across street)	\$8k, \$10k, potentially \$20k	next phase of homesites potentially \$20k premium for fronting park
<i>Tallyn's Reach</i>				
Aurora, CO	Richmond American	view to mountains	\$20k up to \$60k	lot premiums for the view to the mountains, adjacent to small greenbelt. \$60k max premium for "top lots"
<i>Murphy Creek</i>				
Aurora, CO	Richmond American	fronting golf course	\$ 35,000	golf course homesites
<i>Heritage Eagle Bend</i>				
Aurora, CO	US Home, Lennar Corp.	fronting golf course	\$65 - \$85k, up to \$100k	"no less than \$55k" per sales associate.

*Lot premiums in Colorado planned communities*

## ACQUISITION TECHNIQUES FOR PARKS AND OPEN SPACE

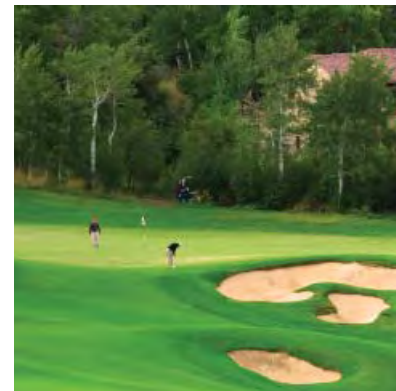
Communities around the country have used a variety of strategies to acquire, develop, and maintain parks and open space assets. Local governments typically use one of the following techniques to acquire park lands.

- **Fee simple purchase of real estate:** Communities may use their general funds, or monies earmarked for park programs, to purchase lands for parks and open space outright, without any easements or additional encumbrances. Local governments have traditionally purchased park lands in this manner. Fee simple ownership conveys full title to the land and the entire “bundle” of property rights including the right to possess land, to exclude others, to use land, and to alienate or sell land.
- **Land donations / gifts:** In this type of acquisition, a government body, public agency, or qualified conservation organization agrees to receive the full title or a conservation easement to a parcel of land at no cost or at a “bargain sale” rate. The donor is then eligible to receive federal tax deductions. This provision may also allow property owners to avoid inheritance taxes, capital gains taxes, and recurring property taxes.

Throughout the history of the country, benefactors have helped their local communities create new parks through the donations of land or other property as gifts to the community. In Western communities, in particular, local farming or ranching families have often donated parts of their landholdings to local cities or counties for open space or park facilities.

- **Option / First Right of Refusal:** In this situation, a local government agency or private organization establishes an agreement with a landowner to provide the right of first refusal on a parcel of land that is scheduled to be sold. An option on land provides local governments with additional time to raise money to purchase a given property or negotiate another mechanism to conserve a property as a park or open space resource.
- **Leases:** Less often, communities may lease additional park land from other fee-simple landowners. This strategy involves less expenditure of cash versus a fee-simple arrangement but does not provide the local community with complete control over the given park or open space property.

In other cases, a local government agency or private greenway organization can purchase a piece of land and then lease it back to the seller for a specified period of time. This lease may contain restrictions regarding the development and use of the property.





- **Easements:** This type of acquisition involves the fee simple purchase of an easement. Full title to the land is not purchased, only those rights granted in the easement agreement. Therefore the easement purchase price is less than the full title value. Over the last few decades, the dedication of easements have allowed local governments to expand their park and open space programs significantly without outright purchasing additional lands. For example, many local communities are able to negotiate easements for trails and greenways on the edges of local streams, floodplains, or agricultural areas from individual landowners. These types of easements help to provide connectivity between different parts of communities in the form of trails and related facilities.
- **Partnerships:** Communities often partner with park and open space advocacy groups, such as the Trust for Public Land, to raise funds for park acquisition or to assist in negotiating transactions with other landowners. These groups can work directly with landowners and conduct business in private so that sensitive land transactions may be handled more quietly. For example, in Santa Fe, New Mexico, the Trust for Public Land helped in negotiating and facilitating the purchase of a 50-acre former railyard in the heart of the downtown area that is now the focal point of a redevelopment in the heart of the community.

Local governments may also partner with other organizations, including local school districts, to create programming for new park and open space facilities. In addition, communities often partner with various private land managers, such as utility companies, to create trails, greenways and other facilities on rights-of-ways. Many towns around the country establish trail or bikeways on the rights-of-way of transmission lines and other utility easements.

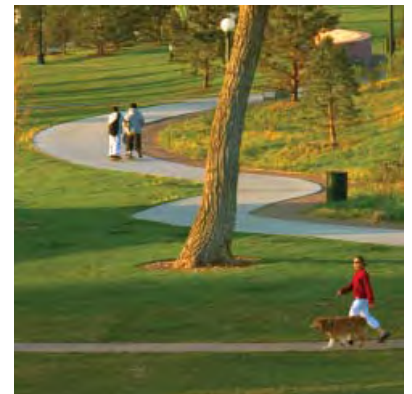
- **Tax Foreclosures:** Communities occasionally gain additional property for use as parks or open space through tax foreclosure proceedings concerning individual landowners.
- **Transfer of Development Rights (TDRs):** Under this arrangement, a local community may transfer the right to develop land to a certain density from areas that are more desirable for park and open space facilities to other areas better suited for development. For example, a TDR program may transfer density rights from floodplain or stream corridors to parcels located near major highways, and therefore more suitable for commercial or higher density residential development.
- **Property Condemnation:** Unless prohibited by state or local statutes, communities usually have the right to use the powers of condemnation to acquire lands for parks and



open space in the name of the larger public good. However, given the potential political costs of pursuing formal condemnation proceedings on individual landowners, local governments usually avoid using this technique.

Condemnation is viewed as a last resort policy. In most cases, condemnation has been exercised when there has been an absentee property ownership, when the title of the property is not clear, or when it becomes apparent that obtaining the consent for purchase would be difficult because there are numerous heirs located in other parts of the country.

- **Land Exchanges:** On occasion, communities are able to swap or exchange properties with other landowners to obtain parcels that are more favorable to the development of a park and open space system. For example, a local community may exchange more favorable land near a major highway for the acreage of a local farmer located in a floodplain zone in order to preserve local watersheds, prevent flooding, and create a stream-related park and open space amenity. Land exchanges may involve significant negotiation, but they often represent a more seamless way to obtain property for parks and open spaces versus acquiring properties on the open market.
- **Government Regulations:** Local communities can use their powers of zoning and other regulations associated with development to compel landowners to provide for parks and open space amenities. Local governments usually use one of the following techniques:
  - *Exactions:* A condition of development approval that requires an applicant to provide for or contribute to the financing of public parks and open space assets at the applicant's expense. For example, many communities require a developer to provide a minimum acreage of park or open space in return for approval of a higher density development in a given area.
  - *Mandatory Dedication:* Under this arrangement, the subdivision or development regulations of a given community would require a developer to dedicate or donate improved land to the public interest.
  - *Fee-in-Lieu:* This form of exaction would require a landowner to provide funds to a local parks or open space agency in return for not providing a specified acreage of improved land to the community as a park or open space amenity.
  - *Impact Fee:* Communities often impose fees, perhaps on a per-unit basis, in order to fund a broader range of facilities that serve the public interest.



## FINANCING TECHNIQUES FOR PARKS AND OPEN SPACE

Local public financing of parks and open space often takes the form of “pay-as-you-go” provi-

### Typical Park Construction Costs

Park Type	Amenities	Cost/ sq ft
Regional, Community, Neighborhood and Pocket Parks	Low end includes: grading, turf, irrigation and minimal playground equipment.	\$4.50 - \$6.75
	High end includes: low end items plus amenities such as tennis courts, basketball courts, perennial gardens, and lighting.	
Naturalistic Open Space	Low end includes: grading, hydro-seeding and temporary irrigation.	\$1.70 - \$2.30
	High end includes: grading, hydro-seeding and permanent irrigation.	

Note: Typical design fees for parks are calculated at 9-10% of construction cost.

sions, relying on current tax revenues or expenditures by local governments, long-term borrowing, or a mixture of these two approaches. Pay-as-you-go approaches use dedicated current funding sources, including property assessments, sales tax set-asides, real estate transfer taxes, and other fees and short term taxes. These approaches do not burden local governments with debt, but they provide relatively small annual revenues. Funding for pay-as-you-go arrangements may be difficult to maintain as politics and government officials change with time. In contrast, borrowing provides a much larger infusion of cash up-front for communities to spend on open space initiatives. The downside of longer-term financing, including bonds, is that they usually require obtaining voter approval. General obligation bonds usually require voter approval, sometimes by two-thirds of the electorate. Many communities combine these two approaches by bonding pay-as-you-go funds in order to raise more up-front cash. These instruments are usually referred to as “revenue bonds”.

The following represent the most common local finance tools for parks and open space.

- **Property Tax:** These are taxes on commercial and residential property owners that fund park, open space, and recreation maintenance, operations and capital improvements. Property taxes are among the least popular taxes among the general public. However, local governments continue to use property tax for park funding because they provide a steady source of revenue, less affected by economic cycles. In addition, local governments may easily administer property taxes and are usually able to accurately predict

property tax revenues. In addition, the burden of property taxes is fairly equitably distributed throughout a community.

- **Special Assessment Districts:** These districts are separate units of government that manage specific resources within defined boundaries. These districts can vary widely in size, ranging from a small part of a city to several counties combined into one entity. The East Bay Regional Park District in California, founded in 1934, is the largest and oldest special assessment district for park and open space programs.
- **Sales and Use Tax:** These taxes on the sales of goods or services often fund “pay-as-you-go” park initiatives. The revenues from these taxes are somewhat more variable as compared to property taxes, depending on economic cycles.
- **Real Estate Transfer Tax:** These taxes on the sale of property are usually employed in fast growing rural and suburban areas to fund open space preservation and park initiatives. The tax represents a one-time cost to home sellers or buyers, and therefore revenues from this source may vary widely with the cycles of the real estate market.
- **Impact Fee:** These one-time fees to offset the costs of infrastructure caused by new development are paid by local developers. Impact fees are used to fund open space acquisition and development, and are often employed in fast growing areas.
- **General Obligation Bonds:** Cities and counties typically pursue the passage of bond issues with the electorate in order to pay for a variety of park improvements and acquisitions. Many municipalities often combine park maintenance and improvements to existing parks with provisions for the acquisition of new lands for future parks.
- **Impact Fees / Funding from Developers:** Many cities, particularly in growing areas, are able to secure the provision of new parks from developers as part of the entitlement process and approvals for site plans for new residential developments. For example, many cities across the country require new developments to set aside a percentage of their total acreage for either pocket parks or for more significant community-wide parks. Other communities require developers to contribute funds toward the general park fund for the acquisition of park land and park improvements.
- **Mitigation Financing:** This includes set-asides of land by developers for the acquisition and protection of wetlands and other natural areas. It represents a one-time cost to a developer and usually pertains to natural resource protection in suburban or rural areas.

- **User Fee Financing:** Local governments often fund parks and open space through fees charged to the users of the local parks. State park systems, in particular, use this strategy. Some fees may include a major event fee policy or sports field user fees that are charged to leagues and groups.
- **Tax Increment Financing (TIF):** TIF financing is usually used when the development of park and open space components is combined with a larger project that creates significant sales or property taxes. For example, larger master planned communities may use TIF to finance infrastructure such as roads and sewers, as well as park and open space amenities.
- **Grants:** Funds may be available from state and federal grant sources. If no city staff have experience with grant writing it may be worthwhile to hire a professional grant writer.
- **Donations:** This source requires significant fundraising effort, and is usually pursued on a project-by-project basis. It can add to the citizen's feeling of "ownership" of the park system, which aids in maintenance as well. Service groups and foundations may also donate time and money. Receiving private donations usually requires citizens and groups to get excited and motivated about projects. This could be a way to make improvements to or partially fund allocated park space in the city center that was never developed.
- **Other possible funding sources include:** revenue bonds, exchanges of property, public / private partnerships, lifetime estates utility easement fees, levies for acquisition and development or for maintenance and operations, certificates of participation, land trusts, private grants / foundations and shared facilities, proximate principle allocation fund (because parks increase property value, allocating a percentage of property tax dollars to the parks department to account for the increase in tax revenue received from increased property taxes of land near parks), Community Development Block Grant (CDBG), state and federal highway funds for pedestrian / bicycle / trail systems.



# SPECIAL CONDITIONS

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## SPECIAL RECOMMENDATIONS

Special cases exist within the programming of the parks and open space system at Eagle Mountain that should be addressed separately. Provided in this section are resources for both the Fremont-era petroglyphs and all-terrain vehicle activity.

Two articles are provided that specifically address petroglyphs and their preservation through best management practices. An additional article is provided that describes the best management practices for ATV use in rural areas.



### THE KOKOPELLI DILEMMA: THE USE, ABUSE, AND CARE OF ROCK ART

*Rock Art Preservation. September 1997 Volume 19 Number 3*

Deterioration at rock image sites can be split into two categories. First there is the natural deterioration from the normal forces of nature that cause archaeological sites to breakdown. These include wind, dust, ice and water erosion, seasonal variations in temperature and sun exposure, plant overgrowth, animal activity, and so forth (Fig. 2).

The origins of the sites themselves can often be attributed to these actions. Commonly rock shelters and shallow caves (favored locations for many types of rock art) were formed by natural erosion and continue to alter under the impact of these forces.

Although the ongoing, natural alteration of sites can cause rock art to decay and be lost, therefore qualifying normal weathering as a threat to the “object”, these natural actions may be seen by some Native American communities as normal and a necessary part of

the life of a site. With that in mind, can we truly call this deterioration? Trying to lessen the impact of natural forces of deterioration is an uphill struggle, and as a species we have not done well in our attempts to control Mother Nature. We can sometimes slow down the rate of decay, but attempting to stop it is rarely successful and can often cause or exacerbate other problems. In light of what we know about the traditional use of sites and the concerns of Native Americans, we also have to ask: should we interfere?

The second category of deterioration is that caused by human actions, both deliberate and unintentional. It is arguably the most destructive form of decay, damaging sites very rapidly and aggressively. The spray paint, scratched graffiti and theft we so quickly associate with urban living finds its way all too commonly to rock art sites.

With the efforts to control graffiti by legislation limiting the availability of spray paint, an increase in the use of permanent ink markers and Liquid Paper® type correction

fluids seems to have occurred at rock image sites. Gunshot damage is a common feature especially in more rural locations, presumably the result of using the glyphs for target practice (Fig. 4). This kind of deliberate and premeditated activity on the part of a few visitors spoils the sites for all of us and for future generations.

Unintentional damage to sites is also widespread. Rock art has a tactile appeal and people are drawn to touch it, perhaps to gain some kind of physical connection to the ancient past, or maybe simply out of curiosity -- after all, the sense of touch is a primary method by which we continuously and instinctively explore our immediate environment. Most people see their visit to a site as an isolated act. They forget that thousands of people have visited the site before them and thousands will come after them. If each of those persons touches the images the result is excessive amounts of wear and tear. Over time the buildup of natural oils from skin and the additional residue of sunscreen or maybe the picnic just enjoyed along the trail,

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Rock art sites are alive both literally and spiritually. They consist of not just the visible images themselves; the very landscape they are situated in is an integral part of the site--or “object”. Indeed, ethnographic records and contemporary Native American accounts tell us that the images (which we

## ARCHAEOLOGICAL SITE BEST MANAGEMENT PRACTICES

*Best Management Practices: An Owner's Guide to Protecting Archaeological Sites. A publication of the Florida Department of State Division of Heritage Resources, Bureau of Archaeological Research*

### *Protection Strategies*

Many site protection strategies defend against deliberate looting and vandalism. Use of signs, fencing, camouflage, site burial, site monitoring, and law enforcement, alone or in combination, can all be effective approaches. Sites in frequently visited, easily viewed, and publicly interpreted settings are among the least looted and vandalized.

### *Signage*

Signs are typically one component of a broader site protection program that includes law enforcement and regular site monitoring. Two types of signs are helpful. The first type guides or interprets; the second advises or warns. Signs that guide or interpret are used to direct, such as trail markers, or to educate, such as historic plaques. The second type of sign makes the viewer aware of the law and the penalty for damaging or endangering a site. Experience has shown that the use of signs generally,

but not always, reduces site looting and vandalism. Like a lock, signs keep honest people honest. Signs usually should not be posted at archaeological sites located in remote areas, as they might call attention to sites that cannot be properly protected. On the other hand, highly visible and accessible sites should have prominent signs that both interpret the site and discourage damaging activity. These signs should indicate to visitors how to report unauthorized activities. Signs can also be placed along trails and roads, near campsites, and as part of a wayside exhibit.

### *Fencing*

The use of fencing for archaeological site protection is, like signs, best in a monitored area. Fences in unusual places may call attention to a site that otherwise would be unknown, saying, "loot here." Fences can be used to guide as well as to restrict access and need not be impenetrable to be effective. A simple series of posts connected by a chain or rope can keep visitors in the right area. Fences should be used in highly visible areas to deter the curious from climbing mounds or where there is no stabilized trail.

### *Camouflage*

Hiding a site can offer some protection. Camouflaging a site works best when it is done prior to any looting or vandalism. Planting poison ivy or oak, cactus, or Spanish bayonette and utilizing beehives will Signage warning looters against unauthorized digging and the penalties for disturbing unmarked burials dissuade many potential diggers. Posting signs noting the presence of such species may also be a sufficient deterrent.

### *Site Monitoring*

The most inexpensive method of site protection is site monitoring. Regular visits to your archaeological site will alert looters that you care about the site and will take steps to protect it. Site monitoring also gives you a chance to keep a log of activities that could be used in court. Authorized visitors, like members of local historical and archaeological groups or scouts, could assist you in monitoring the site. Increased site visitation results in decreased looting and vandalism events.



## ATV & SNOWMOBILE BEST MANAGEMENT PRACTICES

Source: BEST MANAGEMENT PRACTICES for Motorized Recreation on BC's Grasslands. Grasslands Conservation Council of British Columbia

### Minimize Soil Disturbances

Soils perform vital functions such as sustaining plant and animal life (below and above the surface), regulating water flow, storing and cycling nutrients, and providing support to structures.

Here's what you can do to maintain healthy soils...

- » Stay on managed or established trails, roads, and routes.
- » For off-road vehicles, avoid trails that are narrower than your vehicle.
- » Stay in the middle of trails to avoid widening them.
- » Avoid creating switchbacks, shortcuts, or new paths for others to follow.
- » Park or stage only in designated parking areas or turnaround sites.
- » Avoid traveling on poorly placed trails that can cause erosion problems, such as steep hillsides.
- » Avoid muddy trails, wet areas, or traveling through water holes.
- » When in designated riding areas, hill climb and mud bog in permitted areas only.
- » Do not exit off of managed or established trails onto travelling livestock or wildlife trails.
- » Accelerate slowly. Avoid spinning wheels/tracks to avoid creating rooster tails. 'Rip and Tear' acceleration causes many times the impact than that of conservative driving.

- » Ride snowmobiles in areas with 12" or more snow cover.
- » Ride where exposed soil/plants are not visible to avoid damaging soils and vegetation, and spreading invasive plants.

### Avoid Introducing/Spreading Invasive Plants

Invasive plants out-compete native species for nutrients, sunlight, and water leading to a crowding out of our native species in their natural environment. Often invasive species can produce millions of seeds each year.

Invasive plants threaten fragile ecosystems, reduce biodiversity and cost our provincial economy millions of dollars every year.

Here's what you can do to help...

- Stay on managed or established trails, roads, and routes.
- Check and clean vehicle undercarriages, wheel wells, and engine compartments when traveling from an infested site to one that is uninfested.
- Clean vehicles and equipment by removing mud, dirt, and plant parts after leaving grassland areas, or as soon as possible, in a weed-safe site such as a car wash. Do not wash your vehicle in streams or waterways to prevent spreading invasive plants downstream.
- Use staging areas that are free of invasive plants and be sure to keep them free of invasive plants.
- Support regional invasive plant programs.

### Respect Native Plants & Wildlife

Native plant communities provide forage for livestock, as well as feeding, breeding, and cover habitat for wildlife and invertebrates. Looking after our native plant communities (including the soil crust) is important to maintaining the natural diversity of grassland ecosystems.

How you can leave a good impression...

- Stay on managed or established trails, roads and routes.
- Avoid riding ATVs or trail bikes along beaches, through marshes or in other sensitive sites that may be breeding areas.
- Obey all posted signs that pertain to wildlife.
- Avoid traveling through areas during times known to be sensitive for certain wildlife (e.g., avoid grasslands adjacent to Bighorn Sheep during their lambing season – April to June).
- Maintain your equipment: Keep machines tuned and properly muffled to reduce exhaust and noise.

If you encounter wildlife...

- Slow down, leave your engine running and stay on your machine.
- When snowmobiling in deep snow, stay clear of wild animals so that vehicle noise and proximity do not add stress to animals.

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# NEXT STEPS

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## NEXT STEPS FOR EAGLE MOUNTAIN CITY

The following are suggestions for Eagle Mountain City to implement the Parks and Open Space Master Plan and points to consider while moving forward.

### Comprehensive Plan

Incorporate the Eagle Mountain City Parks and Open Space Master Plan into the City's Comprehensive Plan. Establish minimum standards for parks planned and built by anyone other than the city. These standards should include minimum requirements for amenities that respond to the surrounding demographic, lot sizes, neighborhood needs, etc while maintaining creativity. If a developer desires to alter the minimum standards of a proposed park, they must demonstrate to the review committee that what they propose is equal to or exceeds the minimum standards in quality, recreational need, etc.

### Update the Zoning Code

As parks develop in the future there may be a need to have a specific parks and open space zoning designation or overlay instead of parks being subject to the underlying zoning which may have regulations inappropriate for parks and open space needs.

### Land Dedication

Eagle Mountain City should begin investigating land that may be acquired for future regional and community parks. The city's subdivision and development codes should be updated to include provisions which require developers to provide sufficient pocket and neighborhood parks within their developments. If the city decides not to require developers to donate park sites or build them, at a minimum provisions should be made to allow the city to purchase the land needed for parks within a development. Building and maintenance responsibilities should be outlined, with opportunities provided for the developer to dedicate the park to the city if they choose not to maintain it. Codes should also enforce that parks be located throughout the development according to the level of service guidelines outlined in this document to provide all residents access to open space.

### Partnerships

Where beneficial to the city, Eagle Mountain should pursue partnerships with agencies to provide beneficial facilities and services to the public.

### Wise planting and water use

Encourage wise water use and landscape planting in residential landscapes and private land, and require certain levels of water-wise planting in parks and open space systems. This will allow for future growth of the community while minimizing the strain on the water supply. The plant lists provided in this document are a good place to begin and provide a valuable resource.

### Continuing Evaluation

Establish a regular schedule to evaluate the parks and open space system. Evaluate what lands have been developed, what resources / views / features have been lost and what needs to be preserved. Re-evaluate community needs and open space priorities regularly.

### Conclusion

Eagle Mountain City has a unique opportunity to plan for its open space system while most of the city is still undeveloped. This rare situation allows city officials and citizens to decide which landscapes should be preserved for future generations, and which locations provide the best site characteristics for future facilities, activities and community needs. As the population of Eagle Mountain City increases, land will become more valuable, and natural resources will tend to become increasingly marginalized in the face of development. This gives Eagle Mountain City a decided advantage to begin now in establishing a well planned and adequate parks and open space system. The benefits of parks and open space have been studied and shown to increase the economic, physical, mental and social health of a city and its residents. It is imperative that the focus which has been taken by the city to create this Master Plan be furthered by continuing to set aside and plan ample parks and open space in Eagle Mountain. Implementing this plan will provide a parks and open space system that provides beauty, recreation and promotes healthy, active lifestyles for citizens. The advantages of a cohesive parks and open space system in Eagle Mountain City will benefit generations to come.







# APPENDIX

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APPENDIX A

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Summary Memos to Eagle Mountain City



Design Workshop, Inc.  
Landscape Architecture  
Land Planning  
Urban Design  
Strategic Services

## Memorandum

To: Eagle Mountain City Planning  
Department

From: Design Workshop

Date: September 19, 2008

Project Name: Eagle Mountain City Parks and Open  
Space Master Plan

Project #: 4375

Subject: Findings of Foundation Building

Copy To: Design Workshop Team

In order to fully understand the work that has been completed to date by Eagle Mountain and become familiar with the site and the city, Design Workshop has compiled and reviewed extensive existing documents and data. Design Workshop also met with personnel from the Eagle Mountain City Planning Department for a Strategic Kickoff Meeting (SKO), to determine key factors and direction for the project.

Eagle Mountain City existing information reviewed by Design Workshop includes:

- Development Master Plans
- Capital facilities plan
- Regional trail plans
- General Plan goals and policies
- Existing Park facilities
- Current City Development Code
- GIS data (from EMC and other sources)

### Strategic Kickoff Meeting

**May 20, 2008, Design Workshop Salt Lake Office, Conference Room**

The following people were present: PETER SPENCER (EMC), JEFF WEBER (EMC), TERRALL BUDGE (DW), NANCY MONTEITH (DW), AARON NELSON (DW), MELANIE ANDRUS (DW)

#### 1. Legacy Design Critical Success Factors

Critical success factors are items that must be completed or present in order for the project to be considered successful. Legacy Design consists of the four areas of Environment, Economics, Community and Art that must come together to form places of enduring quality. The group listed the following as the critical success factors in each category for Eagle Mountain City.

- a. Environment
  - Water Use
  - Alternative Energy

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www.designworkshop.com

- Hillside / Slope Protection
- Antelope / Wildlife Corridors
- Plant Palette
- Tickville Wash
- b. Economics
  - Marketing Tool / Economic Development
  - Real Estate Value
  - Funding Source / Construction Maintenance
  - Acquisitions for City
  - Conservation Easements
  - TDR's
- c. Community
  - Archeological
  - Recreation
  - Bring Community Together "Unity Pass"
  - Equity in City
  - Rural vs. Urban
  - Provide for all
- d. Art
  - Pony Express
  - Western / Rural
  - Quiet
  - Clean Air
  - Stars
  - Military

## 2. Potential Interview Groups

The group established the following list of potential interview groups for the Eagle Mountain City Parks and Open Space Master Plan.

- Park & Rec. Advisory Board
- Equestrian Community
- HOA's
- Development Community
- Public Lands Community
  - SITLA
  - BLM
- Youth Sports / Youth Council
- General Residents
- School District
- Neighboring Cities
  - Fairfield
  - Cedar Fort
  - Saratoga Springs
- Major Landowners

## **Conclusions**

From the foundation building efforts above, Design Workshop established principles to govern the planning, and goals and objectives for the project.

### **1. Principles**

- a. Diverse park amenities are necessary to service the needs of an entire community.
- b. Varying scales of parks and trail systems with their accompanying accessible distance make a user-friendly and diverse open space system.
- c. Preservation, enhancement and development combined provide a rich and layered experience in open space.

### **2. Goals & Objectives**

- a. Retain the “small town” feel and openness of the current Eagle Mountain landscape.
- b. Provide recreation for all ages and user groups.
- c. Provide connections between residents, parks and trails.
- d. Provide Eagle Mountain City with the guidelines for furthering their information base, acquiring funding and implementing the Master Plan.

## Memorandum

Design Workshop, Inc.  
Landscape Architecture  
Land Planning  
Urban Design  
Strategic Services

To: Eagle Mountain Planning Department  
From: Design Workshop  
Date: July 2, 2008  
Project Name: Eagle Mountain Parks & Open Space Master Plan  
Project #: 4375  
Subject: June 18, 2008 Meeting and Questionnaire Results  
Copy To: Design Workshop Team

Design Workshop and the Eagle Mountain City Planning Department held 2 meetings on June 18, 2008. The first meeting was an interior meeting with available staff members of the Eagle Mountain City Planning and Zoning Department. The second meeting was a collaborative workshop held for invited members of the public and other stakeholders. Before the meetings, all invited guests received a questionnaire regarding the current parks and open space system and needs for the future. The results of this questionnaire and the findings from the 2 meetings are presented in this memo.

### Meeting with Eagle Mountain City Planning and Zoning Staff

#### June 18, 2008, Eagle Mountain City Hall, Planning and Zoning Conference Room

The following people were present: PETER SPENCER (EMC), STEVE MUMFORD (EMC), JOHN HENDRICKSON (EMC), LIANNE PENGRA (EMC), JOHNA ROSE (EMC), CHRIS TRUSTY (EMC), PAUL JEROME (EMC), SANDY RIET (EMC), JEFF WEBER (EMC), NANCY MONTEITH (DW), AARON NELSON (DW), & MELANIE ANDRUS (DW)

#### 1. Critical Success Factors

The staff members were asked what they felt is most important in a parks and open space system for Eagle Mountain City. These are called “critical success factors”, the things that must be present in order for the result to be successful. The following is the list that was generated:

- a. Recreation Facilities – variety in recreation, parking, and multiple facilities
- b. Understand needs and provide for them
- c. Connectivity to the parks
- d. Overall open space character that expresses the essential quality of Eagle Mountain
- e. Continue small town feel (nothing feels inner-city)
- f. Safety – but feeling of being out in the frontier
- g. Preservation of Archeological sites – different facets of Native American, Pioneer, Pony Express and petroglyphs
- h. Interpretive Areas
- i. Address the relationship of the city to the mountains – Interface
- j. Improve access to recreation

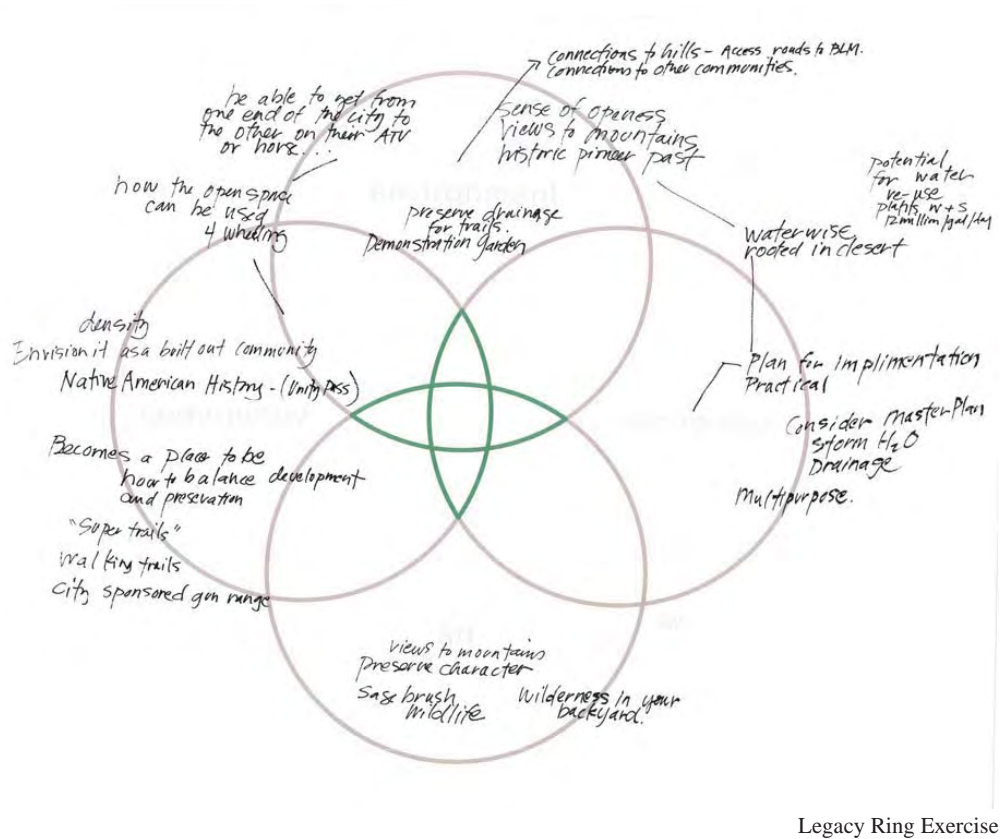
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## 2. Legacy Ring Exercise

Design Workshop believes the 4 elements of Environment, Economics, Art and Community must all be addressed and united in a project in order to create places of enduring quality. The staff members were asked to list what items are most important in each of these categories for Eagle Mountain's Parks and Open Space Master Plan.

- a. Environment
  - Be able to get from one end of the city to the other on an ATV or horse
  - Preserve drainages for trails
  - Demonstration gardens
  - Connections to hills – access roads to BLM
  - Connections to other communities
  - Sense of openness
  - Views to mountains
  - Historic pioneer past
- b. Economics
  - Water-wise rooted in desert
  - Potential for water re-use
  - Plan for practical implementation
  - Consider master plan stormwater drainage
  - Multipurpose
- c. Art
  - Views to mountains
  - Preserve character
    - Sagebrush
    - Wildlife
    - Wilderness in your backyard
- d. Community
  - How open space can be used for 4-wheeling
  - Density – envision it as a built-out community
  - Native American History – (Unity pass)
  - Becomes a place to be – a destination
  - How to balance development and preservation
  - “Super trails” – trails for all uses and users – Pedestrian, bicycle, equestrian, atv
  - Walking trails
  - City sponsored gun range



Legacy Ring Exercise

### Invited Public & Stakeholder Workshop

June 18, 2008, 6:30-8:30 pm, Eagle Mountain City Hall, Council Chambers

The following people were present: PETER SPENCER (EMC), STEVE MUMFORD (EMC), NANCY MONTEITH (DW), AARON NELSON (DW), MELANIE ANDRUS (DW), BRYAN FREE, DAREN BECK, SUSIE SCHERER, TERESA EDWARDS, COLONEL SCOT OLSON, BRYSON PRINCE, RYAN KENT, ELISE ERTER, LYNNETTE ROSE, BRAD ROSE, & ELAINE DULE.

#### 1. Critical Success Factors

(Listed in order of importance) Design Workshop facilitated a discussion that produced the following list of critical success factors for the stakeholders at the meeting, and then gave them opportunity to rank which items were most important to them. Each participant was given 3 green dots and 1 black dot. They placed the 3 green dots by 3 items they felt were most important and put the black dot by anything they felt was unimportant. Participants were only allowed to place 1 dot per item.

- a. 4 Dots
  - Amenity diversification for aging demographics
  - Share uses between schools and community
- b. 3 Dots
  - Multi-use Parks – historical, recreation, aquatic complex, tennis courts, high school
- c. 2 Dots
  - Protect ridgelines



- Dedicated easement for Pony Express Trail and connectivity.
  - Bring “two cities” together (also had 1 black dot)
- d. 1 Dot
- Adding uniqueness to the amenities
  - Make sure the plan is flexible to implement
  - Amenities that encourage use of open space more times of day and year
  - Plan is compatible with Camp Williams goals
  - Gun Club
  - Maintain equestrian culture and celebrate it – permanent element
  - ATV trails – give users a designated place for this activity
  - Alternative water sources – non-potable – for landscape
  - Education – maintenance – water factor – in public spaces – understanding what it takes to maintain public spaces
- e. No Dots
- Master Plan to address ATV use in the city
- f. Black Dot
- Bring “two cities” together

## **2. What is the Character of Eagle Mountain?**

Preserving the character of Eagle Mountain was often brought up, and this is what the users defined the character as:

- a. Family Friendly
- b. Open space
- c. I live where I play
- d. New Frontier

## **3. Image Preference Exercise**

The following Image Boards were located on tables and workshop participants were able to add post-it notes to the boards with comments. This gives an idea of activities or types of open space that are desired or are undesirable to the participants. The following boards contain these comments.

### Questionnaire Results

There were 14 Questionnaires returned for this summary, and 6 others returned after the analysis of the surveys was complete.

1. What part of the community do you live in?

**Results:** 3 from the Ranches, 4 from City Center, 1 from Silver Lake, 3 from Cedar Pass, 1 representing SITCA and 1 from Saratoga Springs.

2. How old are you?

**Results:** 1 person age 19-29, 9 people age 30-44 and 3 people age 45-65.

3. Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)

**Results:** There were 9 surveys returned from individual citizens and 6 people representing the following groups: Eagle Mountain City, Pioneer HOA, SITLA, Rockwell School District, Ranches Academy and an individual developer.

4. What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?

**Results:** Most people moved to EMC for the access to open space and recreation and also for the small town feel. These are the things that they want to be preserved. Respondents have lived here from 4 months to 9 years.

5. What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X). (See attached questionnaires for full list.)

**Results:** The questionnaire results show that the top 10 priorities for development in EMC parks should be (in order):

- 1-Trails for jogging, walking and exercise
- 2-Indoor Recreation Center
- 3-Natural Open Space
- 4-Trails for Equestrian
- 5-Baseball / softball fields
- 6-Soccer Fields
- 7-Trails for Bicycles
- 8-Playgrounds
- 9-Picnic Areas / Pavilions
- 10-Wildlife Habitat

6. Which do you prefer?

- a. Small, frequent neighborhood parks    b. Large, centralized facilities    c. A balance

**Results:** Responses show that residents prefer a balance of small, frequent parks and large, centralized facilities rather than a majority of either one.

7. Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?

**Results:** Almost all of those surveyed are willing to have city referendums and tax payer initiatives as a source of funding future parks and open space. A few said it would depend on how much the referendums were for.

8. Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?

**Results:** Respondents feel the highest priority is natural open space and then the pony express trail. Ridgelines and other trails are also important to many people.

9. What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?

**Results:** Most residents feel that the direction the city is heading is good, and that the things that need improvement are having larger parks as well as parks for older children, and that maintenance is also an issue in some areas.



APPENDIX B

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Parks and Open Space Citizen Survey



## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a.  The Ranches      b.  City Center      c.  Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a.  Under 18      b.  19-29      c.  30-44      d.  45-65      e.  Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b.  Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** *Small town feel, access to hills, quiet, openness, history (PE Route), ATV access — I have lived here for 7.5 yrs.*
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. <input type="checkbox"/> Soccer Fields	k. <input type="checkbox"/> Trails _ Equestrian
b. <input type="checkbox"/> Tennis Courts	l. <input checked="" type="checkbox"/> Trails _ Jogging/Walking/Exercise
c. <input type="checkbox"/> Baseball / Softball Diamonds	m. <input checked="" type="checkbox"/> Bicycle lanes on roads
d. <input type="checkbox"/> Basketball Courts	n. <input checked="" type="checkbox"/> Preserved Natural Open Space
e. <input checked="" type="checkbox"/> Children Playgrounds	o. <input type="checkbox"/> Wildlife Habitat
f. <input type="checkbox"/> Community Vegetable Gardens	p. <input type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.)
g. <input type="checkbox"/> Picnic Areas / Pavilions	q. <input checked="" type="checkbox"/> Other <i>ATV access to hills without driving far from home</i>
h. <input type="checkbox"/> Outdoor Venues / Amphitheater	r. <input type="checkbox"/> Other _____
i. <input type="checkbox"/> Interpretive / Educational	s. <input type="checkbox"/> Other _____
j. <input type="checkbox"/> Trails _ Bicycle	t. <input type="checkbox"/> Other _____
  
6. **Which do you prefer:**  
 a.  Small, frequent neighborhood parks      b.  Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b.  No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?** *Petroglyphs need to be preserved + PE Route sites; natural open space to preserve small town feel; still preserve access to hills.*
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** *Desire for it is helping to make these things happen, however, the speed of development will destroy access to open space if not planned for in advance.*

Thank you!

2

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a. \_\_\_ Individual Citizen      b.  Representing a group - (What group? Eagle Mtn. City)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. <u>2</u> Soccer Fields b. ___ Tennis Courts c. <u>3</u> Baseball / Softball Diamonds d. ___ Basketball Courts e. ___ Children Playgrounds f. ___ Community Vegetable Gardens g. <u>4</u> Picnic Areas / Pavilions h. ___ Outdoor Venues / Amphitheater i. ___ Interpretive / Educational j. ___ Trails _ Bicycle	k. ___ Trails _ Equestrian l. ___ Trails _ Jogging/Walking/Exercise m. ___ Bicycle lanes on roads n. <u>5</u> Preserved Natural Open Space o. ___ Wildlife Habitat p. <u>1</u> Indoor Recreation Facility (pool, gym, etc.) q. ___ Other _____ r. ___ Other _____ s. ___ Other _____ t. ___ Other _____
--	--
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** The recreation department does really well, I'd like to see sports @ a central regional facility & more sports for teenage residents

Thank you!



3

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b.  City Center      c. \_\_\_ Silver Lake  
 d. \_\_\_ Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?**  
7 1/2 Years in City Center / more Land Newer House / Close to Mountains to Ride 4 Wheeler / shooting Guns / Hunting
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. <input checked="" type="checkbox"/> Trails _ Equestrian
b. ___ Tennis Courts	l. <input checked="" type="checkbox"/> Trails _ Jogging/Walking/Exercise
c. ___ Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. ___ Basketball Courts	n. ___ Preserved Natural Open Space
e. ___ Children Playgrounds	o. <input checked="" type="checkbox"/> Wildlife Habitat
f. ___ Community Vegetable Gardens	p. <input checked="" type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.)
g. ___ Picnic Areas / Pavilions	q. ___ Other _____
h. ___ Outdoor Venues / Amphitheater	r. ___ Other _____
i. ___ Interpretive / Educational	s. ___ Other _____
j. <input checked="" type="checkbox"/> Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
 \_\_\_\_\_  
 \_\_\_\_\_
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?**  
 \_\_\_\_\_  
 \_\_\_\_\_

Thank you!

4

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. P City Center      c. \_\_\_ Silver Lake  
 d. \_\_\_ Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. X 19-29      c. \_\_\_ 30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a. X Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?**  
walking trails - being able to walk from area to area  
-only lived here 4 months
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. ___ Trails _ Equestrian
b. ___ Tennis Courts	l. <u>1</u> Trails _ Jogging/Walking/Exercise
c. ___ Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. ___ Basketball Courts	n. <u>2</u> Preserved Natural Open Space
e. <u>4</u> Children Playgrounds	o. <u>3</u> Wildlife Habitat
f. ___ Community Vegetable Gardens	p. ___ Indoor Recreation Facility (pool, gym, etc.)
g. ___ Picnic Areas / Pavilions	q. ___ Other _____
h. ___ Outdoor Venues / Amphitheater	r. ___ Other _____
i. ___ Interpretive / Educational	s. ___ Other _____
j. <u>5</u> Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c. X A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a. X Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
I'm not familiar enough w/ the area to say. I would just like  
the walking trails to stay throughout
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?**  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Thank you!

# PARKS AND OPEN SPACE SURVEY

5

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b.  City Center      c. \_\_\_ Silver Lake  
 d. \_\_\_ Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_

2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65

3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**

a.  Individual Citizen      b.  Representing a group - (What group? Pioneer Addition HOA  
I am on board of Directors.)

4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** I have lived here almost 9 yrs. and would like to see open spaces and parks.

5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

- |   |   |
|---|---|
| a. <u>10</u> Soccer Fields  | k. ___ Trails _ Equestrian  |
| b. <u>11</u> Tennis Courts  | 2 l. <input checked="" type="checkbox"/> Trails _ Jogging/Walking/Exercise            |
| c. <u>9</u> Baseball / Softball Diamonds                          | m. ___ Bicycle lanes on roads   |
| d. <u>8</u> Basketball Courts                                     | 4 n. <input checked="" type="checkbox"/> Preserved Natural Open Space                 |
| e. <u>7</u> Children Playgrounds                                  | 5 o. <input checked="" type="checkbox"/> Wildlife Habitat                             |
| f. ___ Community Vegetable Gardens                                | 1 p. <input checked="" type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.) |
| 3 g. <input checked="" type="checkbox"/> Picnic Areas / Pavilions | q. <u>6</u> Other <u>maintain parks</u>   |
| h. ___ Outdoor Venues / Amphitheater                              | r. ___ Other _____  |
| i. ___ Interpretive / Educational                                 | s. ___ Other _____  |
| j. ___ Trails _ Bicycle   | t. ___ Other _____  |

*who will maintain?*

6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance

7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a. \_\_\_ Yes      b. \_\_\_ No undecided (How much)

8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?** Pony Express

9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** recent progress has been great. but more maintenance is needed.

**Thank you!** Is there any truth to the rumor that the City is planning to provide residents with space to park trailers motor homes campers etc at little or no cost? (Please

I'm not sure if the survey is complete.

## PARKS AND OPEN SPACE SURVEY

b

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) Cedar Pass
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c. \_\_\_ 30-44      d.  45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** 13 yrs  
Living in the country but close to city amenities
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. <input checked="" type="checkbox"/> Trails _ Equestrian
b. ___ Tennis Courts	l. <input checked="" type="checkbox"/> Trails _ Jogging/Walking/Exercise
c. ___ Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. ___ Basketball Courts	n. ___ Preserved Natural Open Space
e. ___ Children Playgrounds	o. ___ Wildlife Habitat
f. ___ Community Vegetable Gardens	p. <input checked="" type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.)
g. <input checked="" type="checkbox"/> Picnic Areas / Pavilions	q. ___ Other _____
h. ___ Outdoor Venues / Amphitheater	r. ___ Other _____
i. ___ Interpretive / Educational	s. ___ Other _____
j. <input checked="" type="checkbox"/> Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
Pony express trails - open space for citizens to enjoy
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** lots of open areas for kids to play - people to enjoy

Thank you!

7

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) Cedar Pass

2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c. \_\_\_ 30-44      d.  45-65      e. \_\_\_ Over 65

3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)

4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** 34/85  
open space      family      community

5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

- |   |   |
|---|---|
| a. ___ Soccer Fields                                    | k. <input checked="" type="checkbox"/> Trails _ Equestrian                          |
| b. ___ Tennis Courts                                    | l. <input checked="" type="checkbox"/> Trails _ Jogging/Walking/Exercise            |
| c. ___ Baseball / Softball Diamonds                     | m. <input checked="" type="checkbox"/> Bicycle lanes on roads                       |
| d. ___ Basketball Courts                                | n. ___ Preserved Natural Open Space   |
| e. ___ Children Playgrounds                             | o. ___ Wildlife Habitat   |
| f. ___ Community Vegetable Gardens                      | p. <input checked="" type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.) |
| g. ___ Picnic Areas / Pavilions                         | q. ___ Other _____  |
| h. ___ Outdoor Venues / Amphitheater                    | r. ___ Other _____  |
| i. ___ Interpretive / Educational                       | s. ___ Other _____  |
| j. <input checked="" type="checkbox"/> Trails _ Bicycle | t. ___ Other _____  |

6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance

7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No

8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
Some express trail

9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** HOA's - Keeping the face of EMC homey & clean

Thank you!

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c. \_\_\_ 30-44      d.  45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** 5 yrs.  
Large lot sizes (5 acres) and open space
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. <u>5</u> Trails _ Equestrian
b. ___ Tennis Courts	l. <u>4</u> Trails _ Jogging/Walking/Exercise
c. ___ Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. ___ Basketball Courts	n. <u>1</u> Preserved Natural Open Space
e. ___ Children Playgrounds	o. <u>3</u> Wildlife Habitat
f. ___ Community Vegetable Gardens	p. ___ Indoor Recreation Facility (pool, gym, etc.)
g. ___ Picnic Areas / Pavilions	q. <u>2</u> Other <u>TRAILS FOR DOGS OFF LEASH</u>
h. ___ Outdoor Venues / Amphitheater	r. ___ Other <u>PARKS</u>
i. <u>NO</u> Interpretive / Educational	s. ___ Other _____
j. ___ Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b.  Large, centralized facilities      c. \_\_\_ A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
NATURAL VEGETATION AREAS SHOULD BE PROTECTED
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** NEED TRAILS MARKED WITH PARKING FOR ACCESS

Thank you!

9

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc.) SITCA - Mid Valley
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c. \_\_\_ 30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a. \_\_\_ Individual Citizen      b.  Representing a group - (What group? SITCA)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. <u>2</u> Soccer Fields b. ___ Tennis Courts c. <u>4</u> Baseball / Softball Diamonds d. ___ Basketball Courts e. ___ Children Playgrounds f. <u>5</u> Community Vegetable Gardens g. ___ Picnic Areas / Pavilions h. ___ Outdoor Venues / Amphitheater i. ___ Interpretive / Educational j. ___ Trails _ Bicycle	k. ___ Trails _ Equestrian l. <u>1</u> Trails _ Jogging/Walking/Exercise m. ___ Bicycle lanes on roads n. ___ Preserved Natural Open Space o. ___ Wildlife Habitat p. <u>3</u> Indoor Recreation Facility (pool, gym, etc.) q. ___ Other _____ r. ___ Other _____ s. ___ Other _____ t. ___ Other _____
--	--
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?** \_\_\_\_\_  
Ridge top in Hidden Valley beneath power lines  
Rory Express trail throughout Cedar Valley
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** \_\_\_\_\_  
City has a challenging maintaining native & xeric plantings -  
the need to mow and trim/shape is strong & detracts from  
natural look of native/xeric plantings.

Thank you!

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

**1. What part of the community do you live in?**

- a.  The Ranches      b.  City Center      c.  Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_

**2. How old are you?**

- a.  Under 18      b.  19-29      c.  30-44      d.  45-65      e.  Over 65

**3. Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**

- a.  Individual Citizen      b.  Representing a group - (What group? Rockwell Charter High School)

**4. What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?**

Open space; Active outdoor lifestyle; Not crowded

**5. What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

- |   |   |
|---|---|
| a. <u>4</u> Soccer Fields                                 | k. <input type="checkbox"/> Trails _ Equestrian               |
| b. <input type="checkbox"/> Tennis Courts                 | l. <input type="checkbox"/> Trails _ Jogging/Walking/Exercise |
| c. <u>1</u> Baseball / Softball Diamonds                  | m. <input type="checkbox"/> Bicycle lanes on roads            |
| d. <input type="checkbox"/> Basketball Courts             | n. <input type="checkbox"/> Preserved Natural Open Space      |
| e. <input type="checkbox"/> Children Playgrounds          | o. <input type="checkbox"/> Wildlife Habitat                  |
| f. <input type="checkbox"/> Community Vegetable Gardens   | p. <u>3</u> Indoor Recreation Facility (pool, gym, etc.)      |
| g. <input type="checkbox"/> Picnic Areas / Pavilions      | q. <input type="checkbox"/> Other _____                       |
| h. <input type="checkbox"/> Outdoor Venues / Amphitheater | r. <input type="checkbox"/> Other _____                       |
| i. <u>2</u> Interpretive / Educational                    | s. <input type="checkbox"/> Other _____                       |
| j. <input type="checkbox"/> Trails _ Bicycle              | t. <input type="checkbox"/> Other _____                       |

jk+l. 5 (tied)

**6. Which do you prefer:**

- a.  Small, frequent neighborhood parks      b.  Large, centralized facilities      c.  A balance

**7. Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**

- a.  Yes      b.  No      c.  Depends!

**8. Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**

Aesthetically and just because, some natural or open space is a huge plus - it is inviting and reinvigorates people.

**9. What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?**

Nolan Park and the amphitheater are great but traffic around them gets tricky. Need some spaces like that.

Thank you!



## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
a. \_\_\_ The Ranches      b. \_\_\_ City Center      c.  Silver Lake  
d. \_\_\_ Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
a. \_\_\_ Individual Citizen      b.  Representing a group - (What group? Ranches Academy)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?**  
Small community feel, parkways, play areas, 2yrs
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. ___ Trails _ Equestrian
b. ___ Tennis Courts	l. ___ Trails _ Jogging/Walking/Exercise
c. <u>5</u> Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. <u>1</u> Basketball Courts	n. <u>10</u> Preserved Natural Open Space
e. ___ Children Playgrounds	o. <u>3</u> Wildlife Habitat
f. ___ Community Vegetable Gardens	p. <u>2</u> Indoor Recreation Facility (pool, gym, etc.)
g. ___ Picnic Areas / Pavilions	q. ___ Other _____
h. ___ Outdoor Venues / Amphitheater	r. ___ Other _____
i. <u>4</u> Interpretive / Educational	s. ___ Other _____
j. ___ Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
Natural open space, i.g. parks/recreational areas, golf course
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?**  
Well - parks & parkways maintained  
not working - more parks for older kids & teens - indoor rec center

Thank you!

12

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b. \_\_\_ City Center      c. \_\_\_ Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) STRATOGA SPAINES
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a. \_\_\_ Individual Citizen      b.  Representing a group - (What group? DEVELOPER)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?**  
I DO NOT LIVE IN EAGLE MOUNTAIN, BUT HAVE A VESTED INTEREST IN INSURING THAT OUR CITY (PARTICULARLY THE RANCHES) IS SUCCESSFUL
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields b. ___ Tennis Courts c. ___ Baseball / Softball Diamonds d. <u>4</u> Basketball Courts e. ___ Children Playgrounds f. ___ Community Vegetable Gardens g. <u>5</u> Picnic Areas / Pavilions h. ___ Outdoor Venues / Amphitheater i. ___ Interpretive / Educational j. ___ Trails _ Bicycle	k. ___ Trails _ Equestrian l. <u>3</u> Trails _ Jogging/Walking/Exercise m. ___ Bicycle lanes on roads n. ___ Preserved Natural Open Space o. ___ Wildlife Habitat p. ___ Indoor Recreation Facility (pool, gym, etc.) q. <u>2</u> Other <u>UNIQUE PLAY AREAS</u> r. <u>1</u> Other <u>CROSS-USAGE AREAS</u> s. ___ Other _____ t. ___ Other _____
---	---
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b. \_\_\_ Large, centralized facilities      c.  A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a. \_\_\_ Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
RIDGE LINES SHOULD BE PRESERVED, INDIGENOUS PETROGLYPH FORMATIONS SHOULD BE RECOGNIZED AND PRESERVED
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?**  
THE TRAIL SYSTEMS AND EXISTING OPEN SPACE AREAS ARE NICE  
 THE CITY CENTER'S LACK OF PARKS AND OPEN SPACE AND POORLY MAINTAINED SUBDIVISIONS ARE NOT WORKING

Thank you!

13

**PARKS AND OPEN SPACE SURVEY**

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

1. What part of the community do you live in?  
 a.  The Ranches    b.  City Center    c.  Silver Lake  
 d.  Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc.)
2. How old are you?  
 a.  Under 18    b.  19-29    c.  30-44    d.  45-65    e.  Over 65
3. Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)  
 a.  Individual Citizen    b.  Representing a group - (What group?)

4. What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?  
 Clean attractive home bases, close to parks  
 10 years

5. What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).
- |   |  |
|---|--|
| k. <input type="checkbox"/> Soccer Fields                 | l. <input type="checkbox"/> Trails - Equestrian                          |
| m. <input type="checkbox"/> Tennis Courts                 | n. <input type="checkbox"/> Trails - Jogging/Walking/Exercise            |
| o. <input type="checkbox"/> Baseball / Softball Diamonds  | p. <input type="checkbox"/> Bicycle lanes on roads                       |
| q. <input type="checkbox"/> Basketball Courts             | r. <input type="checkbox"/> Preserved Natural Open Space                 |
| s. <input type="checkbox"/> Children Playgrounds          | t. <input type="checkbox"/> Wildlife Habitat                             |
| u. <input type="checkbox"/> Community Vegetable Gardens   | v. <input type="checkbox"/> Indoor Recreation Facility (pool, gym, etc.) |
| w. <input type="checkbox"/> Picnic Areas / Pavilions      | x. <input type="checkbox"/> Other  |
| y. <input type="checkbox"/> Outdoor Venues / Amphitheater | z. <input type="checkbox"/> Other  |
| aa. <input type="checkbox"/> Interpretive / Educational   | ab. <input type="checkbox"/> Other                                       |
| ac. <input type="checkbox"/> Trails - Bicycle             |  |

6. Which do you prefer:  
 a.  Small, frequent neighborhood parks    b.  Large, centralized facilities    c.  A balance
7. Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?  
 a.  Yes    b.  No
8. Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?  
 Several open space park areas, trails throughout city, mountains, horse trails, preserved

9. What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?  
 Parks served out well, need more of what people use, larger parks & swings too.  
 Thank you!

Return Address

Place Stamp Here

could be built in phases  
 Eagle Mountain Planning Department  
 c/o Peter Spencer  
 1650 E. Stagecoach Run  
 Eagle Mountain City, Utah 84005

Bike/Jogging Paths  
 Recreation Facility also  
 Very important

Pocket Parks  
 Should have at least 1  
 Tot lot w/swings  
 grass area  
 benches  
 picnic table  
 w/lor w/o Pavilion

Larger Parks at least!  
 Bigger tot lot w/  
 more swings  
 shade trees  
 trailways  
 grass areas  
 soccer fields/baseball diamonds  
 Tennis court or other feature

14

## PARKS AND OPEN SPACE SURVEY

Please bring with you to the Open House. If you are unable to attend, please fill out and return to the address on the back.

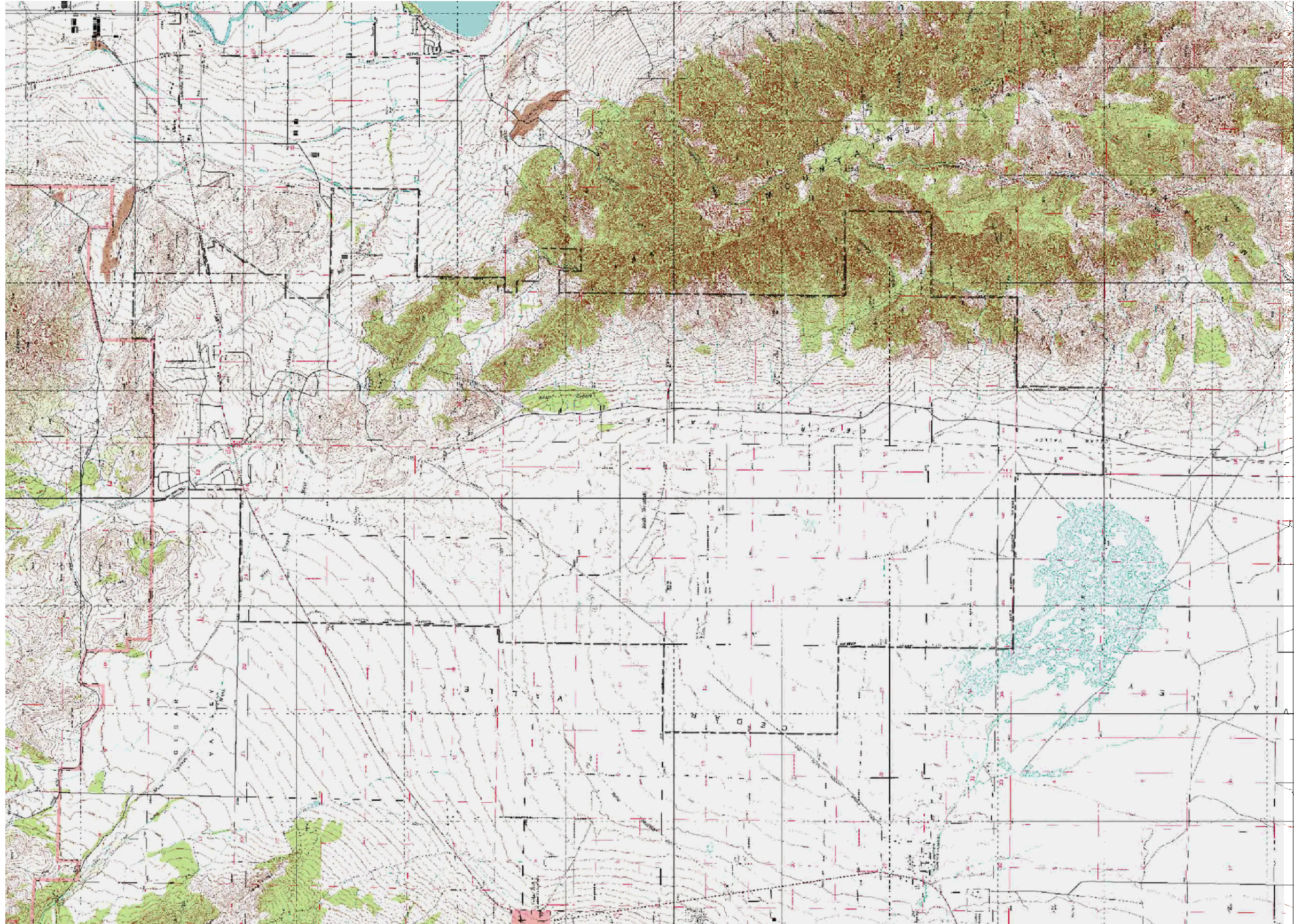
1. **What part of the community do you live in?**  
 a. \_\_\_ The Ranches      b.  City Center      c. \_\_\_ Silver Lake  
 d. \_\_\_ Other (Cedar Pass Ranch, Meadow Ranch, North Ranch, etc) \_\_\_\_\_
  
2. **How old are you?**  
 a. \_\_\_ Under 18      b. \_\_\_ 19-29      c.  30-44      d. \_\_\_ 45-65      e. \_\_\_ Over 65
  
3. **Are you answering this survey as an individual citizen, or are you representing a larger group? (HOA, School District, Parks & Recreation Board, etc.)**  
 a.  Individual Citizen      b. \_\_\_ Representing a group - (What group? \_\_\_\_\_)
  
4. **What were the characteristics that appealed to you and made you decide to move to Eagle Mountain City that should be preserved and maintained? How long have you lived here?** *I liked the open spaces & small town feeling. I've lived here one year.*
  
5. **What do you see as priorities for development in Eagle Mountain Parks? Please rank your top 5 choices (1-5, with 1 being the most important) and mark any that you feel are not necessary (No, or X).**

a. ___ Soccer Fields	k. ___ Trails _ Equestrian
b. <u>2</u> Tennis Courts	l. <u>5</u> Trails _ Jogging/Walking/Exercise
c. ___ Baseball / Softball Diamonds	m. ___ Bicycle lanes on roads
d. ___ Basketball Courts	n. <u>4</u> Preserved Natural Open Space
e. <u>3</u> Children Playgrounds	o. ___ Wildlife Habitat
f. ___ Community Vegetable Gardens	p. <u>1</u> Indoor Recreation Facility (pool, gym, etc.)
g. ___ Picnic Areas / Pavilions	q. ___ Other _____
h. ___ Outdoor Venues / Amphitheater	r. ___ Other _____
i. ___ Interpretive / Educational	s. ___ Other _____
j. ___ Trails _ Bicycle	t. ___ Other _____
  
6. **Which do you prefer:**  
 a. \_\_\_ Small, frequent neighborhood parks      b.  Large, centralized facilities      c. \_\_\_ A balance
  
7. **Are you willing to fund parks through city referendums (tax payer initiatives, bonds, etc)?**  
 a.  Yes      b. \_\_\_ No
  
8. **Think about Eagle Mountain City in 50 years when more of the city is built-out and the majority of undeveloped land no longer exists. What open space do you want to be preserved for the future? Are there special natural or historic places that currently exist that should be protected?**  
*The mountain benches should be kept preserved. I love the beautiful view w/out houses, etc...*
  
9. **What is currently working well for Eagle Mountain City's parks & recreation? What is not working well?** *I like the walking paths, but I think we need bigger parks that will appeal to older children (ie, 7, 8 yrs)*

Thank you!

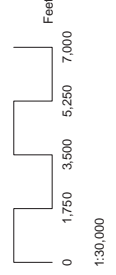




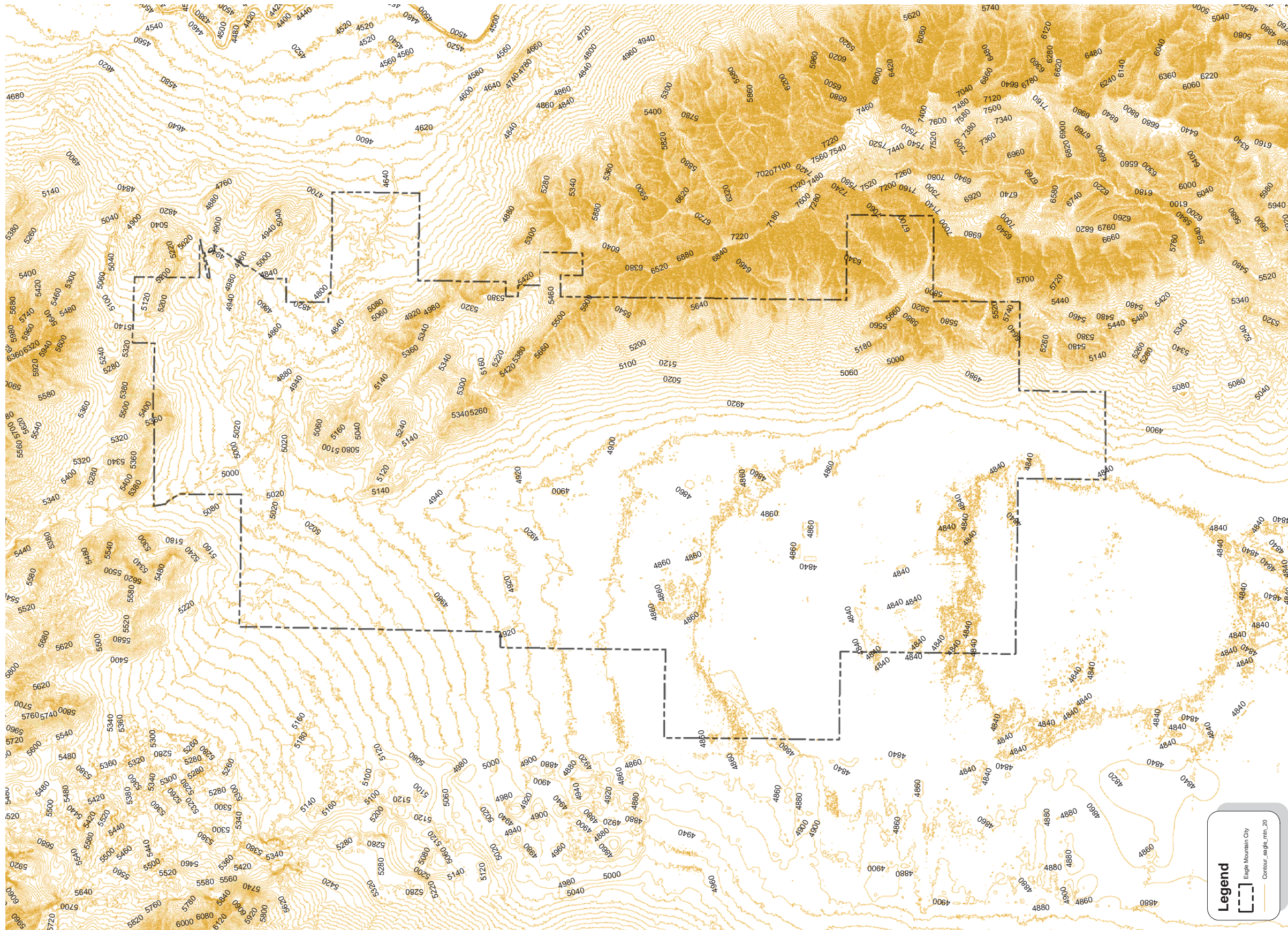


Topography

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT



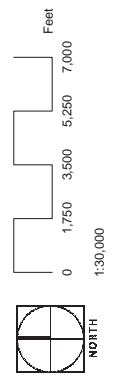
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www.designworkshop.com



Topography - 20 ft contour

Eagle Mountain  
Parks & OS  
Eagle Mountain, UT

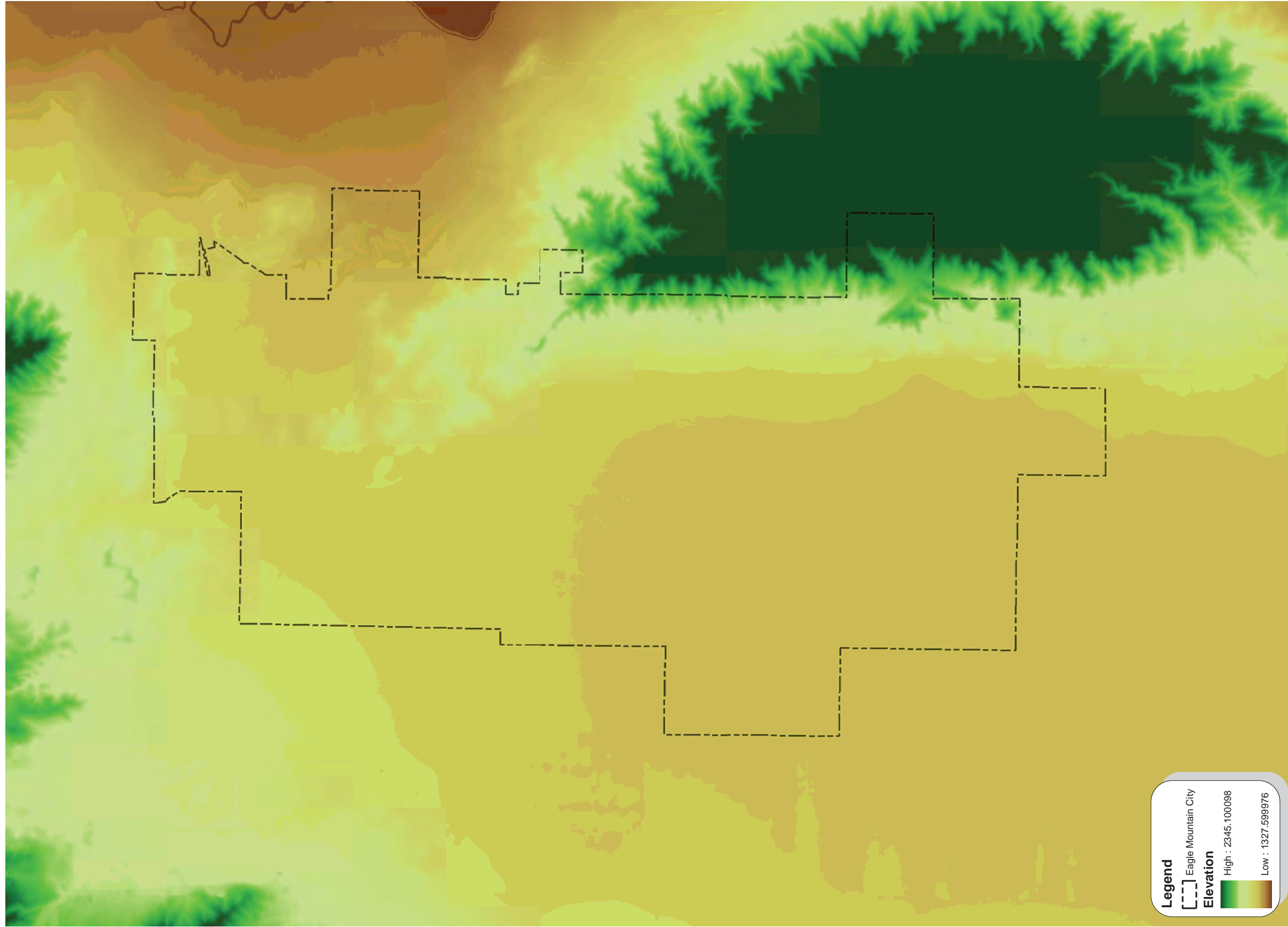
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**Legend**

- Eagle Mountain City
- Contour, eagle, mtn, 20





**Legend**

[Dashed Line] Eagle Mountain City

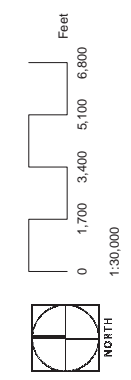
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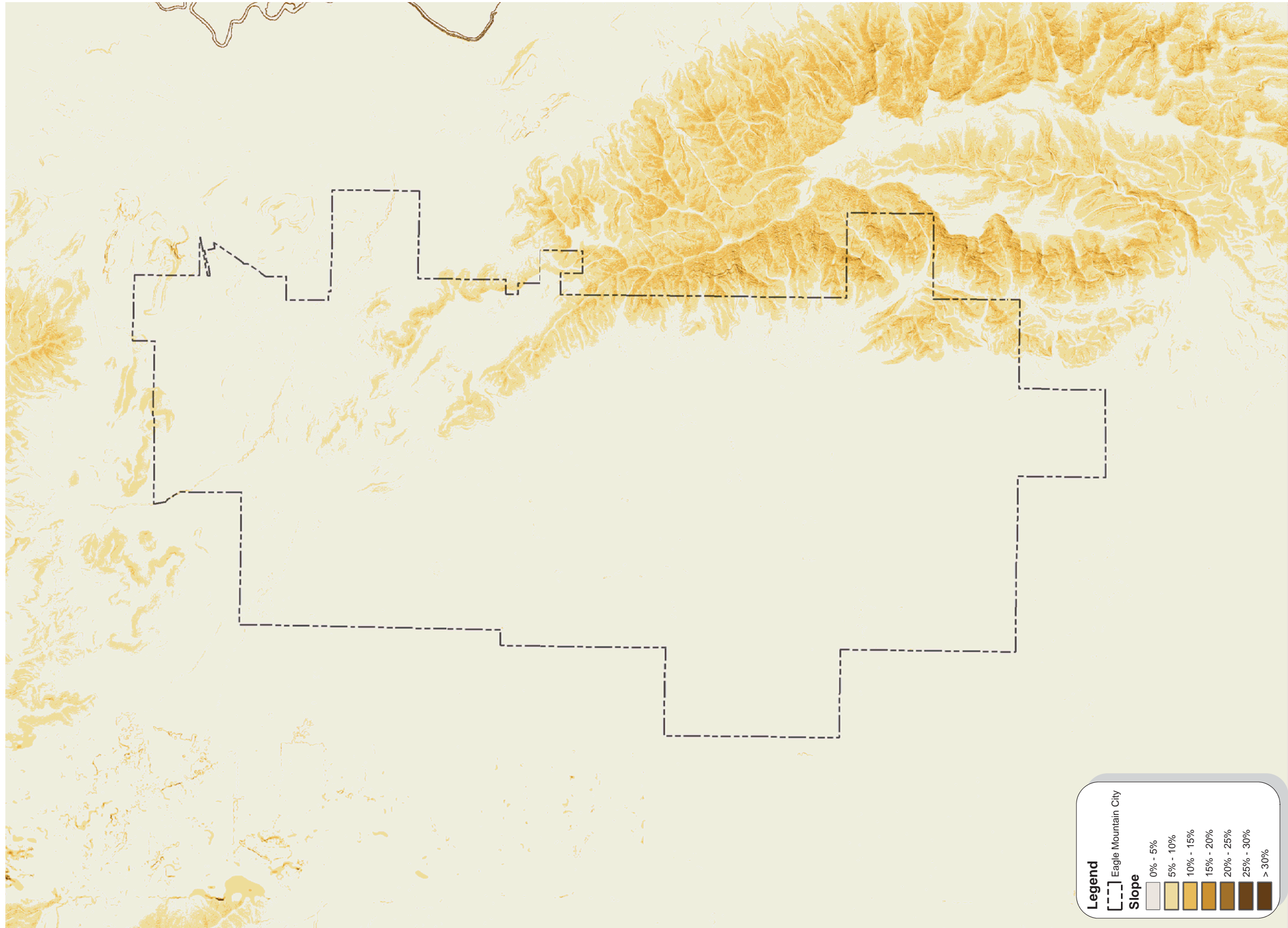
Low : 1327.599976

**Eagle Mountain Parks & OS**  
Eagle Mountain, UT

**Environmental - Topography Features**



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**Legend**

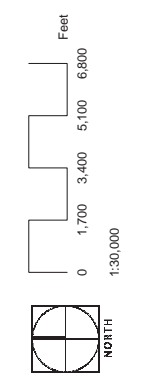
[- - -] Eagle Mountain City

**Slope**

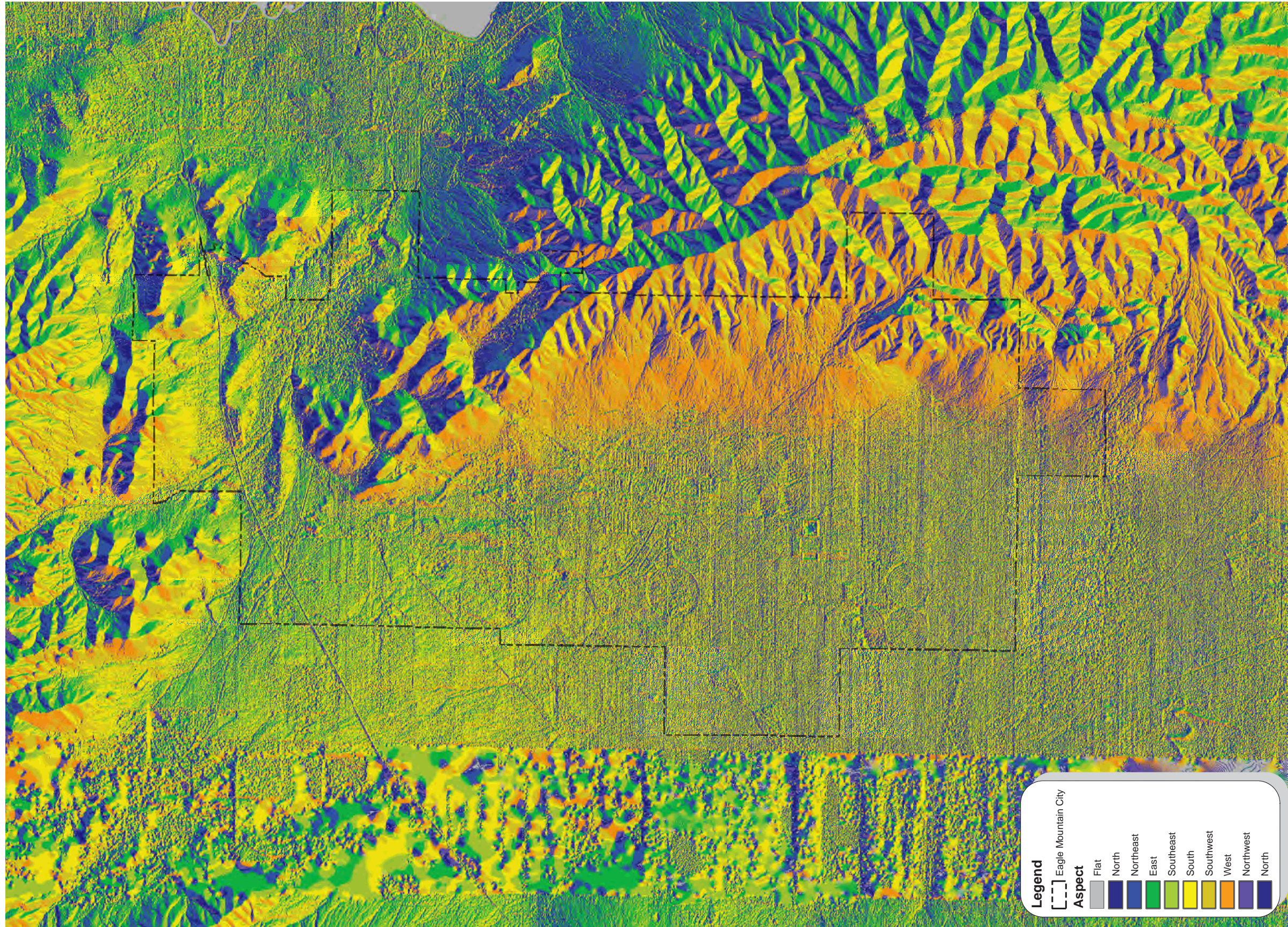
- 0% - 5%
- 5% - 10%
- 10% - 15%
- 15% - 20%
- 20% - 25%
- 25% - 30%
- > 30%

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT

**Environmental - Topography Features**



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**Legend**

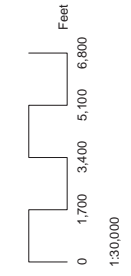
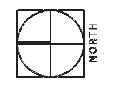
--- Eagle Mountain City

**Aspect**

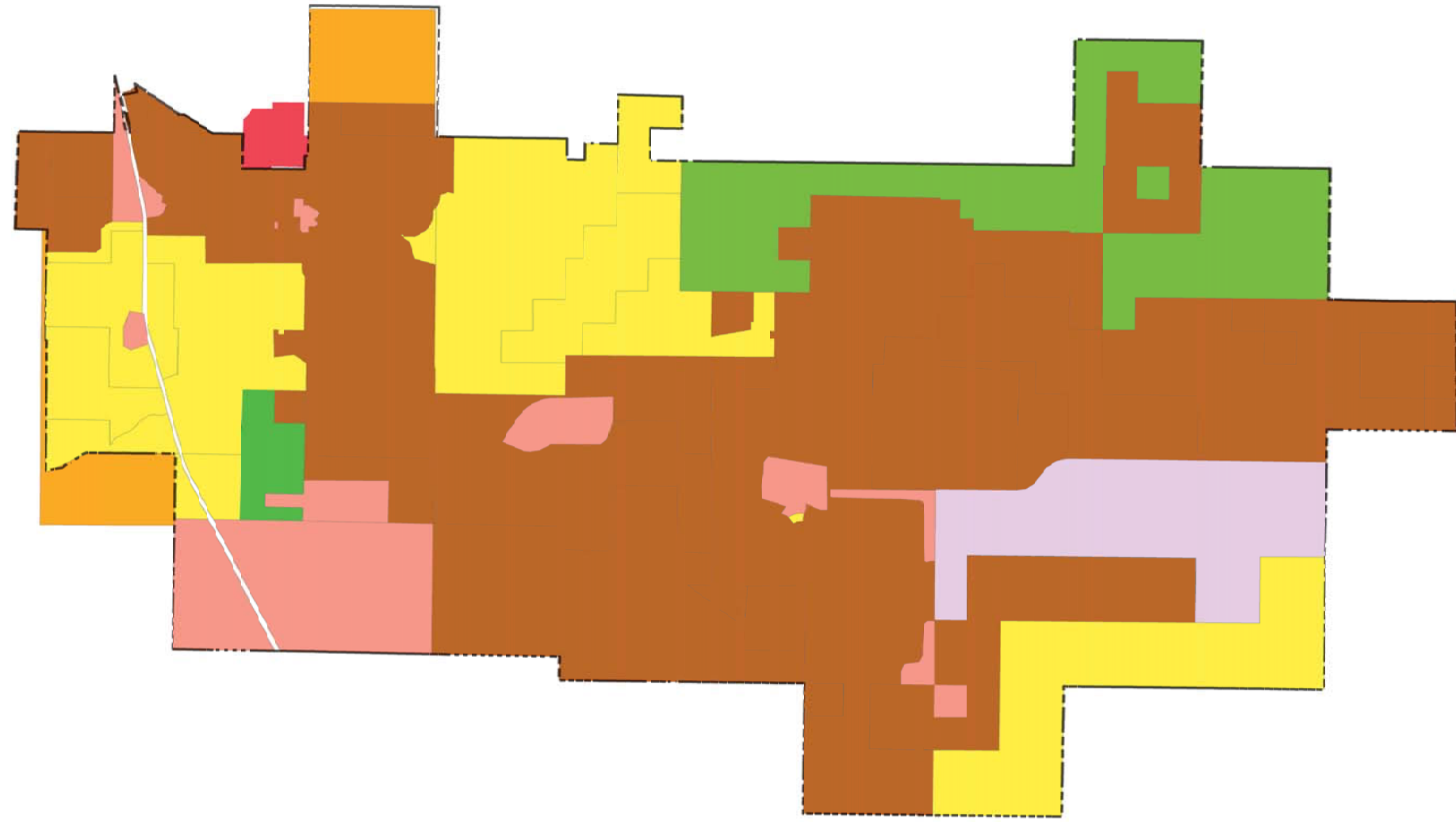
- Flat
- North
- Northeast
- East
- Southeast
- South
- Southwest
- West
- Northwest
- North

**Environmental - Topography Features**

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT



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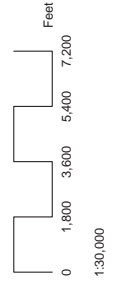


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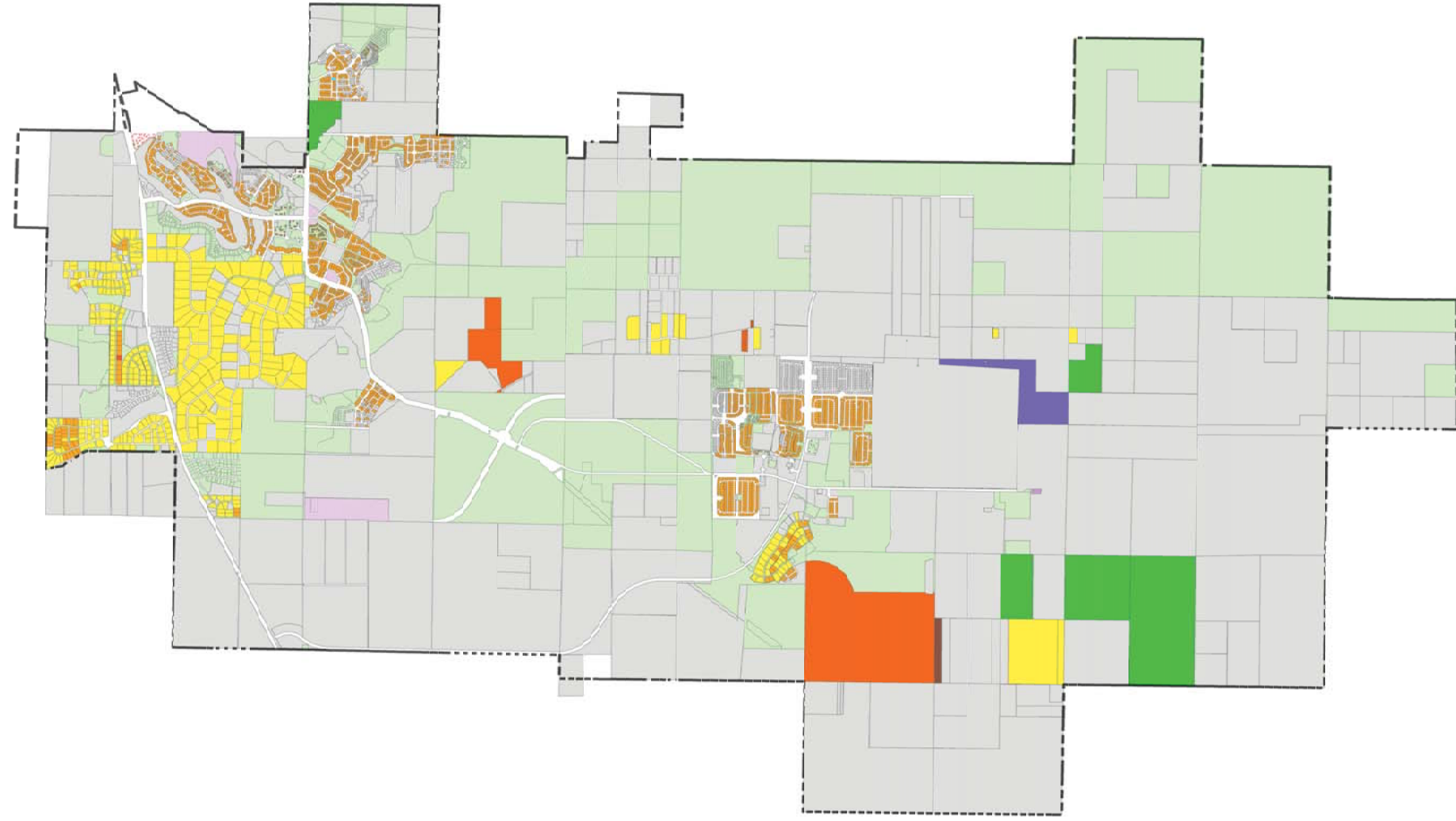
- Eagle Mountain City generalplandesignworkshop City LU
- AG PRO
- AGR
- Airport
- Commercial
- MLC
- MLR
- Master Plan
- RR

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT

**Jurisdiction - Eagle Mountain City General Plan**



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**Legend**

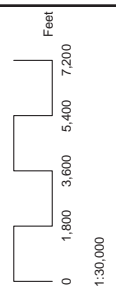
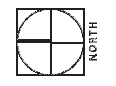
Eagle Mountain City  
designworkshop@parcel

PROP\_DESC

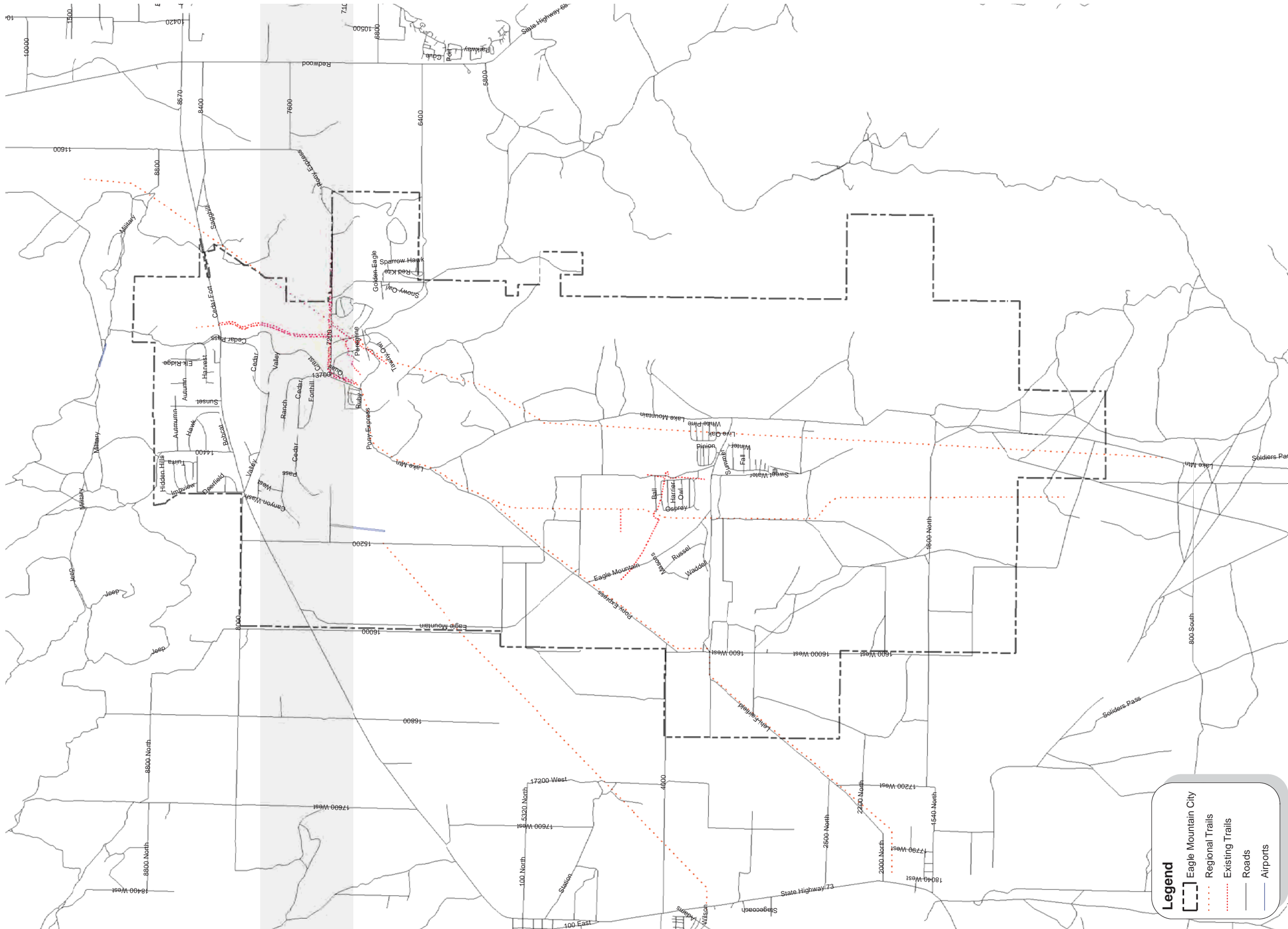
- AGRICULTURAL
- COMM STORAGE
- COMM UNKNOW/MISC
- COMM INDUSTRIAL
- MOBIL HOME-PERMANENT
- MULTIPLE RES + AG > 1 ACRE
- MULTIPLE RES + AG
- MULTIPLE RES + COMM > 1 ACRE
- RES CONDO PUD
- RES SINGLE PUD
- RESIDENTIAL SINGLE
- RESIDENTIAL SINGLE > 1 ACRE
- RESIDENTIAL SINGLE-CONDO
- VACANT
- VACANT CONDO
- VACANT PUD

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT

**Jurisdiction - Eagle Mountain City Parcels**



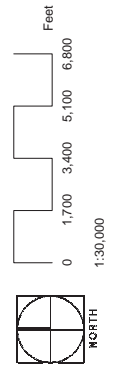
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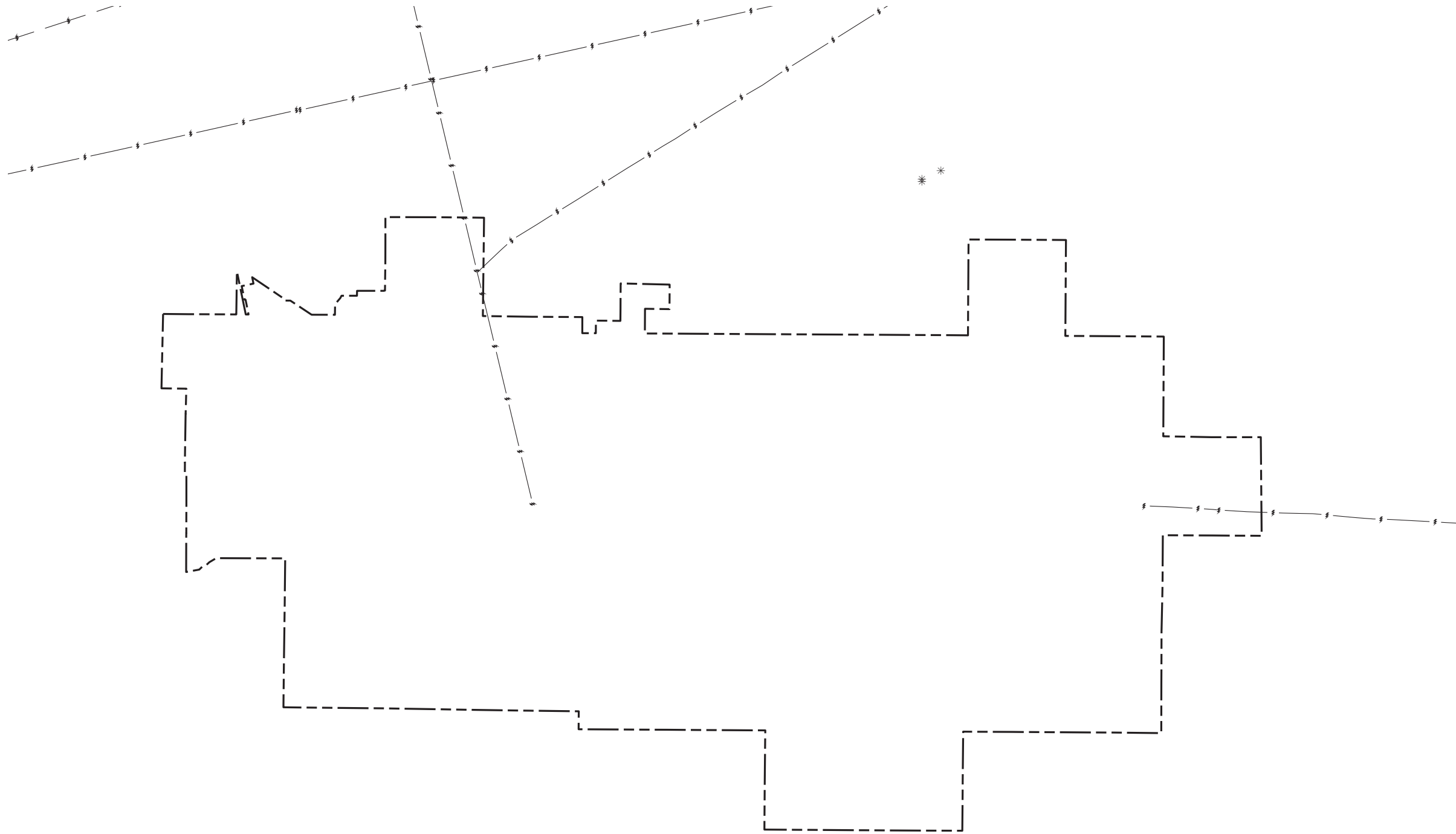


**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT

**Environmental - Transportation Features**

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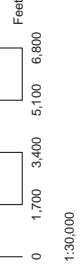


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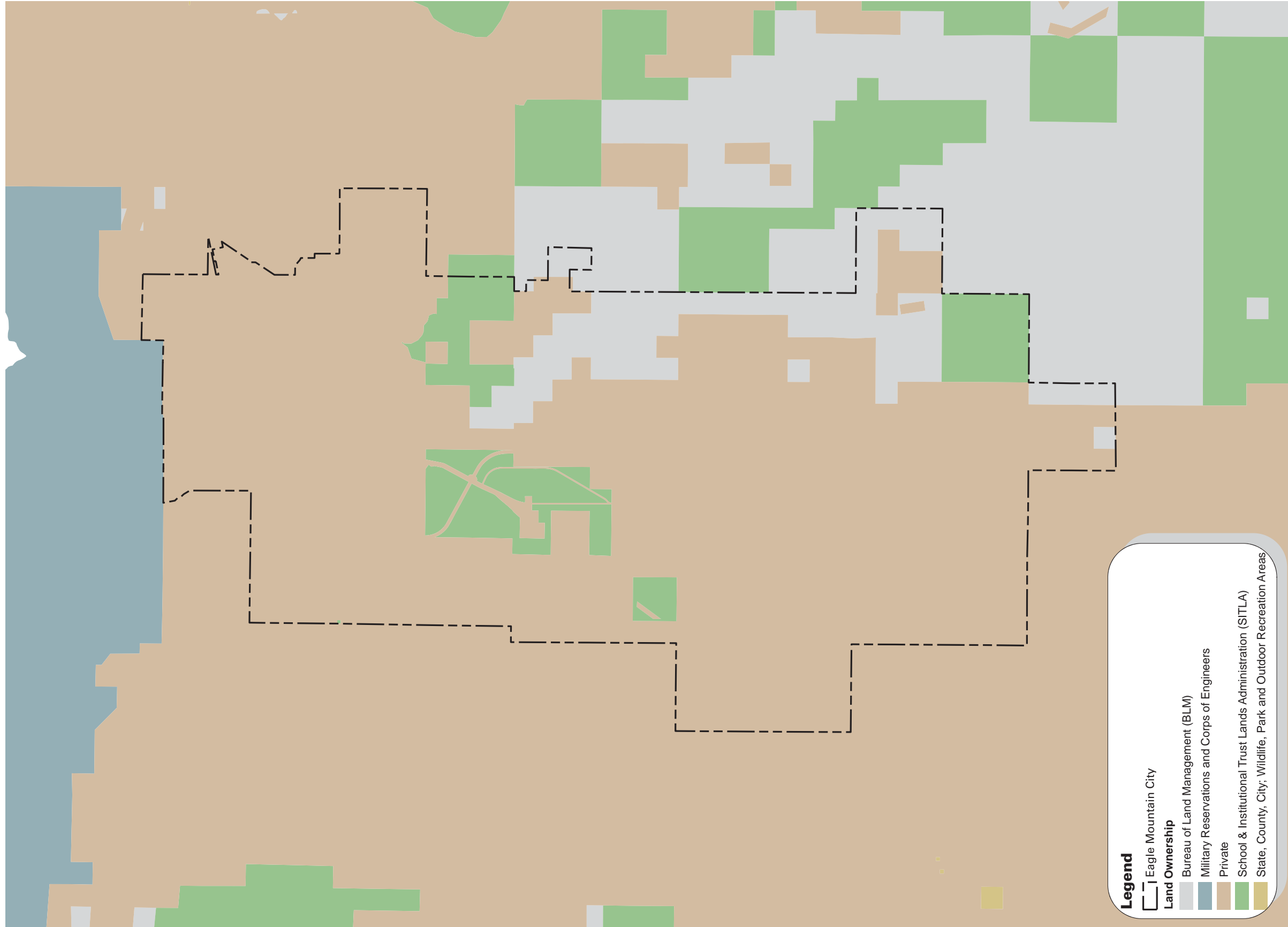
- Eagle Mountain City
- Electrical Lines
- Communication Towers

**Environmental - Utility Features**

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT



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**Legend**

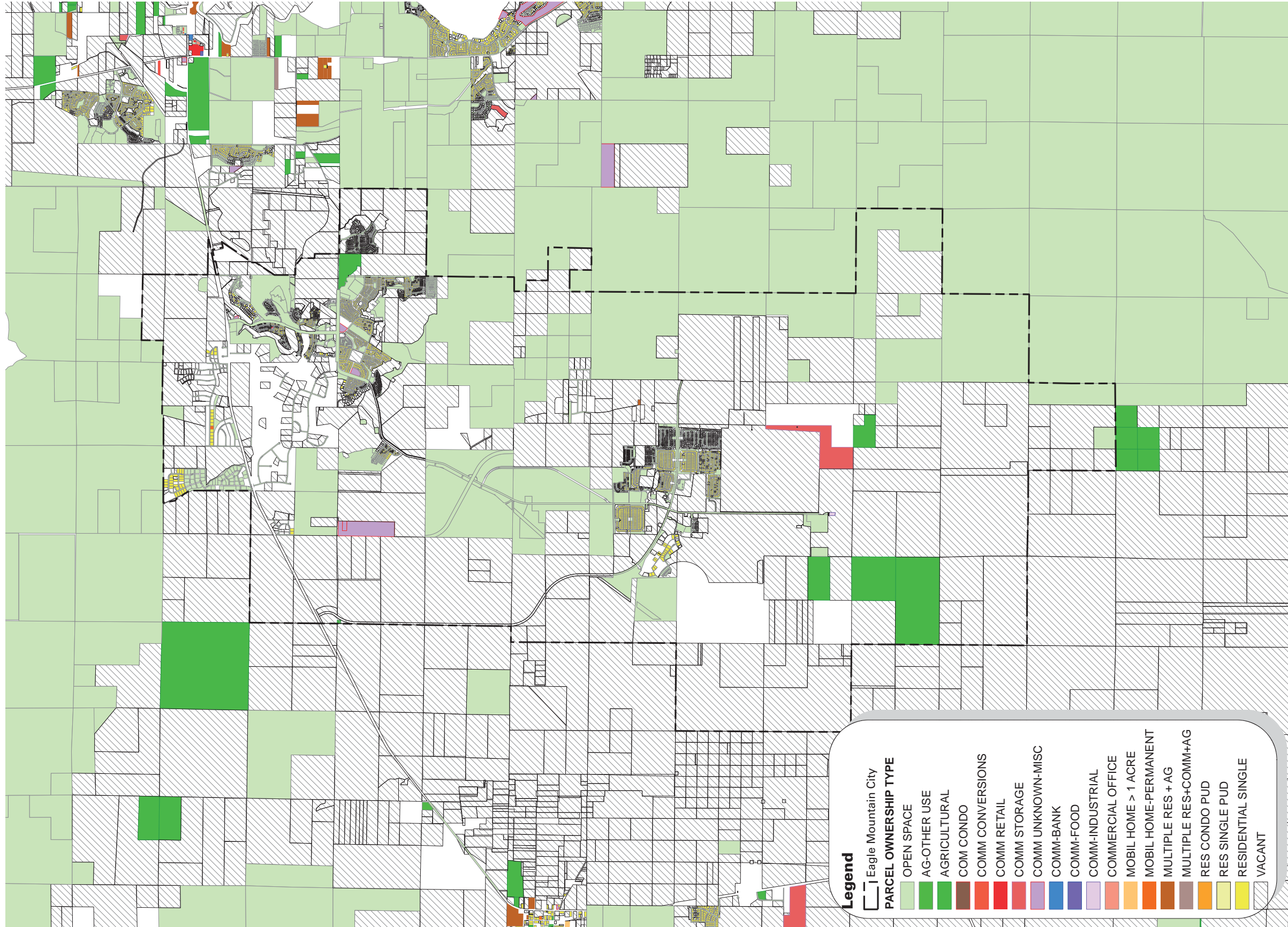
- Eagle Mountain City
- Land Ownership**
- Bureau of Land Management (BLM)
- Military Reservations and Corps of Engineers
- Private
- School & Institutional Trust Lands Administration (SITLA)
- State, County, City, Wildlife, Park and Outdoor Recreation Areas

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT

**Environmental - Jurisdiction Features**

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**Legend**

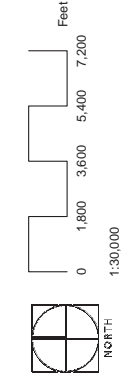
Eagle Mountain City

**PARCEL OWNERSHIP TYPE**

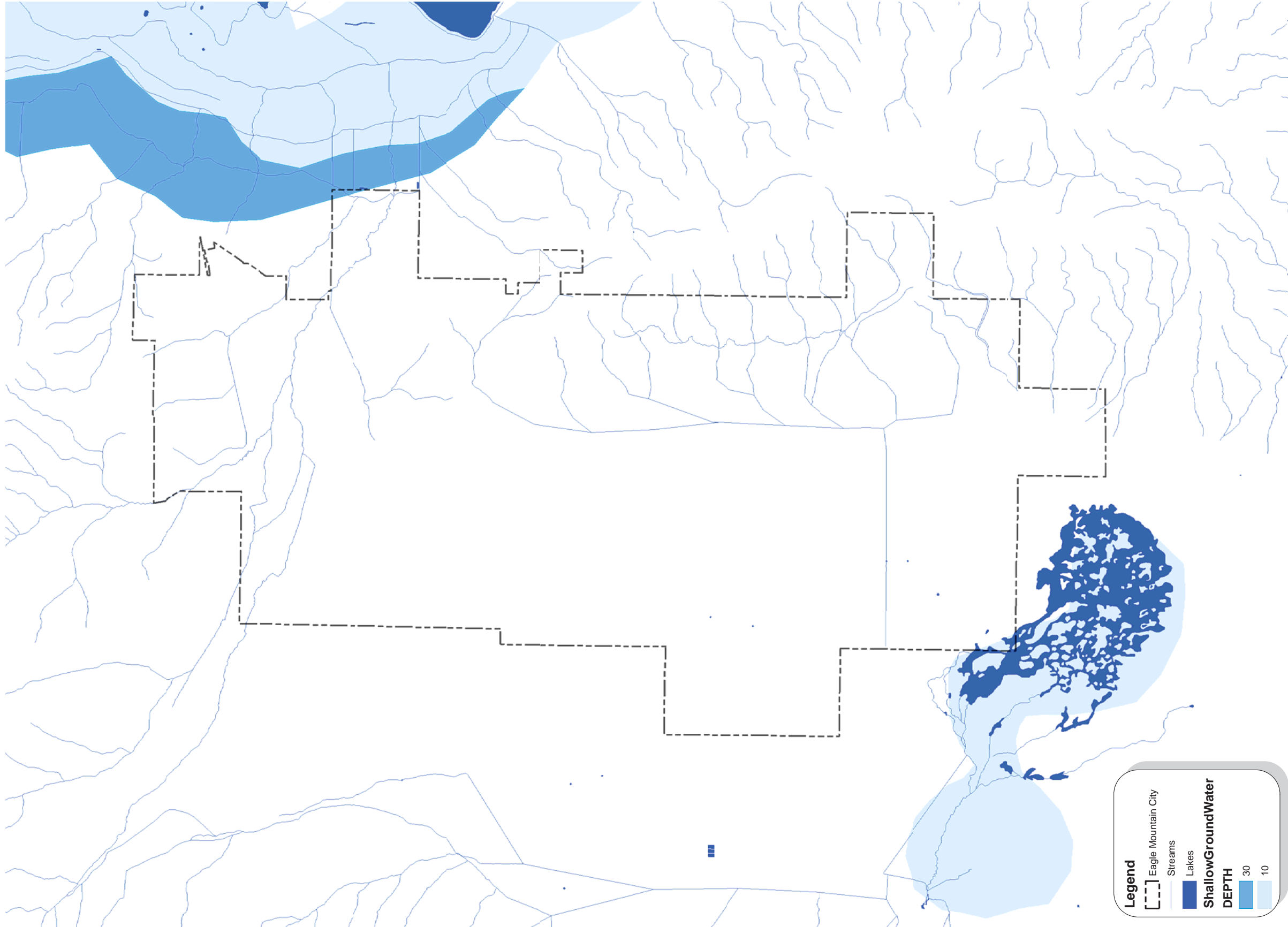
- OPEN SPACE
- AG-OTHER USE
- AGRICULTURAL
- COM CONDO
- COMM CONVERSIONS
- COMM RETAIL
- COMM STORAGE
- COMM UNKNOWN-MISC
- COMM-BANK
- COMM-FOOD
- COMM-INDUSTRIAL
- COMMERCIAL OFFICE
- MOBIL HOME > 1 ACRE
- MOBIL HOME-PERMANENT
- MULTIPLE RES + AG
- MULTIPLE RES+COMM+AG
- RES CONDO PUD
- RES SINGLE PUD
- RESIDENTIAL SINGLE
- VACANT

**Environmental - Jurisdiction Features**

**Eagle Mountain  
Parks & OS**  
Eagle Mountain, UT



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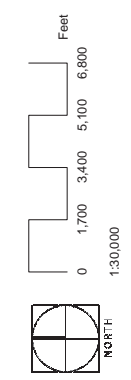


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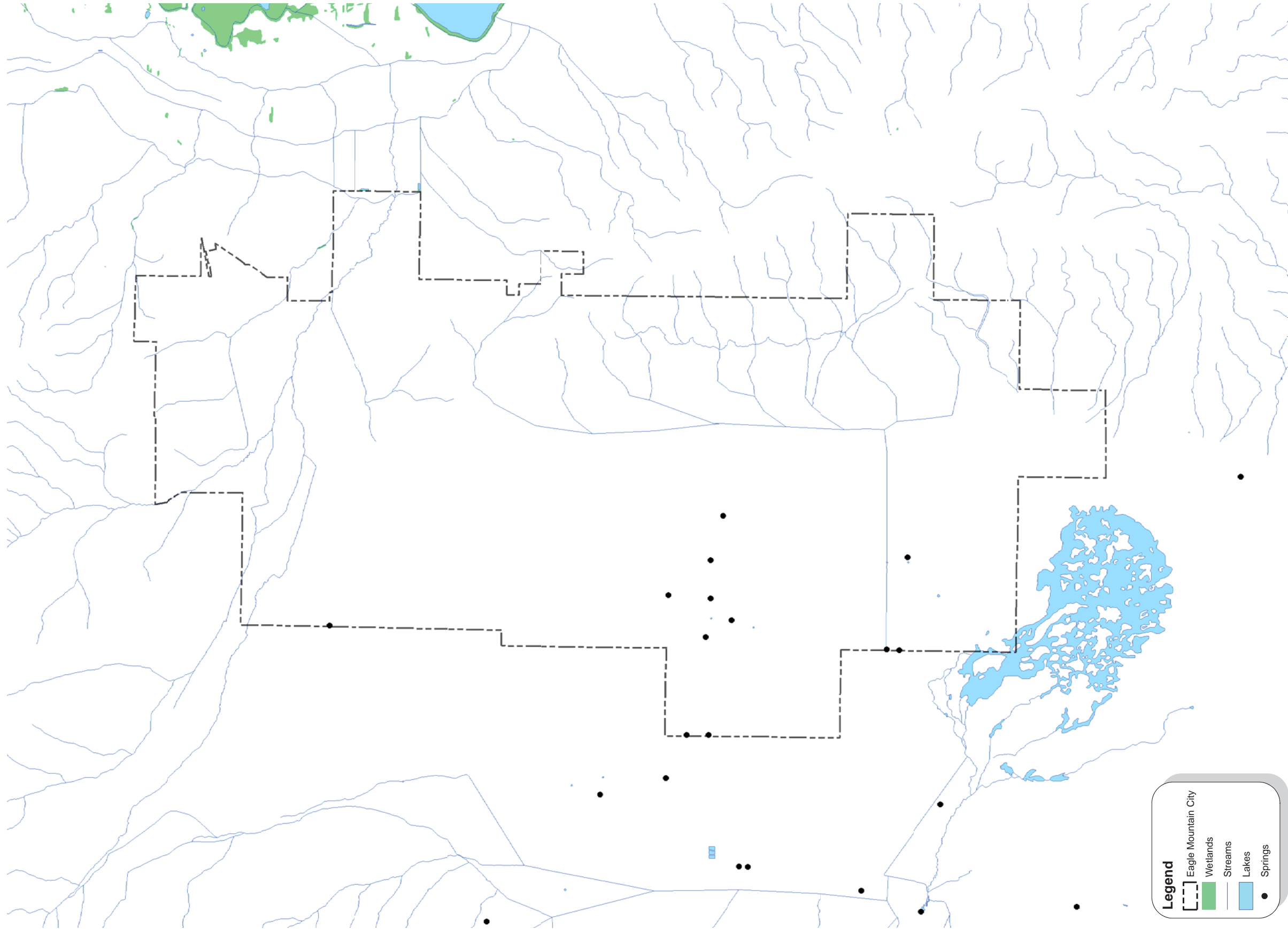
- Eagle Mountain City
- Streams
- Lakes
- ShallowGroundWater
- DEPTH
  - 30
  - 10

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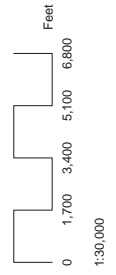


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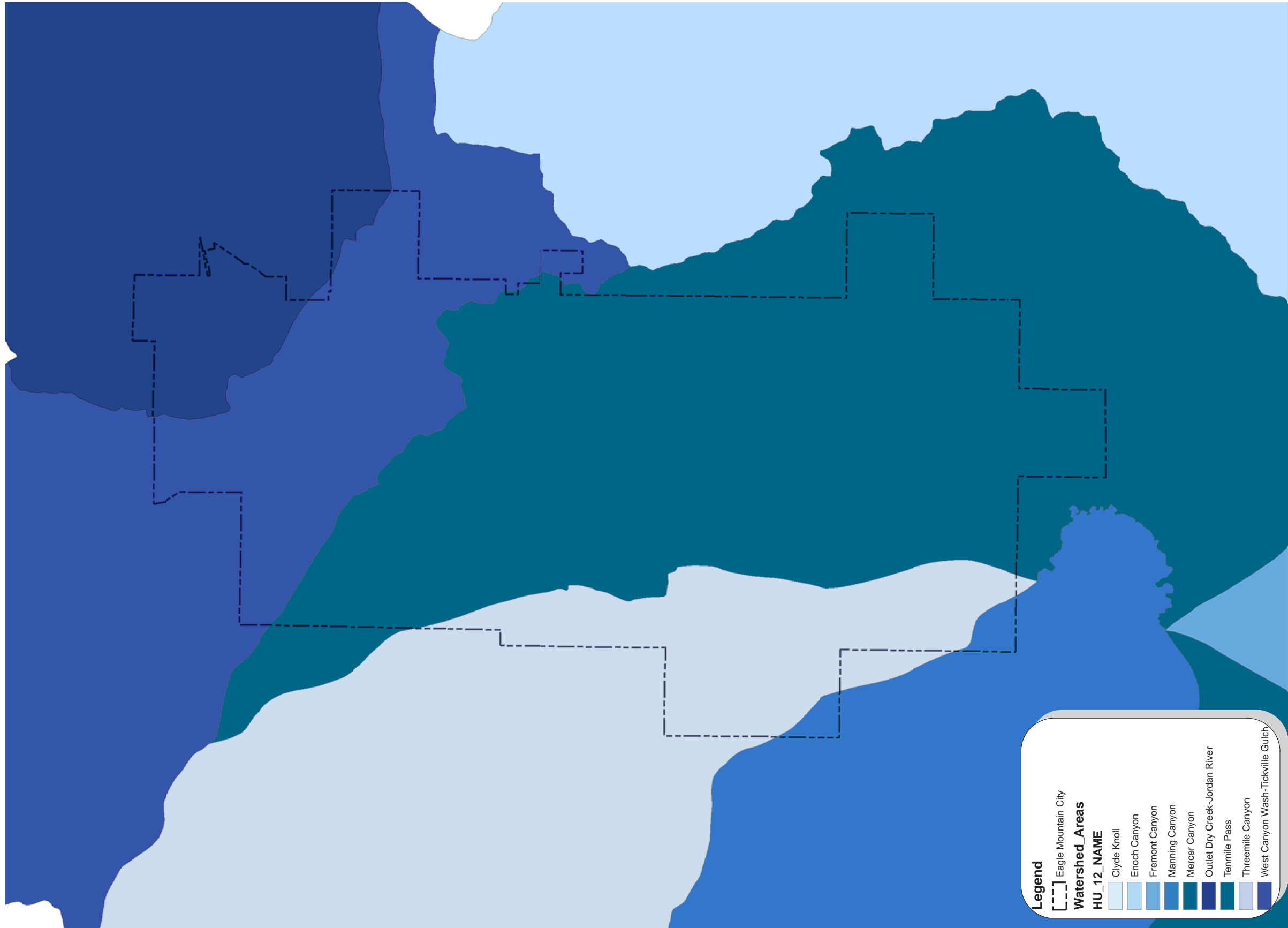
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- Streams
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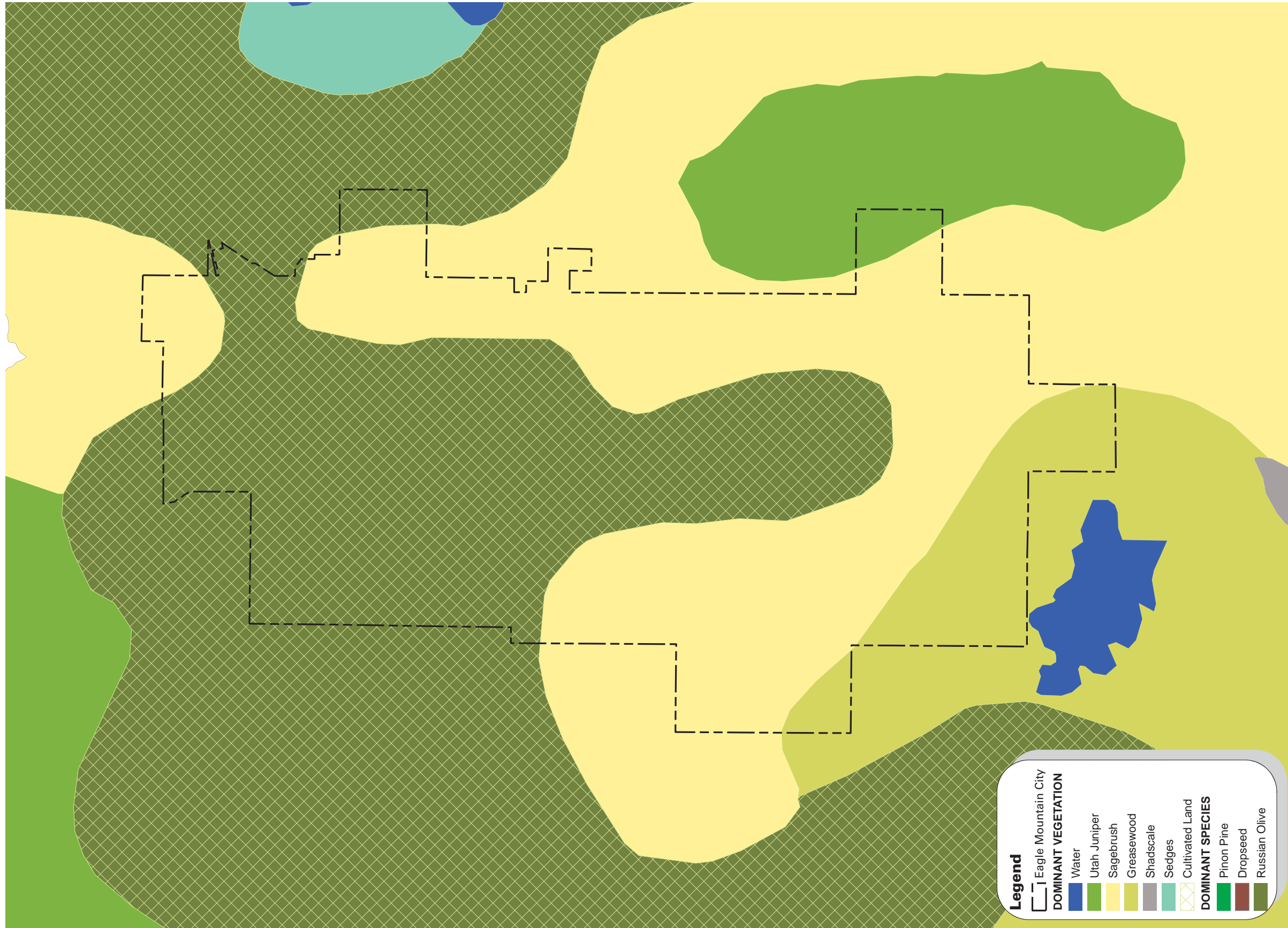
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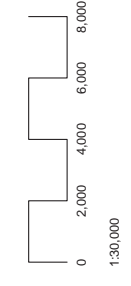


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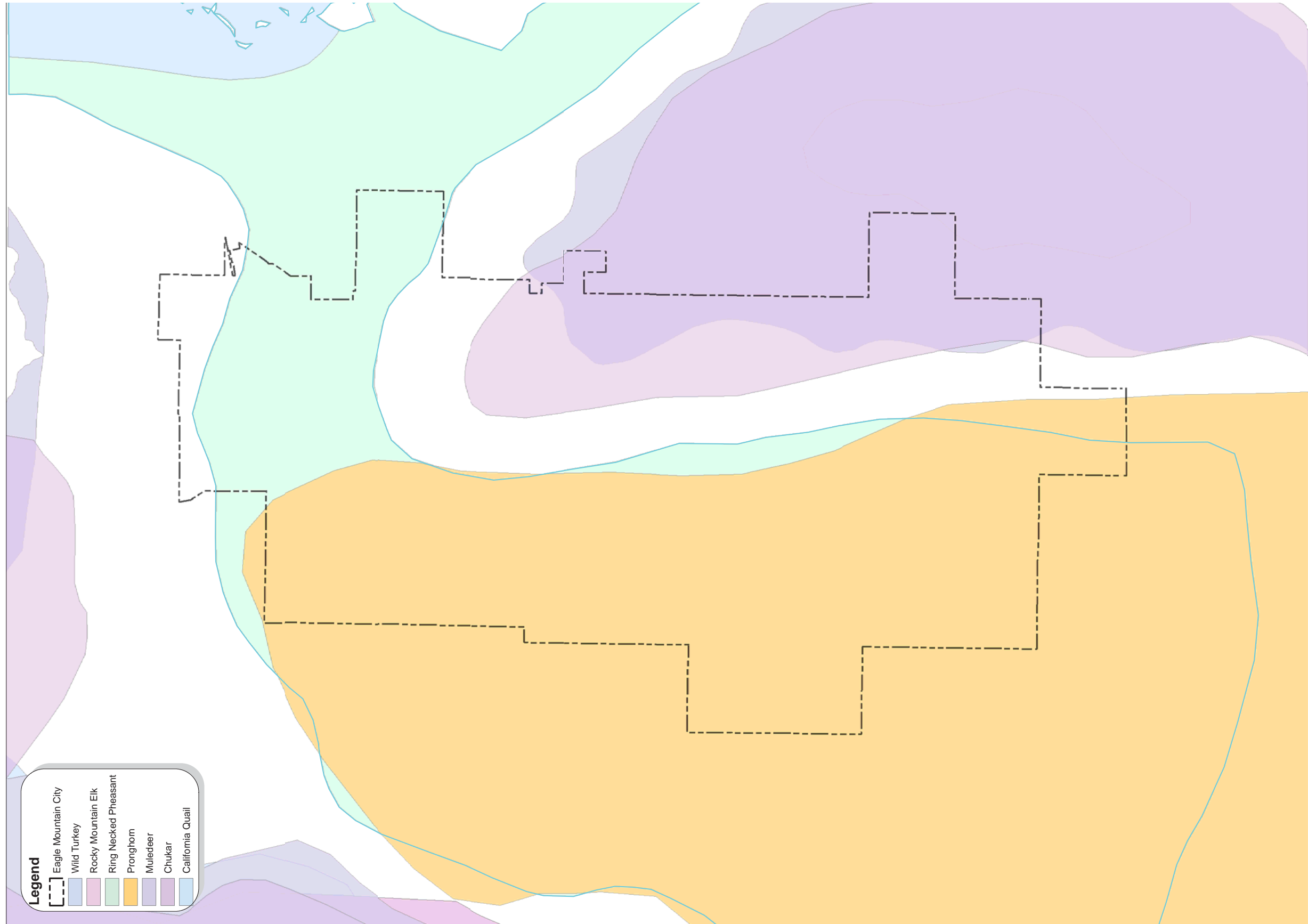
Eagle Mountain City  
**DOMINANT VEGETATION**  
 Water  
 Utah Juniper  
 Sagebrush  
 Greasewood  
 Shadscale  
 Sedges  
 Cultivated Land  
**DOMINANT SPECIES**  
 Pinon Pine  
 Dropseed  
 Russian Olive

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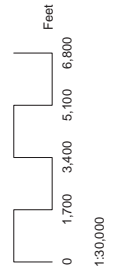
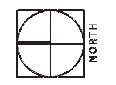


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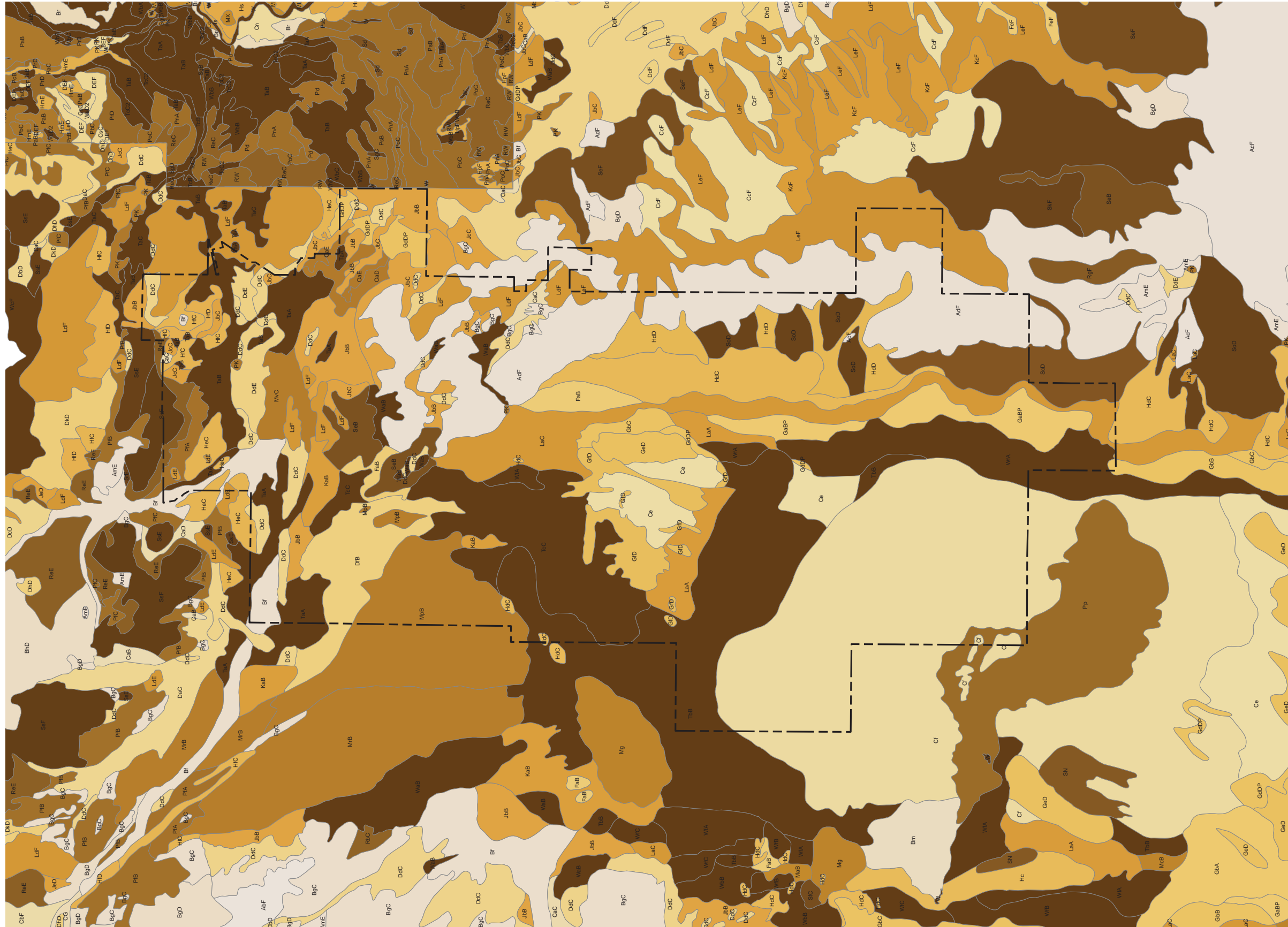
- Eagle Mountain City
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- Rocky Mountain Elk
- Ring Necked Pheasant
- Pronghorn
- Muledeer
- Chukar
- California Quail

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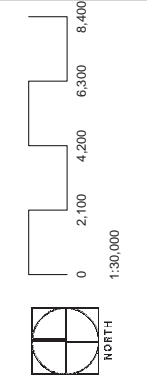
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Map Symbol	Map Unit Name	Map Symbol	Map Unit Name
AaF	Agassiz very stony loam, 30 to 70 percent slopes	M-W	Miscellaneous water
AbF	Agassiz-Rock outcrop complex, 30 to 70 percent slopes	MaB	Manassa silt loam, 0 to 2 percent slopes
AcE	Amtoft-Rock outcrop complex, 8 to 30 percent slopes	MbC2	Manassa silt loam, 2 to 5 percent slopes, eroded
AcF	Amtoft-Rock outcrop complex, 30 to 70 percent slopes	MbB	Manassa silt loam, moderately saline, 0 to 2 percent slopes
AdE	Amtoft, moist-Rock outcrop complex, 8 to 30 percent slopes	MdB	Manassa-Mellor silt loam, 0 to 2 percent slopes
AdF	Amtoft, moist-Rock outcrop complex, 30 to 70 percent slopes	MeC	Manila loam, 4 to 8 percent slopes
AeD	Ant Flat loam, 8 to 15 percent slopes	MeD	Manila loam, 8 to 15 percent slopes
AF	Aquic Ustifluvents, saline	MFA	Medburn fine sandy loam, 0 to 2 percent slopes
AG	Argic Pachic Cryoborolls, rolling	MFB	Medburn fine sandy loam, 2 to 4 percent slopes
AhA	Ashdown loam, 0 to 2 percent slopes	Mg	Mellor silt loam
AhB	Ashdown loam, 2 to 4 percent slopes	Mh	Mellor silt loam, wet
AkA	Ashdown loam, moist, 0 to 2 percent slopes	MkC	Modoc fine sandy loam, cool, 4 to 8 percent slopes
AkB	Ashdown loam, moist, 2 to 4 percent slopes	Mm	Moroni silty clay loam
AmE	Atepic shaly loam, 10 to 40 percent slopes	MnF	Mortenson silt loam, 40 to 70 percent slopes
Ba	Beaches	MoC	Mountainville very stony sandy loam, 3 to 10 percent slopes
Bb	Benjamin silty clay loam	MpB	Mountainville gravelly loam, sandy substratum, 2 to 4 percent slopes
Bc	Benjamin silty clay loam, moderately saline-alkali	MrB	Mountainville, sandy substratum-Doyce complex, 2 to 4 percent slopes
BdD	Bezzant gravelly loam, 6 to 30 percent slopes	MsD	Mountainville, sandy substratum-Doyce complex, 2 to 4 percent slopes
BdF	Bezzant gravelly loam, 30 to 60 percent slopes	MtB	Mower-Rock outcrop complex, 30 to 50 percent slopes
BeD	Bezzant gravelly loam, dry, 6 to 30 percent slopes	MuB	Musinia silt loam, 0 to 2 percent slopes
BeF	Bezzant gravelly loam, dry, 30 to 60 percent slopes	MuC	Musinia silt loam, 2 to 5 percent slopes
Bf	Birdow loam	MvB	Musinia silty clay loam, moist, 0 to 2 percent slopes
BgC	Borvant cobbly loam, 2 to 8 percent slopes	MvC	Musinia silty clay loam, moist, 2 to 5 percent slopes
BgD	Borvant cobbly loam, 8 to 25 percent slopes	NaB	Nephi silt loam
BhD	Borvant-Reywat complex, 8 to 30 percent slopes	OaD	Orcky gravelly fine sandy loam, 4 to 15 percent slopes
BhF	Borvant-Reywat complex, 30 to 60 percent slopes	OaE	Orcky gravelly fine sandy loam, 15 to 40 percent slopes
BkE	Borvant-Sandall complex, 8 to 60 percent slopes	PA	Pachic Calcixerolls, very steep
Bm	Bramwell silt loam	PB	Pachic Haploxerolls, steep
BnD	Broadhead loam, 3 to 25 percent slopes	PC	Pachic Cryoborolls, sloping
BnF	Broadhead loam, 25 to 70 percent slopes	PD	Pachic Cryoborolls, north slopes
CaB	Calita loam, 2 to 4 percent slopes	PeD	Parkay-Rock outcrop complex, 8 to 30 percent slopes
CaC	Calita loam, 4 to 8 percent slopes	PeF	Parkay-Rock outcrop complex, 30 to 70 percent slopes
CaD	Calita loam, 8 to 15 percent slopes	PfA	Parleys loam, 0 to 2 percent slopes
CbF	Calpac-Agassiz complex, 30 to 70 percent slopes	PfB	Parleys loam, 2 to 4 percent slopes
CcF	Calpac-Lundy complex, 30 to 70 percent slopes	PfC	Parleys loam, 4 to 8 percent slopes
CdE	Checkett, moist-Rock outcrop complex, 8 to 40 percent slopes	PgC	Pharo very stony loam, 3 to 10 percent slopes
Ce	Cheebe fine sandy loam	PhD	Pibler gravelly fine sandy loam, 4 to 15 percent slopes
Cf	Cheebe silty clay loam	PK	Pits-Dumps complex
CG	Cumulic Haploxerolls, sloping	PmD	Pober fine sandy loam, 4 to 15 percent slopes
DaC	Dagor loam, 2 to 8 percent slopes	PnD	Pober-Pibler complex, 4 to 15 percent slopes
Dam	Dam	Po	Provo Bay silt loam
DbD	Deer Creek cobbly loam, 6 to 25 percent slopes	Pp	Provo Bay-Cheebe complex
DcD	Deer Creek-Borvant complex, 2 to 25 percent slopes	RaD	Reebok cobbly loam, 4 to 15 percent slopes
DdC	Donardo stony loam, 2 to 8 percent slopes	RaE	Reebok cobbly loam, 15 to 40 percent slopes
DdE	Donardo stony loam, 8 to 25 percent slopes	RbC	Renol stony fine sandy loam, 4 to 8 percent slopes
DdF	Donardo stony loam, 25 to 40 percent slopes	RcD	Renol-Reebok complex, 4 to 15 percent slopes
DeF	Donardo-Hiko Peak complex, 25 to 40 percent slopes	RdE	Reywat-Reebok-Rock outcrop complex, 10 to 30 percent slopes
DfB	Doyce loam, 2 to 4 percent slopes	ReE	Reywat-Rock outcrop complex, 10 to 30 percent slopes
DfC	Doyce loam, 4 to 8 percent slopes	ReF	Reywat-Rock outcrop complex, 30 to 60 percent slopes
DgC	Doyce silt loam, loamy substratum, 2 to 4 percent slopes	RF	Rock outcrop
DhD	Dry Creek cobbly loam, 4 to 15 percent slopes	RgF	Rock outcrop-Amtoft complex, 30 to 70 percent slopes
DkD	Dry Creek-Reebok complex, 4 to 15 percent slopes	RhF	Rock outcrop-Lodar complex, 30 to 70 percent slopes
Dm	Duggins loam	RkF	Rock outcrop-Lundy complex, 30 to 70 percent slopes
Dn	Dune land	RmF	Rock outcrop-Saxby complex, 30 to 70 percent slopes
FaB	Firmage gravelly loam, dry, 2 to 4 percent slopes	RnF	Rock outcrop-Sheep Creek complex, 30 to 70 percent slopes
FbF	Firmage loam, 30 to 70 percent slopes	RoF	Rock outcrop-Wallsburg complex, 30 to 70 percent slopes
FcF	Flygare-Parkay-Rock outcrop complex, 30 to 70 percent slopes	RpD	Rofiss gravelly clay loam, 4 to 15 percent slopes
FdF	Flygare-Starley association, very steep	Rr	Roshe Springs silt loam
FeD	Fontreen stony loam, 3 to 25 percent slopes	RS	Rubble land
FeE	Fontreen stony loam, 25 to 60 percent slopes	Sa	Saltair silt loam
FfD	Fontreen-Borvant complex, 2 to 25 percent slopes	SbF	Sandall very cobbly loam, 25 to 60 percent slopes
FgB	Freedom silt loam, 0 to 2 percent slopes	ScD	Sanpete gravelly fine sandy loam, 4 to 15 percent slopes
FgC	Freedom silt loam, 2 to 5 percent slopes	ScF	Sanpete gravelly fine sandy loam, 15 to 40 percent slopes
FhB	Fridlo loam, 2 to 4 percent slopes	SdE	Saxby-Rock outcrop complex, 10 to 30 percent slopes
GaBP	Genola fine sandy loam, hummocky, 1 to 2 percent slopes	SdF	Saxby-Rock outcrop complex, 30 to 70 percent slopes
GbA	Genola silt loam, 0 to 1 percent slopes	SeB	Saxby, moist-Rock outcrop complex, 10 to 30 percent slopes
GbB	Genola silt loam, 1 to 2 percent slopes	SeF	Saxby, moist-Rock outcrop complex, 30 to 70 percent slopes
GbC	Genola silt loam, 2 to 5 percent slopes	SfC	Shablis very fine sandy loam, 2 to 5 percent slopes
GcA	Genola silt loam, moist, 0 to 1 percent slopes	SfD	Shablis very fine sandy loam, 5 to 15 percent slopes
GcB	Genola silt loam, moist, 1 to 2 percent slopes	SfE	Shablis very fine sandy loam, 15 to 30 percent slopes
GcC	Genola silt loam, moist, 2 to 5 percent slopes	SgC	Shablis very fine sandy loam, moist, 2 to 5 percent slopes
GdDP	Goldrun loamy fine sand, hummocky, 0 to 10 percent slopes	ShE	Sheep Creek very cobbly loam, 10 to 30 percent slopes
GeD	Goldrun-Cheebe complex, 0 to 10 percent slopes	ShF	Sheep Creek very cobbly loam, 30 to 70 percent slopes
GgD	Goldrun-Medburn complex, 0 to 10 percent slopes	SkF	Sheep Creek very cobbly loam, dry, 30 to 70 percent slopes
GhA	Hamtah loam, 30 to 70 percent slopes	SmE	Sheep Creek-Flygare complex, 8 to 30 percent slopes
HbA	Hansel silt loam, 0 to 2 percent slopes	SN	Slickens
HbB	Hansel silt loam, 2 to 4 percent slopes	SoD	Spager gravelly loam, 4 to 15 percent slopes
Hc	Harding silt loam	SpF	Starley-Rock outcrop complex, 30 to 70 percent slopes
HdC	Hiko Peak stony sandy loam, 4 to 8 percent slopes	SrE	Sumine very cobbly loam, 10 to 30 percent slopes
HdD	Hiko Peak stony sandy loam, 8 to 15 percent slopes	SsE	Sumine-Reywat-Rock outcrop complex, 10 to 30 percent slopes
HdE	Hiko Peak stony sandy loam, 15 to 25 percent slopes	SsF	Sumine-Reywat-Rock outcrop complex, 30 to 60 percent slopes
HeC	Hillfield silt loam, 2 to 5 percent slopes	TaA	Taylorville silt loam, 0 to 2 percent slopes
HfC	Hupp gravelly loam, 4 to 8 percent slopes	TaB	Taylorville silt loam, 2 to 4 percent slopes
HfD	Hupp gravelly loam, 8 to 15 percent slopes	TaC	Taylorville silt loam, 4 to 8 percent slopes
JaD	Jericho gravelly fine sandy loam, 4 to 15 percent slopes	TcB	Thiokol silt loam, dry, 0 to 2 percent slopes
JbA	Juab loam, 0 to 2 percent slopes	ToB	Truesdale fine sandy loam, 2 to 4 percent slopes
JbB	Juab loam, 2 to 4 percent slopes	TE	Typic Cryoborolls, moderately sloping
JbC	Juab loam, 4 to 8 percent slopes	TF	Typic Haploborolls, steep
JbD	Juab loam, 8 to 15 percent slopes	W	Water
JcC	Juab loam, gravelly substratum, 2 to 4 percent slopes	WaB	Wales loam, 2 to 4 percent slopes
JcC	Juab loam, gravelly substratum, 4 to 8 percent slopes	WbB	Wales loam, dry, 2 to 4 percent slopes
JcD	Juab complex, 4 to 8 percent slopes	WcF	Wallsburg-Rock outcrop complex, 25 to 70 percent slopes
JeD	Justesen loam, 4 to 15 percent slopes	WdE	Wallsburg-Yeates Hollow complex, 25 to 40 percent slopes
KaB	Keigley silt loam, dry, 0 to 2 percent slopes	WdF	Wallsburg-Yeates Hollow complex, 40 to 70 percent slopes
Kb	Kirkham silt loam	WeB	Woodrow loamy fine sand, 1 to 2 percent slopes
KcF	Kitchell-Rock outcrop complex, 30 to 70 percent slopes	WfA	Woodrow silt loam, 0 to 1 percent slopes
LaA	Linoyer very fine sandy loam, 0 to 1 percent slopes	WfB	Woodrow silt loam, 1 to 2 percent slopes
LaB	Linoyer very fine sandy loam, 1 to 2 percent slopes	WfC	Woodrow silt loam, 2 to 5 percent slopes
LaC	Linoyer very fine sandy loam, 2 to 5 percent slopes	XA	Xeric Torriorthents, steep
LaD2	Linoyer very fine sandy loam, 5 to 10 percent slopes, eroded	XB	Xeric Torriorthents-Rock outcrop complex, steep
LbE	Lizzant very cobbly loam, 8 to 30 percent slopes	YaC	Yeates Hollow very stony loam, 6 to 10 percent slopes
LbF	Lizzant very cobbly loam, 30 to 60 percent slopes	YaD	Yeates Hollow very stony loam, 10 to 25 percent slopes
LcF	Lodar-Rock outcrop complex, 3 to 30 percent slopes	YaE	Yeates Hollow very stony loam, 25 to 40 percent slopes
LdF	Lodar-Rock outcrop complex, 30 to 70 percent slopes	YbF	Yeates Hollow very stony loam, 40 to 70 percent north slopes
LeF	Lundy-Rock outcrop complex, 30 to 70 percent slopes		

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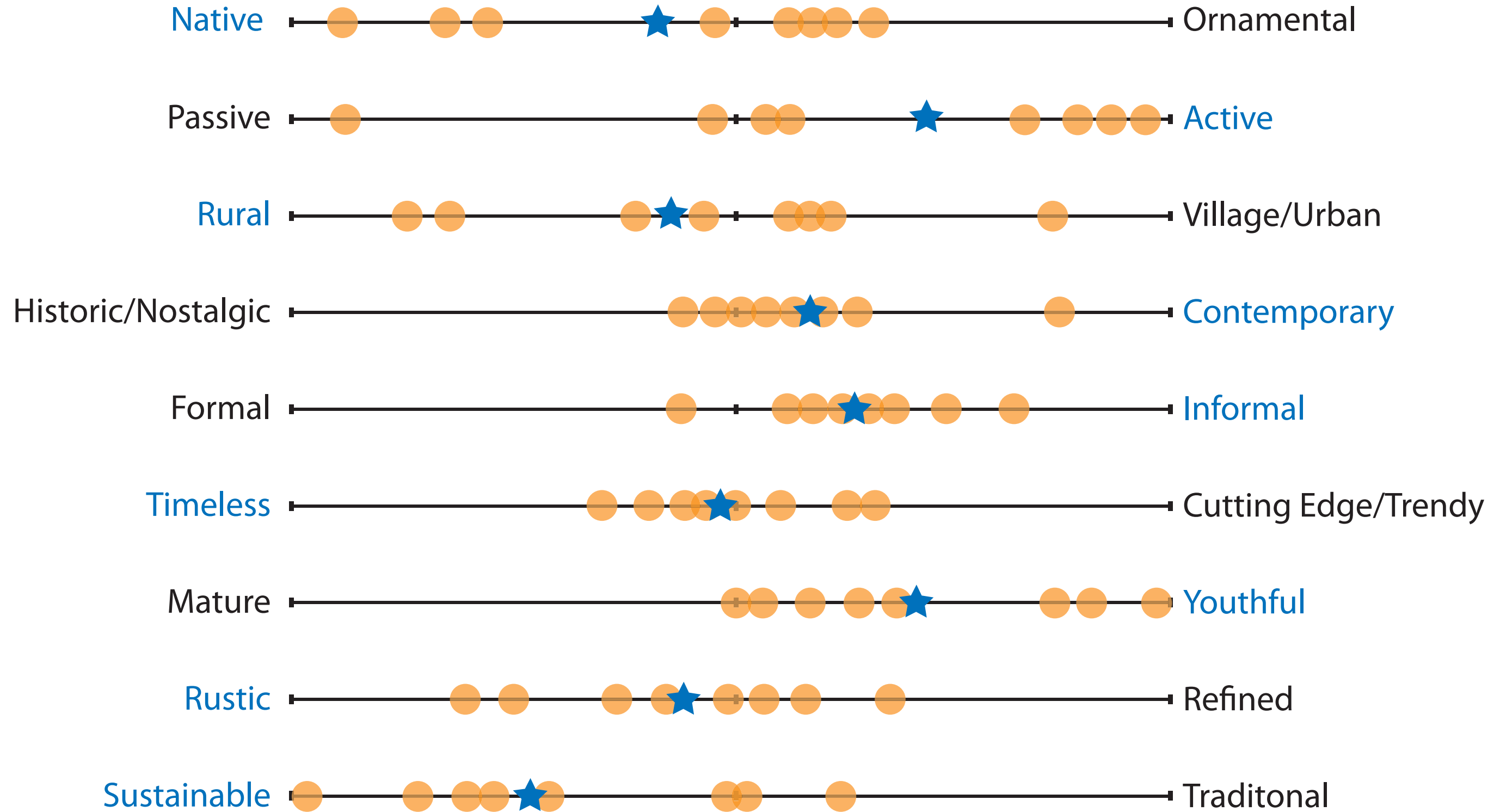
APPENDIX D

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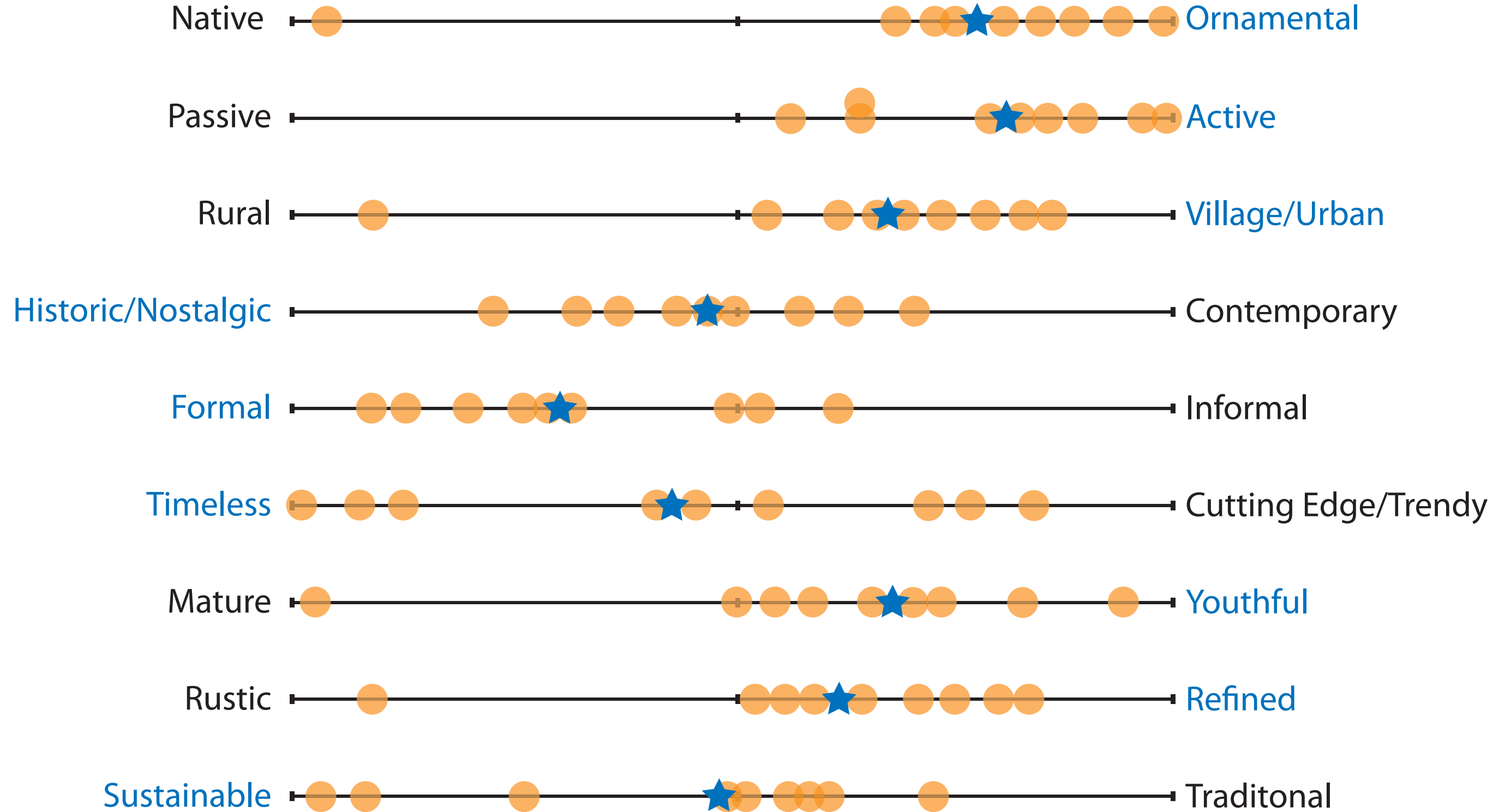
Community Feedback: What Do Your Parks Look and Feel Like



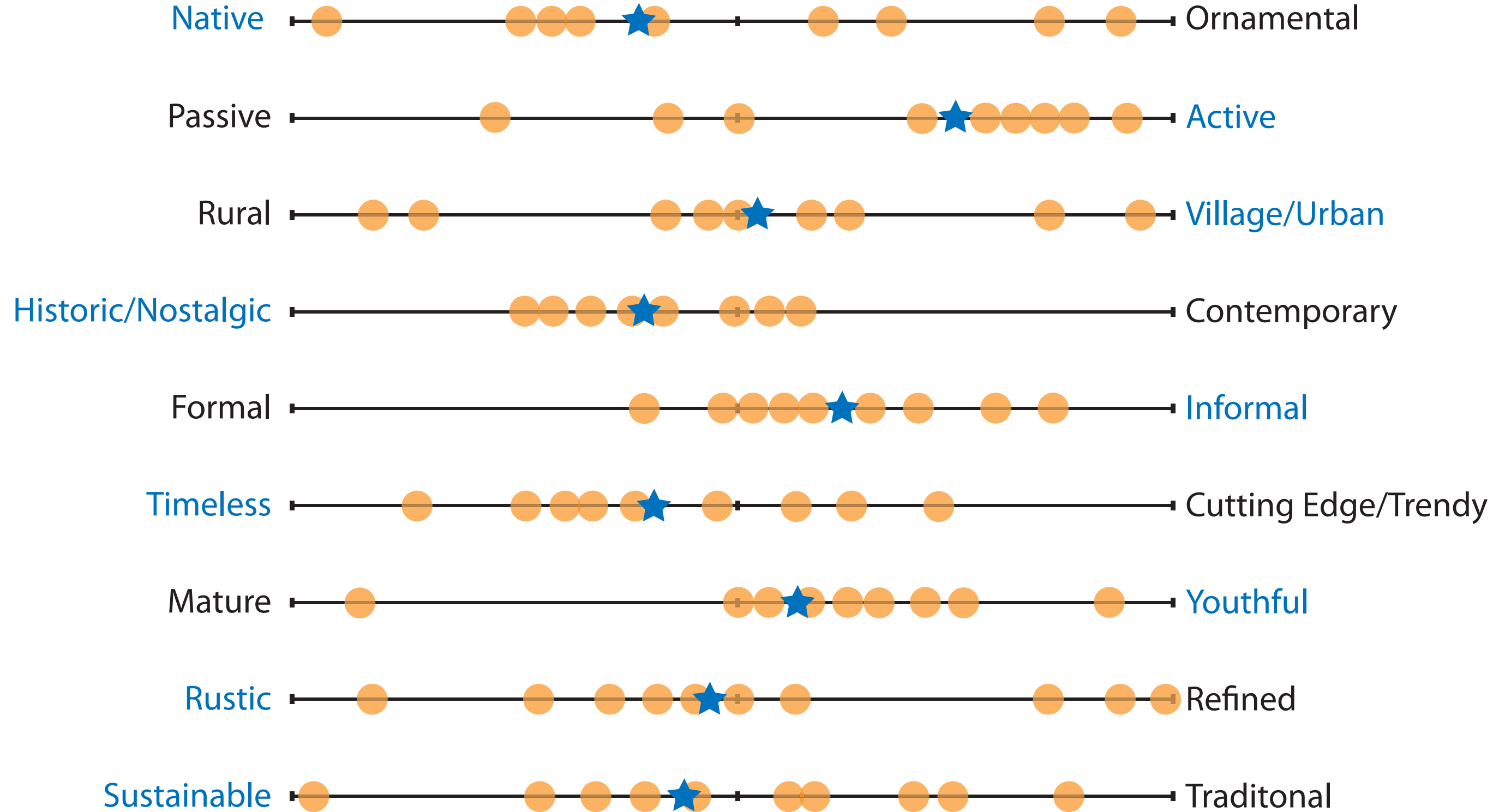
### WHAT DOES YOUR POCKET PARK LOOK AND FEEL LIKE?



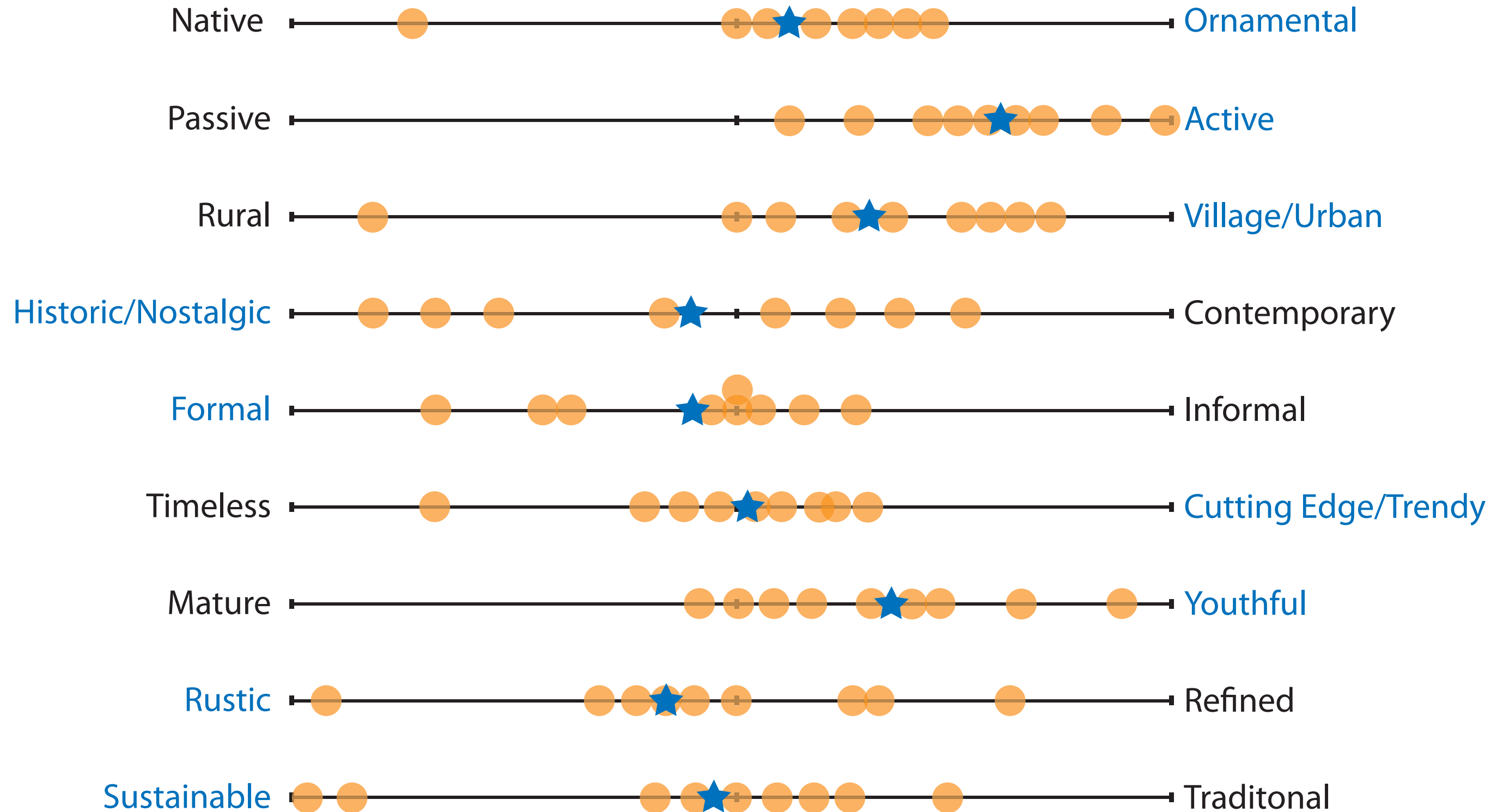
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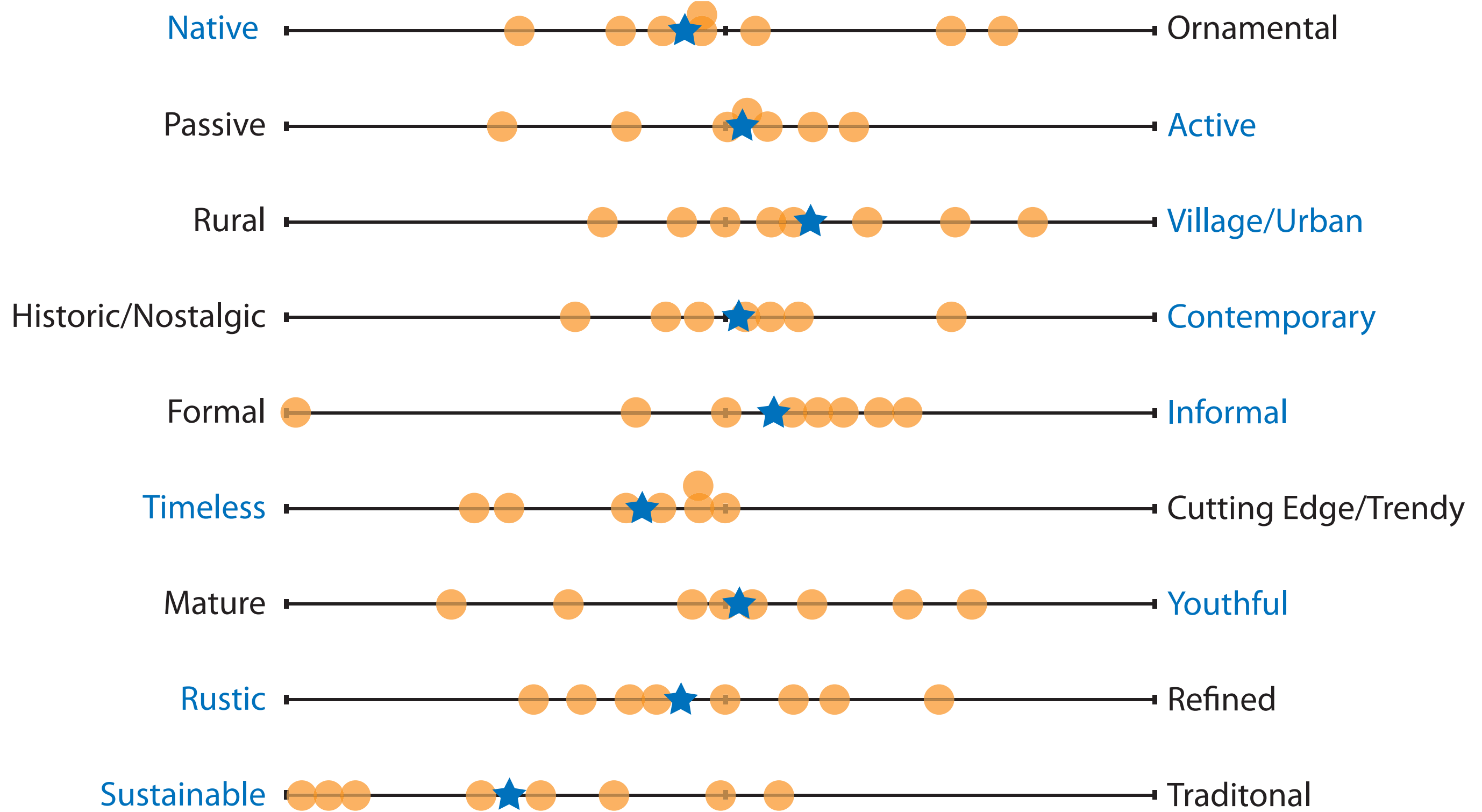
### WHAT DOES YOUR NEIGHBORHOOD PARK LOOK AND FEEL LIKE?



### WHAT DOES YOUR COMMUNITY PARK LOOK AND FEEL LIKE?



### WHAT DOES YOUR PASEO PARK LOOK AND FEEL LIKE?







APPENDIX E

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Community Gardening: Handbook from Wasatch Community Gardens



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# From Neglected Parcels to Community Gardens: A Handbook



## **Our Mission:**

- To help people grow and share fresh produce.
  - To teach urban youth responsibility, cooperation and ecological awareness.
  - To be an active resource for sustainable organic gardening.
-



**Principle Author**

Brian Emerson, with input from the *Wasatch Community Gardens* staff: Ginger Ogilvie, Celia Bell, Don Anderson, Agnes Chiao and Rob Ferris.

**Acknowledgments**

*Wasatch Community Gardens* and the author would like to thank the *Barbara L. Tanner Fellowship* and the *University of Utah Lowell Bennion Center* for funding this project.

*Wasatch Community Gardens* is a community-based, non-profit organization serving Salt Lake City's low-income neighborhoods since 1989. *Wasatch Community Gardens* cultivates individual growth and neighborhood unity through community gardening and youth gardening education.

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## Preface

Consider for a moment the problems of food insecurity in communities throughout our country, the decay of inner city neighborhoods, the increase in city crime rates, the disappearance of urban open space, the suburban sprawl over arable lands and wild places, and the lack of neighborhood cohesion. Consider also the nearly complete absence of locally grown products on the average American dinner table and the destructiveness of fossil fuel dependent industrial agriculture—rapidly depleting our topsoil (that takes 300-to-1,000 years per inch to accumulate), introducing toxic chemicals into our environment, loss of habitat and biodiversity, global warming, and the disappearance of our forests. (Badgley pg.203, 2002)

As a community we are becoming increasingly distanced and unfamiliar with our life-support system. In his book, *Coming Home to Eat*, author and ecologist Gary Paul Nabham writes, “The food we put into our mouths today travels an average of thirteen hundred miles from where it’s produced, changing hands at least six time along the way.”(pg 23) There is a growing disconnect between consumers and their food sources--between a consumer’s choices and their larger social and environmental impacts. Consequently, there is a growing inability of the public to make connections between their health and the health of the environment.

Our cities have become monsters of consumption, rapidly depleting our natural resources, spreading across the land in endless stretches of impenetrable concrete and poisoning our community’s air, water and soil. As urban areas continue to experience growth, communities are losing much needed green space for recreation, relaxation and neighborhood gatherings. The upshot, our social environment and ecological life support systems are under increasing stress. If these detrimental

patterns continue, the prognosis for our communities will be one of increasing sterility, pollution and social-environmental illness.

What does this have to do with community gardens, one might ask? Often doom-and-gloom forecasts can be overwhelming to the point of paralysis, disempowering the individual who wishes to improve the state of their life and community. Creating community gardens is a tangible way to affect positive change. Imagine how much food could be grown on the vacant land in our cities using sustainable gardening techniques that improve our health and the health of the environment. With the creation of community gardens, blighted vacant parcels in the heart of our ailing cities can be converted into flourishing green spaces. They create places where people can escape the chaos of urban life, grow delicious and nutritious food for themselves and for the hungry, beautify their cityscape, reconnect with the environment and their social communities and reduce the distance between their actions and their consumer impacts.

Community gardens can make significant contributions to the health of the earth and to the enrichment of our communities. The process of starting community gardens is an empowering and fulfilling way to build community and take responsibility for the ills of our world. The benefits of the finished garden are numerous, both for the general public, and especially for the community of, by, and for which the garden was created. The purpose of this handbook is to guide community groups through the process of starting a community garden. The process is not formulaic and the information that follows is not meant to be exhaustive. However, the hope is that the following sections will prove helpful to the planning and development of your own community’s garden. Good Luck.



## **Introduction: What is a Community Garden?**

A community garden is a piece of land shared by friends and neighbors for growing vegetables and flowers, and providing opportunities for positive social interactions and recreation. It may be sandwiched between two buildings, on the outskirts of a city, in an apartment building courtyard, on hospital grounds, alongside railroad tracks, or even in your own backyard.

Community gardens can take on diverse forms. Designated land can be divided up among neighbors for personal use or developed into school gardens where subjects including biology, environmental science, and mathematics can be taught and explored in the garden environment. Other community gardens have been used for growing food for food pantries, educational and training workshops, youth gardening programs, and integrated into senior centers. A garden's theme and program possibilities are virtually endless and should be the focus of the envisioning stage.

### **What are the Benefits of Community Gardening?**

- Community building tool—create opportunities for neighbors to work together
- Grow fresh, nutritious produce in urban areas for community members or food banks
- Clean up and use vacant and unsightly lots
- Provide safe learning space for children and adults
- Reduce crime and vandalism
- Preserve urban green space

- Economic empowerment—provide income opportunities
- Reduce city heat from streets and parking lots
- Enable positive human-earth connections and the cultivation of environmental stewardship
- Reduce stress and improve mental health of community members
- Beautify and enrich neighborhoods and enhance their sense of identity
- Provide opportunities for intergenerational and cross-cultural connections

### **How does a Community Garden Operate?**

Just as the settings for community gardens vary, so do the ways for making them work. The key to success is to create a system for decision-making and responsibility-sharing that works for you and your garden. A governance system that involves all members of the garden and interested community members in maintaining and organizing garden operations will support long-term success. Typical garden committees will address concerns about: general maintenance, garden celebrations, community relations, garden fees, rules for the garden, and the initial and long-term planning for the garden (see later sections).

### **What are Challenges that Community Gardens Face?**

Some of the most common challenges that community gardens face include; Finding and securing land; Long-term viability due to loss of land to development; Lack of community interest; Theft and vandalism; Finding resources in an urban environment; and Fundraising (for more information see the “Challenges that Community Gardens Face ” sections)

## Forming a Planning Committee

Community gardens start with 'community.' Forming a manageable group of committed individuals ensures that one person will not be doing all the work. Involving many people at the beginning of the process increases the shared sense of ownership and responsibility for the success of the garden. If you want to start a garden in the spring, be sure to start planning no later than summer of the preceding year. Gather at least 10 people who are committed to maintaining an individual plot of their own and the garden as a whole for at least one season (March - November). Be sure to keep neighbors surrounding the garden informed about your plans. A Planning Committee should include an organized Garden Coordinator who is willing to coordinate plot assignments, water access, and communication with gardeners and the landowner. Other common committee positions include a Treasurer, to handle the fees and money generated by fundraising. And lastly, a Garden Steward, who is the link between the Garden Coordinator and the gardeners, who makes basic repairs on the water system and makes sure the garden is being well-maintained (see next section). These positions are especially useful during the late-planning stages and when the garden is in full operation. Until that time the committee as a whole will be responsible for the initial planning stages.

The committee should have both people who are interested in being gardeners and people who have good community contacts with the city and local businesses. Having an expert gardener on board, such as a Master Gardener from the County Extension Office would be a good person to act as a reference and committee member. Other possible committee members include: representatives from local schools, neighborhood council members, church leaders, local politicians, representatives from nonprofits, lawyers, and perhaps most importantly, neighbors who live near the garden.

This is a good time to start identifying local sponsors who would be willing to help finance the garden or provide necessary tools or seeds. One of the committee's first jobs will be to identify local and national resources for community gardening. If a particular contact person, such as a business owner, is interested in the community garden, but is too busy to be

actively involved with its development, ask if s/he will support the garden in other ways.

Announcing the garden project at neighborhood council meetings, putting ads in local newsletters, recording PSAs on local radio stations and contacting representatives of local institutions will help you recruit committee members.

Once you have a group of interested committee members, it's time to call the first meeting. This meeting will allow members to become acquainted with each other and is when community building begins. The agenda will include envisioning what the garden could look like, what land is available, and what focus it could take (such as a youth education or food bank garden).

In addition to an envisioning session, during the first meeting the committee will begin to discuss the organizational structure of the community garden, including: how will decisions be made (Ex. Consensus style voting where gardeners govern themselves), who will take what role during and after the planning stage, and considering who would make good Garden Coordinators, Treasurers and Stewards.

During the planning process it will be the task of the planning committee to set goals, establish the garden rules and regulations, decide whether to incorporate or not, investigate land options, negotiate the lease with the landowner, raise funds, determine the garden layout, create a budget, determine how problems (such as vandalism) will be dealt with if they occur, obtain an insurance plan if needed, and make any other decisions that may arise.

Dividing-up into sub-committees to accomplish each task is an efficient and helpful way to manage what to some may be a daunting list of tasks. Focusing on one stage at a time will help you avoid becoming overwhelmed. Possible committees include: a fundraising committee, outreach or public relations committee and a steering committee to oversee the project in its entirety. Below is a "mock agenda" for the first meeting to help you get started. Remember, the more diverse the members of the planning committee and "coalition" of sponsors, the more resources will be available and the more successful the community garden project will be.



## Sample: Time Line For Planning a Community Garden

### *Summer-Fall*

1. Publicize the community garden project, make a list of interested individuals, and then call, email or give each of them an introduction/welcome letter.
2. Call a meeting for those who showed interest in the garden project.
3. **1<sup>st</sup> meeting agenda:**

*-Welcome, introduction*

*-Envisioning stage. What type of garden—theme (ex. Neighborhood garden), goals, objectives.*

*-Form a planning committee (sub-committees for each task), organizational structure, positions*

*-Next steps: (1) Investigate land options (2) Outreach/build support, funding*

*-Schedule next meeting date*

### *Fall*

1. Review and assess land options/contact owners, soil test
2. Continue outreach, generating interest
3. Start drafting budget, listing garden needs, determine garden plot rental fee (if there will be one)

### *Fall-Winter*

1. Finalize budget/start fundraising, looking for donations (\$ and in-kind)
2. Choose a site, negotiate lease
3. Plan the garden--determine rules and regulations
4. Insurance

### *Winter*

1. Continue fundraising
2. Outreach—look for volunteers (to help develop site) and gardeners
3. Plan the garden--layout

### *Winter-Spring*

1. Organize the Gardeners: orientation, applications, waivers, fees, etc.
2. Finalize garden plan
3. Gather all remaining materials needed—plants, seeds, tools, compost, etc.

### *Spring*

1. Prepare and develop site

## Envisioning Stage

During the envisioning stage, the planning committee churns out its visions, goals and objectives for the community garden project in a veritable brainstorm of ideas. This is the most exciting stage when community members are most enthusiastic and eager to start digging in the earth. The questions that should be explored include: What type of garden do we want to start (a youth garden, a neighborhood garden, a food bank garden, etc.)? Who is the garden for? What sort of programs could we run out of the garden? Where could the garden be located? Within what area should we search for land? What is the goal for the garden completion date? How will the garden be laid out? What benefit will the garden bring to our community? What community events could be held there?

Before the end of the first meeting, it's important to discuss briefly all the different stages of starting a community garden and the general timeline so the committee can stay organized and up-to-date. Other decisions that should be at least tentatively made by the end of the first meeting include: the general type of garden it will be, what sort of programs will be run out of it, and what neighborhood(s) will be the focus of the search for land.

## Types of Community Garden:

*Neighborhood Gardens:* Garden plot are rented to community members who don't have their own gardening space. The garden serves as a gathering space for neighbors.

*Youth/School Gardens:* youth garden programs where youth groups participate in hands-on learning of subjects such as environmental sciences, biology, and mathematics in the garden setting.

*Food Pantry Gardens:* Food grown in garden is donated to local food banks often lacking fresh, nutritious fruit and vegetables.

*Market/Job Training Gardens:* Commercial garden/economic diversification programs—in conjunction with local farmers' markets. Job-training, leadership training, and sustainable urban agriculture/small farm business internship programs.

*Mental Health/Rehabilitation Therapy Gardens:* Horticultural therapy/healing gardens, often created on hospital grounds. Prison garden programs.

## Others

*Native/Drought-tolerant*

*Demonstration Gardens*

*Flower Gardens*

*Senior Center Gardens*

*Public Housing Gardens*



### **Investigating Land Options and Choosing a Site**

Once a committee has been established and the ‘envisioning’ meeting has kindled the interest of the group, it’s time to investigate land options for the garden. There are a few key points to consider that will help direct the search for land.

First, it is important to consider a number of parcels as potential garden sites. As the saying goes, ‘don’t put all your eggs in one basket.’ In the context of starting a community garden this point is essential because not all of the sites that look promising will work out.

There are a number of issues that can make an otherwise ideal piece of land unavailable. The property owner could have other plans for the site or may just not be interested. The soil could be contaminated to the extent that it would be dangerous to garden there. The surrounding neighbors may not want a garden in that site. Or there may be no water access and the cost of installing a meter too high an investment for a potentially short tenure. Therefore, it’s a good idea to consider several sites from the beginning so as to avoid frustration and disappointment when a particularly ideal site falls through and to increase the chance of obtaining land while the

committee is still enthusiastic about the project.

During the envisioning meeting one of the topics discussed was, ‘Who is the garden for?’ This question should be kept in the back of one’s mind when searching for land. The location of the garden should be near the population it’s being created for.

Naturally, if the garden is being created for a specific population, such as a school or church, it should be located in close proximity to it--on the school or church grounds.

If the garden is being created for a particular neighborhood then, if possible, it should be located centrally and within walking distance of most of its residents. The closer the garden is to its gardeners, the more attention it will receive and the stronger the sense of pride and ownership will be among community members. This last point is essential for the sustainability of the garden.

The investigation for land can begin once the committee has considered the points above and defined the area within which they’ll conduct their search. Every open space that typically goes unnoticed, every blighted vacant parcel, every park and patch of grass will become the focus of the investigative eyes of the garden planners. This is when the envisioning stage begins to mingle with the tangible reality of land gone unused. We all become planners in this stage, assessing each piece of land for its latent potential as a community garden. Using the “Site Assessment Criteria and Selection Process” listed below, the viable lots can be selected and those parcels unfit, removed from the drawing board like so many weeds.

## Site Assessment Criteria and Selection Process

The preliminary site assessment is a general evaluation of a parcel's potential as a garden. Though there are a lot of things to consider, this initial evaluation only requires a quick visit to the site. The following is a list of basic points to consider when determining the parcel's viability.

### **Sunlight**

Most garden vegetables require full sun (at least 6 hours of direct light). Generally this requires good southern exposure, so if there are tall trees or large buildings along the south end of the site you'll want to look elsewhere. If you can, observe the site in the morning and afternoon to determine whether or not it receives adequate sunlight. Remember, deciduous trees viewed in the winter will create more shade come spring when their leaves emerge.

### **Shade**

On a sweltering July afternoon, thirsty and exhausted gardeners will need somewhere shady to relax and enjoy the garden atmosphere. Look for trees as an excellent source of shade. Placing benches or café-style tables and chairs underneath them creates a place where gardeners and community members can enjoy the garden surrounding in comfort.

### **Soil**

Finding land with good soil in an urban setting can be challenging. The good news is that even if the soil isn't ideal, there's almost always something that can be done to improve it. When assessing the soil quality there are a number of characteristics to look at. These include: soil texture, compaction, drainage, the depth of the topsoil, nutrient levels, pH levels, and the presence of heavy metals or other toxins.

The preliminary soil assessment will not necessarily rule out any piece of land, but it will help you choose between several options. The reason for this is that most soil characteristics such as texture, compaction, topsoil depth, pH, and nutrient levels can all be improved with a little work. Therefore the initial soil assessment more than anything will give you an idea of what inputs (labor, resources) you can expect to contribute during the development stage.

The ultimate determinant for a soil's viability for gardening is the presence of high levels of heavy metals and other contaminants. After the initial assessment is complete and the landowner has been contacted, a detailed analysis of a soil's nutrient, pH, and *especially* heavy metal/contaminant levels can be conducted by sending a soil sample to a soil lab at a county extensions agency or private soil testing company. (See the "Lead in Soil" link in the *Resource Guide...* section). For instructions on how to have your soil tested in Utah call the Utah State University Extension Service at 801-468-3170.

In the meantime the soil's texture, compaction, drainage, depth of topsoil, and some understanding of the nutrient levels (by observing the site's flora and amount of organic matter in the soil) can be ascertained with a quick examination.

Soil Texture is evaluated according to the relative proportions of three main soil particle types: sand, silt and clay. These three classification types correlate with the size of the mineral particle. Sand particles are the largest of the three particles (and the smallest mineral particle discernable to the naked eye), followed by silt and clay.

Vegetable gardens should have a relatively even balance of sand, silt and clay, but

often you'll hear gardeners refer to an ideal composition of 40-40-20 respectively).

A soil's texture will help determine the nutrient and water-holding capacity (drainage) and the soil's structure (crusty to well-aggregated). However, whether your soil has too much sand or clay, organic matter (such as compost) will improve its water and nutrient holding capacity and add nutrients as decomposers in the soil break it down. If an otherwise good site has poor soil don't be too concerned. You'll need to add compost and in some cases (where the topsoil is shallow), to add topsoil as well. For instructions on how to take a simple soil texture test see Appendix A. A more detailed analysis will also be conducted with the sample you send to the lab.

In addition to optimal texture plants prefer loose soil to enable their roots to penetrate deeper into the ground where important minerals accumulate. Loose soil is also much easier to work with.

Topsoil is the darkest upper layer of soil usually ranging from 4 to 12 inches deep. The deeper the topsoil the better, as this is the layer where plants will obtain many of their nutrients.

Researching the land's previous uses will also give you an idea of the soil's quality or possible contamination. For example, if the site was once a parking lot or a gas station then you might expect the soil to be compact or possibly contaminated with petrochemicals. If it was once a residence then, depending on its age, lead-based paint may have been used on the home's exterior and may have flaked off into the soil.

### ***Topography***

While flat land is preferable for a garden site (optimal drainage and minimized

erosion), it's also possible to create beautiful gardens on sloped land. Garden plots on sloped land can be staired and held secure with wooden or stone frames similar to raised beds with switchback pathways.

### ***Water Access***

Water access is an essential component to any garden. When observing a piece of land look for an on-site water meter, for sprinkler systems, or for an existing faucet. If none of these are present, but the land is otherwise ideal and the property owner has given permission to use the land, then consider approaching neighbors. It may be possible to negotiate water access from one of their sources. If the neighbors agree this will save a good deal of money (installing new water meters can easily exceed a thousand dollars).

Offering free garden plots to the acquiescent neighbor is a nice way of showing your appreciation. It's also a good idea to draw-up and sign a contract stating that the community garden organization will be responsible for paying for the water they use.

The irrigation system can be designed according to the garden layout and an additional hose hooked-up for supplemental watering of germinating seeds and saplings.

### ***Tool Box or Shed***

While some community gardens require that the gardeners bring their own tools to the garden each time they work, most have either a toolbox or a tool shed. Depending on the garden budget, communal tools can be purchased and stored on-site, or community gardeners can store their own tools there. When assessing land consider where you could locate the toolbox or shed.

**Visibility**

Good visibility will help enhance the safety and publicity of a community garden. The problems of theft, vandalism, and violent crime will all be reduced if a garden is especially visible to local residents who can keep a watchful eye out for trouble. A centrally located garden will be seen by more of the public who may be interested in being involved in the garden. A garden located within walking distance of its gardeners will receive more activity and therefore will be safer and better maintained.

**Composting Area**

Most community gardens have a designated area for composting. Although it's not necessary, at the end of each season there will be piles of dead plant debris to dispose of in one way or another. Composting this material is a free method of disposal and will save money on fertilizer and other soil amendments. Composting plant material is also an integral component of sustainable gardening. Some community gardens have aspired to become completely sustainable (after some initial inputs) by growing cover crops and creating their own compost instead of buying it from an outside source. When assessing land consider where the composting area might be designated. For hot and dry climates, locating the compost in a shady spot may help it stay optimally moist to enhance decomposition. Wasatch Community Gardens recommends having a compost spot for each plot.

**# of Plots**

It's good to have a rough idea of how many people will be interested in renting garden plots so a site can be chosen that will accommodate current and future demand. Be careful not to overestimate and acquire land that is unmanageably large or underestimate and exclude

interested gardeners who helped in the garden's creation. If a parcel is too large it's ok to start small and garden only what is presently manageable.

**Restrooms**

Although restrooms are convenient they're not necessary since most gardeners will likely live close by and won't be in the garden all day. Restrooms can be costly to install and maintain and if land is being leased it's impractical to build a permanent bathroom. If it's deemed necessary to have one on site then outhouses can be rented. This option is practical for garden festivals, but again it's not necessary. In emergency situations there are usually public bathrooms in close proximity to the garden. If ownership of the land is acquired and the garden made permanent, then installing a restroom would be a welcomed addition to the site.

**Power**

Power can be useful but again is not necessary. About the only essential component of a garden that may sometimes require electricity is a water-timer for drip irrigation systems, though, there are many battery-powered systems available on the market. If power is needed for some occasional purpose such as for lighting and music for garden festivals, or for power tools, consider negotiating to use a neighbor's outlet or better yet, if the budget permits, invest in a small solar panel set. This would supply the garden with enough power for the occasional electricity needs and draw interest from the public to see the newest energy technology in action.

**The Neighborhood**

It's a good idea to survey the neighborhood surrounding each site to evaluate the environment's general conduciveness to community gardening.

Assessing the demographics of a community will help you understand the needs of community members. This will help you determine the garden's usefulness for local residents and help you incorporate specific programs and designs into the garden to address their needs. For example, if there are a lot of children in the area surrounding a potential site, building a playground or youth plots within the garden would address a need and increase the garden use.

On similar lines, if there are many apartment buildings with no garden space or few sunny patches in surrounding residential yards, there will likely be more demand for garden plots than in an area where large sunny yards abound. Observations such as these can help you decide if a garden will thrive or wither away from lack of use.

A more direct method of assessing the general interest level of local community members is to send letters of inquiry about the project and inviting their participation, or simply to go knocking on their doors. If the city or neighborhood council for the area is active, try getting them involved as well. Gaining the support of neighbors and neighborhood groups is an essential step. Starting early will only improve the gardens chance for long-term success.

Lastly, it's wise to assess the level of crime in the area around the site. An excessive amount of violence, theft, and vandalism in a neighborhood may create an environment that isn't conducive to community gardening. However, the process of starting a community garden can be an excellent way to bring the community together, transform crime-ridden places into positive public spaces and help reduce crime. If the decision is made to use such land then a few considerations will help minimize unwanted incidents including building and locking a fence around the property at night with a code known only by the gardeners (though this can create a more exclusive environment) and recruiting neighbors to keep a watchful eye on the garden. City police departments keep incident statistics on record that might be helpful as you assess the neighborhood crime levels. Also, often times the police officers assigned to your neighborhood will give area crime reports at community council meetings. Form a good relationship with your local officer and ask them to keep an eye on the garden.

Rather than looking at crime as a problem, it can be viewed as a challenge needing people only to rise to it to bring about a positive solution. Overcoming challenges will bring the community closer together.

**Vehicle Access**

At some point it will likely be necessary to have a load of compost delivered or rubble removed. Therefore, vehicle access is important

**Parking**

Unless the garden is exceptionally large (100 plots or more) or frequent crowd drawing events are anticipated, additional parking is probably not necessary. However, in already parking-stressed areas parking could be a contentious issue. Each site’s parking situation should be assessed to avoid upsetting neighbors, local businesses or churches in the area, and to ensure the availability of parking space for gardeners. Ideally, with good planning, most gardeners will be within walking distance of the garden.

Once the preliminary site assessment has been completed, the next step is contacting the owner. If they agree to host the garden on their land then the last step is to have the soil tested for harmful contaminants. The following section will help prepare you for approaching property owners.

(References for this section Eliot Coleman, *The New Organic Grower* and *Center for Agroecology and Sustainable Food Systems, UCSC*)

**Community Garden Site Assessment List**

**Sun:**

Shade/ Partial Shade/ Full Sun (6-8hrs):

Shading Structure Description:

Facing Southwest/South/Southeast/North/Northeast/Northwest:

**Soil:**

Texture (sand/silt/clay/organic matter):

Drainage (wet-moderate-dry):

Depth of Topsoil (where darker soil ends):

Compact/Loose:

ph level (soil test):

Nutrient levels (soil test): N-P-K

Lead or Other Toxins (soil test):

**Topography:**

Flat or sloped (degree)

**Water Access:**

On-site/Neighboring Apt./Home/Business/Church

Type and Proximity to Garden and Future Plots:

**Shed or Tool Box Site:**

**Composting Site:**

**Estimate of # of Plots:**

**Visibility (safety and publicity):**

**Parking:**

**Restroom Access:**

**Power:**

**Neighborhood:**

Interest/Involvement Level of Neighbors:

Demographic Profile (Children/young adults/adults/senior citizens):

Crime (drugs/vandalism/violent crime/theft):

Animals (deer/raccoons from the hills/ dogs):

**Site History (parking lot/gas station/residential):**

**Vehicle Access:**

**Quick Sketch of Property:**



## Acquiring Permission to Use Land for Community Gardens

Once several viable parcels of land have been identified in your neighborhood, it's time to contact the owner. Listed below are the steps one must take to find the property owner's contact information and suggestions on how to gain permission to use the property. The steps vary depending on whether the property is privately owned or on public land, and may also vary from entity to entity. However, the process listed below should be relevant for most cities or counties. Once permission has been gained, place a sign on the parcel publicizing it as the future site of a community garden. Include contact information so that interested members of the public can get involved.

### Finding Out Who Owns the Property

#### *1- Determining the parcel number:*

A parcel # is used by the city/county and real estate agencies to identify property. This number can be obtained by calling most real estate companies and giving them the exact address of the buildings on both sides of the parcel.

*2- Getting the owner's contact information:* Call the County Assessor's Office and give them either the full address of the neighboring buildings, or if possible, the parcel # to obtain the property owners name and contact

information. Salt Lake County Assessors Office # is 801-468-3050.

#### *3- How is the property zoned?*

During the process of obtaining land for the garden, it may be necessary to know how the property is zoned to make sure that community gardening is an authorized use (in most cases it will be). This information can be found by calling the city or county planning departments depending on where the property is located (the city for land within an incorporated city or the county for land on unincorporated county land). For S.L.C. go to the city website, enter in the parcel # and the zoning for that parcel will be ascertained. URL:

[http://apps1.slccgov.com/General/AddressInformation/zoning\\_search.asp?passval=searchbynumber](http://apps1.slccgov.com/General/AddressInformation/zoning_search.asp?passval=searchbynumber)

Once you know how the property is zoned, make sure community gardening is a permitted or conditional use for that zoning category by calling the city or county planning department, or reviewing the local zoning code. If community gardening is not a permitted or conditional use, find out why. The zoning code may be outdated and up for challenge. In this case the garden committee will have to speak with a planner to see if the ordinance could be successfully challenged, and if so, take the proposed change to the city or county council's approval. (See "Tips for Proposing Community Gardens to City or County Councils" section below).

## Seeking Permission to Use Privately Owned Land

### *Privately Owned Land*

There are a variety of ways to contact the owner once their contact information has been found. They include writing a letter, phoning them directly, or setting up a meeting in person. A courteous and well-prepared presentation of the community garden proposal will increase your chances for a positive response. Some of the points that should be discussed when approaching a landowner are listed below.

1- Inform them about the myriad of benefits community gardens bring to communities (see "Benefits of Community Gardening" section).

2- Mention the personal incentives a property owner has for hosting a garden on her/his land. For example, they would no longer need to keep the parcel weed free and beautiful once gardeners are responsible for maintaining the site.

3- Let them know that you have a well-organized committee of interested neighborhood gardeners who are committed to the creation and continued upkeep of the garden and who have already met for planning meetings. This will help enable the owner to trust that the garden won't be neglected, creating an eyesore worse than when it was vacant. In addition, it will assure them that the garden won't fail due to a lack of community interest.

4- Mention that a lease would be negotiated (and reviewed by a lawyer) if they (the owner) agrees to have the garden on their property. We recommend that a lease

be signed for at least 3-to-5 years, as it would be a shame to invest time and money in a garden and then lose the land the next year (see "Choosing a Site" section).

5- Mention that a "hold harmless" waiver clause will be included in the lease stating that, should one of the gardeners be injured as a result of negligence on the part of another gardener, the landowner is "held harmless" and will not be sued.

6- Mention that your group will purchase Liability Insurance upon the land owner's request. This is further protection for the landowner.

7- Ask what the past use of the property was (it's good to know if the land was once a dumping ground for toxic chemicals).

8- Be sure to ask about water access. If there isn't any, you may want to look elsewhere, as having water meters installed can be quite costly. However, there have been examples of gardens that have negotiated water access with neighboring buildings. In one example the garden treasurer paid for the community garden's share of the water bill each month, while in exchange for the water access, the committee offered a garden plot to the neighbors with the yearly rental fee waived.

9- Mentioning that you have the support of an experienced community garden organization (like WCG) or gardening expert will increase your credibility and give further reassurance to the property owner.

10- If it seems likely that the owner will agree, the next step is taking a soil test for general information and to make sure that it's not contaminated

## Sample Letter to Property Owner

Dear ,

My name is \_\_\_\_\_. I am contacting you on behalf of the Avenues Community Garden Committee, a group of Avenues residents working on starting a community garden in the Avenues. Our committee has met several times for planning meetings and has started building a strong and diversified coalition of supporters for the garden including a representative of the LDS Hospital Employee Advisory Council (who offered volunteers), the Sweet Library Branch, the Greater Avenues Community Council, and the Cathedral of the Madeline church. We've also had the ongoing support of an experienced community garden organizer from the local non-profit organization, Wasatch Community Gardens, who has attended most of our meetings.

We've recently started searching for potential sites for the Avenues Community Garden (ACG) and have come across your property at 9<sup>th</sup> Ave. and G Street (494 East). As you might guess, the purpose of this letter is to inquire about the possibility of using your land as the site of the garden.

We'd love to speak with you in person or over the phone to discuss what hosting a community garden on your property would entail. We'd also like to present to you the beautiful and vibrant community gathering space we envision and discuss our proposal in detail.

In general, the garden would be a place where community members who don't have their own gardening space (those living in apartment buildings), or who have too much shade (like so many residents in the Avenues) could grow nutritious produce on plots that they would rent for the cost of maintaining the garden each year. In addition to making individual plots available to community members, the garden would serve as a gathering place facilitating positive social interactions. Other possible uses for community gardens include offering adult educational workshops, youth gardening programs, growing food for local food bank, and integration within senior centers.

The garden would be managed by the not-for-profit Avenues Committee and there would be an elected Garden Coordinator to oversee the project in its entirety, a Treasurer to handle the money generated by fundraising and the plot rental fee, and a Garden Steward who would be in charge of general maintenance of the garden and to make sure that all the gardeners are maintaining their individual plots (this means you would no longer need to take care of the site yourself).

Some of the technical issues that would need to be discussed include negotiating a lease, liability insurance, garden rules and regulations, and water access and billing. Of course, all costs for the community garden project would be covered by the ACG Committee and the gardeners.

I've included with this letter some general information about community gardens provided by Wasatch Community Garden including a list of some of the benefits community gardens can bring to a community.

The ACG Committee is a well-organized group of interested Avenues residents committed to the creation and continued upkeep of a community garden in the Avenues. We hope this will help you trust that the garden will be a success if you granted us permission to use your land.

On behalf of the ACG Committee, I thank you for your consideration of our proposal. Please feel free to contact me over the phone, email, or by letter to discuss the community garden project in more detail. My phone number, email address, and mailing address are included below. Thanks again.

Respectfully,

## Seeking Permission to Use City or County Owned Land

*Land within Incorporated City Area:*

1- Call *City Dept. of Real Property Management* (Salt Lake City Real Property Management 535-7133). Ask them if the land is available and tell them about your idea to start a community garden on it.

2- Seek approval from the City Council (see below for tips). Depending on the property, its size, and how the location is zoned, the process of obtaining permission to use a vacant parcel owned by the city may involve getting the garden proposal approved by the city council.

3- Once approved the lease should be negotiated. (See “Investigating Land Options” section, the sample lease, and the “Legal Issues” section).

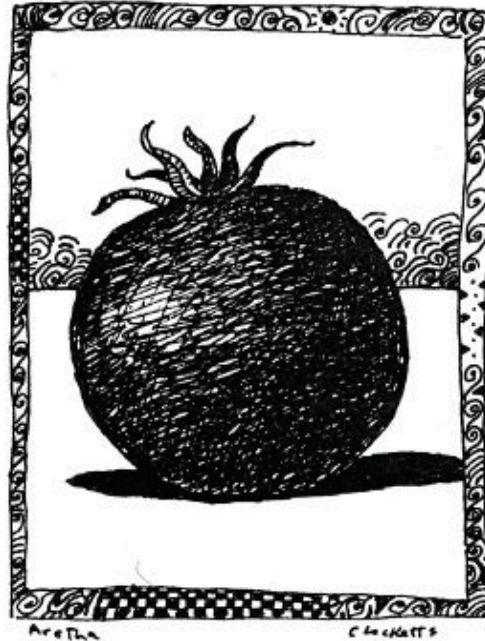
*Land in Unincorporated County Area:*

1- Call *County Dept. of Real Property Management* (Salt Lake County Real Property Management 468-2556).

2- Obtain approval from County Council (see below for tips).

- If organization has non-profit status, the next step should be having a lease drawn up and the property should be able to be rented for a nominal fee (such as \$1 a year).

- If organization does not have official non-profit status the County by law has to rent the property for ‘fair market value,’ even if the garden is not-for-profit.



- At any time during the tenure if the County wants to use the land again, the lease can be terminated, but they would have to wait until the harvest is complete for that year. (Incorporate protocol on what to do in this circumstance into the lease)

3- Once approved the lease should be negotiated. (See “Finding Property” section, the sample lease, and the “Legal Issues” section).

(Source: Lee Colvin at the Salt Lake County Dept. of Real Property Management 10/16/03)

### Seeking Permission to Use Land within Existing Parks

Using land that's part of an existing park can be a challenge, but it has been done. In some cases the activity of community gardening might be seen as a limited use that excludes the non-gardening segments of the public—thus privileging a segment of the public at the expense of the rest and undermining the *public* nature of the park system. Although community gardens can be designed to be as inclusive as possible (open to the public for viewing during park hours, accessible to wheelchairs) and would be no more exclusive than such uses as tennis courts or other specific use areas, the decision may ultimately rest with the city or county council (or other approving bodies).

Again, it has been done. If you feel you can make a case for it, showing that the use will not be exclusive, then by all means try it.

- 1-Contact and seek approval from Parks and Recreation Div. Director
- 2-She or he would have to recommend it to the County Mayor
- 3-The County Mayor would then have to have it affirmed by the County Council

(Source: Salt Lake County Parks & Rec. Administration 468-2299, 10/15/03)

### Tips for Proposing Community Gardens to City or County Councils

Forming a well-organized garden planning committee before the proposal is made will not only improve the garden's general chance for success, but it will also help in the process of getting the garden approved. The existence of such a committee will assure the approving council that there's a group of citizens committed to the ongoing success and maintenance of the garden.

The garden's chance of approval will be greatly increased by circulating a petition of support among neighbors of the proposed site. In addition, getting endorsements from local churches, schools, businesses, government staff members, expert gardeners, and community garden organizations will strengthen the proposal.

Do some research about the local zoning code, and make sure the community garden is a permitted or conditional use in the area. If community gardening isn't officially listed as a use at all (not listed as permitted *or* not permitted), be able to demonstrate how the garden fits in with the general character of the neighborhood. To validate the proposal, have a rough garden plan and layout map to show how it will look and operate. Lastly, have some general information about the benefits community gardens bring to communities. Have articles and pictures of successful gardens in other cities.

## **Legal Issues: Becoming a Nonprofit and Applying for 501(c)(3) Tax-Exempt Status**

At some point during the planning process the committee will likely consider the pros and cons of incorporating as a non-profit (through the Department of Commerce) and applying for 501(c)(3) tax-exempt status (through the Internal Revenues Service). Initially, a group may be interested in incorporating to make it easier to acquire 501(c)(3) status. This status allows donors to make tax-deductible charitable donations, and thus, greatly increasing a not-for-profit organization's ability to raise funds. Organizations with 501(c)(3) status may also be granted exemption from federal income tax and state income, sales, and property tax.

An organization does not need to be incorporated as a non-profit to obtain 501(c)(3) tax-exempt status and eligibility to receive tax-deductible charitable donations. It is also possible to apply as an "unincorporated association." However, if you are going to the trouble of applying for tax-exempt status, it may well be worth the extra effort to incorporate as a non-profit. There are several reasons why a garden group might consider organizing in such a way.

For example, by incorporating as a non-profit, an organization achieves government recognition as a "legal entity," separate and distinct from its "owners," or in this case, from the garden organization members. This status can be critical in protecting the personal assets of individual members in the event that a lawsuit is brought against the organization. Liability insurance protects the gardening

organization in such a circumstance, though only to the extent of the coverage determined in the insurance plan. If, for example, a gardener is seriously injured in the garden and decides to sue the organization for \$10,000,000—and the liability coverage is only \$2,000,000-- then the individual members of the unincorporated organization may be responsible for covering the difference.

Another legally recognized organizational structure that offers similar protection as non-profit status is the "Limited Liability Company" (LLC). Again, as a recognized "legal entity" the LLC protects the individual members of the organization in the case of a lawsuit. In some cases, a LLC may offer more complete limited liability than a non-profit organization, may be less complicated to start and manage, and may entail simpler rules of operation. A LLC can also apply for 501 (c)(3) status.

A community gardening organization may also want to incorporate to gain the ability to purchase and hold valid title over real estate. If there is no legally recognized garden organization to hold title over land or to sign a lease, then individual members must take sole responsibility of ownership instead--a heavy burden for individual members to bear.

Moreover, filing as a non-profit corporation or LLC that maintains its existence as a legal entity, regardless of changes in organization members, is useful as members come and go over the years. This last point is important when considering the difficulties that may arise with changing land ownership if the title-holding member of the organization moves away.

Therefore, for a community garden created and organized by a group of community members and gardeners, it is less complicated for reasons of fairness, legality (liability) and practicality to create a legally recognized organization.

Lastly, incorporating as a non-profit gives an organization access to special nonprofit bulk mailing rates from the U.S. Postal Service.

Incorporating as a non-profit and applying for 501(c)(3) status can be a dauntingly complicated process, full of confusing forms and legal jargon. It may not be worth incorporating if funds can be generated in other ways than receiving tax-deductible donations. The question should be explored: Is the gardening organization willing and motivated to go through the process of incorporating and gaining tax-exempt status? It may not be worth scaring interested gardeners and community members from participating in the planning process. The budget for starting and maintaining a simple neighborhood garden can be quite small. A combination of money pooling and receiving smaller, non-deductible contributions from community members may be sufficient for meeting the garden's budget. For most gardens, the initial input of capital will be significantly larger than the yearly cost of maintenance, which, with some good planning and community connections, may be covered by the money generated by the annual garden plot rental fees.

That said, there are significant benefits and protections offered by incorporating and/or obtaining 501(c)(3) status, as mentioned above. Gardening organizations should seek consultation

from a lawyer as well as assistance from Department of Commerce and Internal Revenues Service agents on the matters discussed in this section. Some local bar associations may offer “pro bono” legal service to not-for-profit community groups. (The Utah State Bar holds a Tuesday Night Bar where an individual can meet with an attorney free of charge for 30 minutes. Utah State Bar, 645 S. 245 E. SLC, UT 531-9077). Also, for obvious reasons, this section should drive home the recommendation to invite a lawyer to participate in the planning process or become a supporter, as suggested in the section on forming a planning committee.

Helpful information for seeking further assistance and concerning the process of incorporating and applying for 501(c)(3) status is given below.

### ***How to Incorporate or Register as a Limited Liability Company***

Register with the:

State of Utah Department of Commerce  
PO Box 146705  
Salt Lake City, UT 84114-6705

Walk In: 160 East 300 South, Main Floor  
Information Center: (801) 530-4849  
(877) 526-6438

Web Site:

<http://www.commerce.utah.gov>

If registering as nonprofit the processing fee is \$22.00, to be remitted with Article of Incorporation. To legally solicit charitable donations the nonprofit organization must also file for a *Charitable Solicitations License* from the Division of Consumer Protection at

the Dept. of Commerce. The annual fee for such a license is \$100 as of January 2004. The fee for filing as a Limited Liability Company is \$52.00 and must be remitted with Articles of Organization. For more information contact the Department of Commerce.

**Helpful Information, Forms & Publications for Obtaining 501 (c)(3) Status:**

*Pub 4220: Applying for 501(c)(3) Tax-Exempt Status* A helpful document about why and how to apply for 501 (c)(3) status.

*Pub 557: Tax-Exempt Status for Your Organization* The rules and procedures that pertain to organizations applying for federal income tax exemption under Internal Revenues Code 501(c)(3).

*Form 1023: Application for Recognition of Exemption Under Section 501(c)(3) of the Internal Revenue Code* When does an organization *not* need to fill out *Form 1023*?

Exempt status is automatically granted to “any organization (other than a private foundation) normally having annual gross receipts of not more than \$5,000...”(pg.18 Pub 557, IRS).

However, if an organization files Form 1023 they will receive a letter from the IRS recognizing their exempt status. By doing so, potential contributors are assured by the IRS that contribution will be tax-deductible.

*Form 8718: User Fee Exempt Organization Determination Letter Request* For “new organizations that anticipate gross receipts averaging not more than

\$10,000 during the first 4 years,” the fee is \$150. For more than \$10,000, the fee is \$500. (*Form 8718*)

*Form SS-4: Application for Employer Identification Number* Every exempt organization must have an Employer Identification Number (EIN) even if they do not have any employees.

If an organization files within 15 months from the end of the month in which they were organized, their exempt status will be recognized retroactively to the date it was organized. (Pg. 17, *Pub 557*)

Organizations applying for 501 (c)(3) status should review pertinent sections of *Pub 557*, and then send completed *Forms 1023, 8718, and SS-4* with Articles of Organization (an example can be found on page 19, section Draft A, of *Pub 557*) with all accompanying documents and fees to the Internal Revenues Service.

***To order forms and publications.***

1-800-829-3676

***Asking tax questions.***

Call the IRS with your tax questions at 1-877-829-5500.

*The above information is given as guidance only. Organizations applying for tax-exempt status should consult a Tax Advisor to assure all procedures and rules are followed correctly. Organization deciding whether or not to become a legal entity such as filing as a non-profit corporation, are strongly advised to seek legal council from a lawyer and follow the procedures given by the Department of Commerce.*



## Things to Consider Including in a Lease

- Description of land
- Beginning date, length of lease term
- Procedure for lease renewal/termination. Will it be automatically renewed? With or without notice? Will it be negotiated and resigned each year? Will there be a lease termination procedure? Will the notice be sent out to be received a specified number of days before lease terminates, automatic termination when lease expires unless resigned?
- Clause allowing garden organization to sub-lease plots for fee--specify tenant's right to assign or sublease
- Rental cost per year—Who is responsible for paying it and by what date each year?
- What type of rent will be paid (cash, share, etc.)? How will rent be calculated? When will rent payments be due?
- Other costs—Who is responsible for paying the water bill?
- Who will be responsible for property damage that occurred during the term of the lease?
- Attach Garden Rules and Regulation. Have a clause referring to them as part of the agreement. Add any additional rules and restrictions to the lease that are not covered in the Garden organization's Rules and Regulation.
- Clause stating that the garden organization will not act unlawfully and will operate at all times in accordance with city/county zoning codes.
- Hours of operation--when garden will be unlocked and open to public
- Who is allowed in garden?
- What to do when lease rules are broken--lease violated, warning system, probationary period?
- Is there an option for the garden organization to buy the land.
- Mention the “waiver of liability” clause that all gardeners will sign as part of the plot rental application
- Agreement for garden organization to obtain a general liability insurance plan if property owner desires it
- Division of expenses, specifying each party's share of expenses: maintenance, repairs, utilities, taxes, etc.
- Outline duties to maintain and repair property—landlord or tenant?
- Who is responsible for paying the property tax?
- Will the lease require the landlord's permission before improvements are made? If improvements are made, a method should be included for specifying either the landlord's share or how the tenant will be reimbursed for the improvements when the lease terminates.
- Nondiscrimination clause

*This above information is for guidance only. It's advisable when negotiating a lease, to obtain legal review of the lease agreement.*

## **SAMPLE: 2001 Lease Agreement Between Wasatch Community Gardens And Mrs. Jane Doe**

Mrs. Jane Doe, owner, agrees to lease the property located at 100 West 100 North in Salt Lake City free of charge to Wasatch Community Gardens. The property is 15,000 square feet not including the front lawn located south of the gate.

The leased property is to be used as a public community garden with subleased plots, to be administered by Wasatch Community Gardens. This lease agreement shall commence March 20, 2001 and continue through November 20, 2001.

Wasatch Community Gardens agrees to sublease plots to the tenants of the apartments at 110 West 100 North for half-price (amounting to \$15 for the 2001 season). Wasatch Community Gardens agrees to pay the full cost of water used during the time the lease is active.

Mrs. Jane Doe agrees to care for the front lawn leading up to the gates surrounding the community garden area. Wasatch Community Gardens agrees to coordinate the planting and maintenance of perennial plants around the garden area, with boundaries as follows:

- Mrs. Jane Doe will maintain landscaping and plants outside the gates
- Wasatch Community Gardens will maintain landscaping and plants inside the gates.

This lease agreement will be reviewed at the termination date stated above with the option of renewal each year according to the desires of Mrs. Jane Doe. Mrs. Jane Doe agrees to permit Wasatch Community Gardens and the community gardeners participating on the leased property to hold at least one community party/event on the property.

Wasatch Community Gardens agrees to act lawfully and will operate at all times in accordance with the city and county zoning codes. The garden "Rules and Regulations" are attached to and considered part of this lease agreement.

Wasatch Community Garden will be open daily to the public from 6am to 9pm. During the hours the garden is closed the gate will remain locked. The garden's Rules and Regulation will be visibly posted at the entrance of the garden. If any member of the public acts in violation of these Rules and Regulation, they will be given a preliminary warning. If a further violation occurs the individual will be asked to leave the property for the remainder of the day. If repeated violations occur, the individual will be officially banned from the garden.

All gardeners will be required to sign a "waiver of liability" clause as well as an agreement to the garden Rules and Regulations as part of the plot rental application (see attached "Rules and Regulation" and "Community Gardener Application" documents).

Wasatch Community Gardens agrees to hold an active general liability insurance plan for the property during the full duration of the lease agreement.

Wasatch Community Gardens will not discriminate against any individual or group on the basis of sex, race, sexual orientation, religion or political affiliation.

At the termination of this agreement the site will be returned to the owner in a neat and orderly condition.

Property owner:

\_\_\_\_\_  
Jane Doe

\_\_\_\_\_  
Date

For Wasatch Community Gardens:

\_\_\_\_\_  
(            ), Director

\_\_\_\_\_  
Date

## Insurance Issues

There are two general types of insurance to consider when deciding on an insurance plan for the garden: property and general liability insurance. Property insurance covers tools, the irrigation system, or other communal belongings deemed necessary to protect. Liability insurance (the more vital of the two) protects both the community gardening organization and the property owner from a lawsuit in the case that someone (invited or not) is injured within the garden. Both types of insurance can be written up into one insurance plan. Also, it's much cheaper to be covered under an existing umbrella policy than to create a new plan exclusively for one garden. If there isn't an organization that offers this service consider setting up an umbrella insurance plan with other community gardens. It may also be possible to affiliate with a parent organization such as a church or non-profit organization that could incorporate the garden into their existing insurance plans.

In general, the cost of the liability insurance premium will be determined based on the size of the garden, the type of programs run there, the amount of anticipated traffic regularly passing through the garden, and in some cases, the appraised risk of injury to gardeners and visitors. For example, if a large garden receives hundreds of visitors a week, then the appraised risk, and hence the premium, will be higher than for a small garden that receives light traffic.

If the garden organization plans to host a public benefit party or any other type of garden festival that will draw a crowd, then additional event coverage may need to be included in the plan. Other issues that may come up when determining an insurance plan include whether or not the garden is locked-up at night (increased

chance of property vandalism and theft), or if gardeners are allowed to use potentially dangerous power tools within the garden.

The recommended general liability coverage is \$1,000,000 for each occurrence and a \$2,000,000 "aggregate" coverage, but this may vary from agency to agency.

If a garden is created on public property the community garden organization might not need an insurance plan because the property might be self-insured by the entity that has jurisdiction over it (the city, county, or state).

When starting a garden on public property the gardening committee should check with the particular jurisdictional entity they're working with to find out if any additional insurance is needed.

Unfortunately in Salt Lake City and County, public property used for a community garden usually requires an individual public liability insurance plan, as it will not be covered by the city or county. However, because government policies continually change, committee members should always inquire about whether or not additional insurance is needed as the lease is being negotiated.

In the case that liability insurance is needed, Wasatch Community Gardens has a plan with *Beehive Insurance Agency* (801-685-2779), but there's sure to be other agencies that offer plans. It's a good idea to shop around to find the best deal.

(Source: Susan Smith at *Beehive Insurance Agency* 11-4-03)

## Generating and Assessing the Interest of the Community

In addition to the suggestions included in the “Forming a Planning Committee” section, it’s helpful to create and disseminate flyers to residents living in the neighborhood surrounding a possible site for the community garden. Such a flyer can invite community participation and feedback among residents and the garden planners. If the feedback is

positive then starting a garden in their neighborhood will be that much easier. If the feedback is negative and unsupportive, then it may be a good idea to search elsewhere. Below is a sample flyer that might be used to inform residents in a particular neighborhood of the garden planning committee’s project and encourage their input and participation.

### *Avenues Community Garden*

Would you like to have a space where you and your neighbors could gather among sunflower forests and tomato-laden vines? Or be involved in a project that could beautify and enrich your community? A group of Avenues residents are working to do just that by starting a community garden in the Avenues. The Avenues Community Garden Committee has met several times for planning meetings and has started building a strong and diversified coalition of supporters for the garden.

We’ve recently started searching for potential sites for the Avenues Community Garden (ACG) and have come across the property at the end of 10<sup>th</sup> Ave. and M Street. The purpose of this letter is to inquire about your opinion regarding the possibility of transforming a portion of this vacant parcel into a community garden.

We’d love to speak with you to discuss what having a community garden in your neighborhood would entail. We’d also like to invite you to join the committee in planning and designing the potentially beautiful and vibrant community garden space.

The garden could be a place where community members could grow nutritious produce on plots that they would rent for a share of the yearly maintenance cost. In addition to making individual plots available to community members, the garden could serve as a gathering place facilitating positive social interactions. Other possible uses for community gardens include offering adult educational workshops, youth gardening programs, growing food for local food banks, and integration into senior centers.

Some general information about community gardens provided by the local nonprofit *Wasatch Community Garden* is located on the other side of this flyer.

Thank you for considering our proposal. Whether or not we obtain consent to use the parcel mentioned or if we find land elsewhere, we encourage your feedback and participation in the planning and development of the garden. For more information call 359-2658.



## Planning the Garden

Once a piece of land is secured, it's time to germinate the ideas considered during the envisioning stage, and begin planning them into reality. Some of the questions discussed in the first planning committee meeting probably included: What is our vision for the garden? What type of garden are we trying to create? Will we rent plots to individuals for them to do with as they please, or will certain groups garden in certain areas? Will some space be given for donating produce to the hungry? Should we include some specially designed plots accessible to people in wheelchair? Will we have raised beds plots? etc. Questions such as these, as well as the goals and objectives determined in this first meeting should again be brought to the table to guide the planning stage. During this stage the committee will address both the physical layout of the garden and its operational rules and regulations.

Begin by determining the square footage of gardening space available and map it out on paper. Then divide up and designate the area into sections for individual garden plots and all other basic elements found in community gardens. These can include communal spaces (for herbs or flowers), composting sites, meeting spaces, a sign, a message board, a fence surrounding the garden, tool boxes or sheds, a delivery space, shady areas for gardeners to sit and relax out of the sun, and irrigation systems (centralized sprinkler or drip systems, soaker hoses, or hand-

held hoses). Other gardens incorporate playgrounds for kids or small amphitheaters for community events. When mapping out the physical garden space, refer back to the Site Assessment List (from the "Site Assessment Criteria and Process" section) for a checklist of the basic garden elements.

Plot sizes vary from garden to garden depending on the preferences of the garden planners and the desires of the community gardeners. One garden plot can take anywhere from 24 to 200 square feet. At Wasatch Community Gardens, the most common plot size is 4' x 40' with 2 foot pathways on each side. Beds should run North-South if the garden is designed as a grid system to prevent shading out plots.

Once the physical elements have been designated and mapped out, the committee should begin drafting garden rules and regulations that determine everything from gardening methods allowed (organic or not), type of irrigation system (drip, sprinkler, or hoses), to establishing the date when individual garden plots must be cleared at the end of each season. Some of the questions that need to be answered include: Will garden members have to pay a plot rental fee? What rules will be established? Will we offer free seeds/seedlings to the gardeners? Will there be conditions for membership? Below is a sample "Rules and Regulations" document to give you a better idea of some of the concepts that should be considered.

## **Sample: Wasatch Community Gardens Community Garden Information & Policies**

Welcome to the \_\_\_\_ (date) gardening season! Wasatch Community Gardens is a local non-profit organization. We cultivate individual growth and neighborhood unity through community gardening and youth gardening education. Our community gardening policies and procedures are important for all community gardeners to understand. If you have any questions about this information, please call \_\_\_\_\_ (contact name) at \_\_\_\_\_ (phone #).

### ***Reserving your plot***

Each gardener is entitled to one plot (approximately 4 by 35 feet) if space is available. If there is space remaining by \_\_\_\_\_ (date) gardeners will have the opportunity to rent additional plots for the remainder of the season. A \$30 garden plot rental fee is required of all gardeners. Garden plots must be cleared of weeds by \_\_\_\_\_ (date). If a gardener has not used his/her plot by \_\_\_\_\_ (date), the plot will be given to another gardener or to the Wasatch Community Gardens' Youth Gardening Program. The \$30 fee will not be returned.

### **Land**

With the exception of the Tomato Garden, we do not own the land used for gardens. We have lease agreements with the owners but there is always a possibility that we will lose the use of the land. For this reason, there are some planting restrictions (ie trees and some perennials).

### **No herbicides, pesticides or chemical fertilizers allowed**

Our goal is to create and nurture healthy soil and a healthy plant environment in the garden. Because plant and soil health deteriorates with the use of chemicals, they are not allowed in any of our community gardens. Gardeners using chemical weed killers, fertilizers and/or pesticides will lose their gardening privileges!

### **Weeds and trash**

The city requires that we keep all weeds below six inches in height. It is the gardeners' responsibility to control the weeds and trash in their own plots and adjacent pathways, and to clear their plot of trellis materials and debris at the end of the season. Gardeners are also required to assist with weeding common areas.

### **Water use, drip irrigation and mulch**

Automatic drip irrigation systems operate at each site. WCG will maintain this system. Please do not alter the system in any way. Please report any problems or leaks to WCG. The drip system is a water-efficient method of garden irrigation. Each gardener will learn how the drip irrigation system works at the gardener orientation meetings. You can also help make sure that water is not wasted, and greatly reduce your garden's water needs by using mulch (this also helps keep out weeds).

### **No Rebar**

For safety reasons, rebar is not allowed for staking or trellising.

### **Cooperation and community**

This project will be more successful if all of our gardeners work together. We ask that in addition to your \$30 annual fee, you also make a contribution of your time by participating in clean-up projects in the spring and fall and general maintenance throughout the season. Each gardener is expected to contribute 12 hours of labor to the garden during the year.

### **Please remember**

Wasatch Community Gardens is a small non-profit organization supported by donated funds that must be raised annually. Staff size is small and varies according to funding. The purpose of our community gardening program is to provide access to land, water and general garden administration. The care and maintenance of the garden is the collective responsibility of the community gardeners.

### **Garden Addresses**

Grateful Tomato Garden: 800 South 600 East  
Marmalade Garden: 222 West 600 North

Fairpark Garden: 300 North 1037 West  
4th East Garden: 555 South 400 East

## Sample: Community Garden Rules and Gardener's Responsibilities

Each gardener must understand and agree to the following rules and responsibilities before gardening with Wasatch Community Gardens:

- Chemical weed killers, fertilizers and pesticides are not allowed in any garden.
- Garden fees are \$30.00 per plot, payable when gardener registers for plot.
- Plots are available on a first-come, first-served basis. Gardeners are limited to one plot (approximately 4' x 35'). Gardeners may have more plots and may be put on a waiting list for extra plots, if extra plots are available by \_\_\_\_ (date) of the gardening season.
- Disrespectful or abusive language, or destructive behavior can result in the immediate loss of all gardening privileges, and forfeiture of any crops remaining in the garden.
- New gardeners must attend a Garden Orientation in the Spring. Returning gardeners are strongly encouraged to attend Spring Orientations as well.
- Gardeners are responsible for weeding their plots by \_\_\_\_ (date), and clearing their plots at the end of each growing season (usually by \_\_\_\_).
- Gardeners are responsible for planting, cultivating and maintaining their own garden plots.
- Gardeners are responsible for assisting with maintenance of common areas at each garden. Gardeners must contribute 4 hours in the spring, 4 hours in the summer and 4 hours in the fall in the maintenance of common garden space.
- Gardeners are responsible for keeping the weeds in their gardens and adjoining pathways below six inches in height.
- Gardeners are responsible for clearing all plant and trellis materials out of their own garden by the end of each gardening season. Dead material should be placed in compost piles.

### *Wasatch Community Gardens' Responsibilities*

- Wasatch Community Gardens is responsible for administering the Community Gardening Program.
- Wasatch Community Gardens is responsible for registering gardeners and assigning available plots to each gardener.
- Wasatch Community Gardens will provide tools, technical assistance and skills training when possible.
- Wasatch Community Gardens is responsible for maintenance of water and drip irrigation systems and overall administration of each garden site.
- Wasatch Community Gardens reserves the right to make changes or exceptions to policies where and when appropriate.

## **Fundraising: How To Introduction**

There are many fundraising strategies to be considered shortly. However, before these are explored some general fundraising tips will be suggested. Starting a community garden doesn't have to be a costly endeavor, but it does require at least some minimal fundraising. By soliciting in-kind donations and dedicating some time to urban scavenging an organization can obtain many of the resources needed to start the community garden. It's helpful to create a fundraising committee both to spearhead the initial campaign as well as talking responsibility for raising the ongoing financial needs of the garden. To begin, the committee should be able to answer the questions; "What is the purpose and mission of the community garden?" and "Why is it necessary or desirable to the community?" The community garden's goals and objectives (refined, precise goals) should be outlined by the planning committee and then used to help convince donors to support the project. The fundraising committee should present these ideas in brochure form so they can be distributed to potential donors.

Although it's not necessary, the garden organization may want to obtain 501 (c)(3) tax-exempt status so donations are tax-deductible—thus attract more contributions (see "Becoming a Non-profit..." section for more discussion on this matter). The organization can either apply for its own tax-exempt status or it can affiliate with a parent organization such as a church or non-profit group under which to run the community garden and thus share their non-profit status.

If your community gardening organization wishes to raise money by soliciting donations from individuals, corporations or foundations, you will need to obtain a business license by incorporating--such as by becoming a nonprofit or LLC (see the "Legal Issues" section). The license cost for incorporating as a non-profit is \$22.00 or \$52.00 for a LLC as of March 2004.

Any business (non-profit or for-profit) in Utah is required to obtain a *Charitable Solicitations License* from the Utah Department of Consumer Protection. The fee for the license is \$100 per year.

A fundamental rule for fundraising is "Don't be afraid to ask: If you don't ask, you won't get it." Successful solicitations will encourage you to continue until you've met the budgetary goal. The fundraising committee should identify likely donors (gardeners, neighbors, local institutions or anyone else who will benefit from the garden). When raising a relatively small amount of money (which is likely the case for most community gardens), individual contacts will be the focus of your solicitations. Friends and acquaintances in particular are often those most willing to donate a little extra cash.

The initial start-up cost can range from \$500 to \$5,000 depending on the size, the elements (tool shed, irrigation system, type of fencing, extra wood, compost) that will be included in the garden and how much materials can be donated. The ongoing yearly budget can range from \$300 and up depending on size, water used, what's offered to the community gardeners by the organization (seeds, tools, compost), and repair costs (irrigation system). It's



often cheaper for businesses to donate in-kind rather than with financial contributions. Go to your local institutions, gardening and hardware stores where you're familiar with the owners or staff and ask them for donations. Take a "wish-list" of needed supplies. If you aren't familiar, don't let that stop you. Simply introduce yourself and have information about your organization, a fund-raising letter and your "wish-list" ready to give to the store manager. (Tip: contact seed companies and ask them for some of their seeds that they were unable to sell from the previous year. These seeds will generally only have a slightly diminished germination rate). Remember to say thanks regardless of their response—they may decide to donate in the future when they become more familiar with your group. If an organization seems especially interested in your cause, ask them to be an official fiscal sponsor.

In organic agriculture planting a diversity of crops together in a garden plot helps to prevent pest epidemics and the spread of species-specific pathogens (see "Introduction to Sustainable Gardening Practices"), therefore, planting diverse crops results in a more stable garden ecosystem. Similarly, using a diversity of fundraising strategies will increase the financial stability of the garden organization. Several potential fundraising strategies are summarized below.

### ***Direct-Mail Appeals***

Direct appeal fundraising letters are given to local corporation/banks, foundations and individuals to solicit contributions. See the "Resources" section to find more information on how

to craft successful letters. Include a "wish list" and a brochure with every letter you send to introduce your project to the targeted recipients. In-person delivery is preferable if possible and follow-up calls are advisable. In addition, thanking contributors and publicly acknowledging them is an essential way to show your appreciation and maintain a strong relationship. Don't be discouraged. Initial response may be minimal until the organization is more widely known.

### ***Writing Grant Proposal***

Grant writing can draw in significant contributions if done skillfully, though it can take 6 months or longer to get a response. Generally larger nonprofit organizations that have tax-exempt status utilize this strategy. Due to the elaborate process and limited space in this handbook, grant writing will not be discussed here. See the "Resources" section that follows for good references on this subject.

### ***Survey Letter***

Creating and disseminating a survey asking people for their input regarding the community garden project is a good introductory strategy that can accompany a letter or be sent individually. Start the survey with several questions that do not involve making donations, such as:

- 1) "Do you support the creation of a community garden in your neighborhood?"
- 2) "What type of garden would you like to see in your neighborhood (Youth Garden/Food Bank Garden/Educational Garden/Neighborhood Garden/Flower Garden, etc.)?"
- 3) "What type of programs would you like to see the garden organization offer?"

Then embed a subtle question into the survey regarding the respondent's

willingness to donate time, materials, or money.

**Door-to-Door Solicitation** (people hate to do it, but it’s effective)

This strategy is self-explanatory. Remember to have information ready to give out and be willing to listen to the concerns and input of those you approach. Again, thank them for their time regardless of whether they make a contribution or not.

**Fundraising Events**

It’s easy to overextend fundraising events and end up spending as much or more money organizing them than is raised in the end. Be careful to plan an event of the appropriate scale for your needs. It’s not necessary to spend a lot

of money to raise some. Be creative. Ideas to consider include: car washes, craft/bake sales, benefit concerts or lectures, auctions and raffles of donated items, plant sales, garden tours, harvest festivals/sales, creating and selling garden cookbooks and holding workshops taught by volunteer experts. When appropriate, entry fees can be charged. Fundraising events can also draw good publicity. Make certain that every potential donor is invited. Also, always have an official and recognizable “donation can” present at each function that you plan.

*The above information is intended as guidance only. It’s advisable to consult a lawyer regarding any legal issues that your committee is dealing with.*

**Sample: Initial Community Garden Budget**

<b><u>Start-up</u></b>	<b><u>Min. Cost</u></b>	<b><u>Max. Cost</u></b>	<b><u>Payment Explanation</u></b>
Soil Test		\$30	\$30
Compost		\$60	\$350 Cheaper source/partial donation
Drip Irrigation System	\$250.00		\$625.00 Donation from local farm that has leftovers
Water Timer		\$30	\$60 Cheaper model/partial donation
Fencing		\$150	\$2,000 Salvaged wood/cheaper source/partial donation
Sign		\$0	\$100 Salvaged materials/donation
Tools		\$50	\$250 Tool drive donation Initiative
Wood for Tool Bin		\$50	\$100 Look for donation/reclaimed wood
Liability Insurance		\$50	\$350 "Min." with Organizational sponsorship
Benches (3)		\$0	\$100 Look for donations/used
Incidentals that might arise		\$100	\$250
Renting Tiller		\$0	\$50 Look for donation
Outreach/PR		\$20	\$60 Min. with flyer printing/ Max. printing + ad
<b>Cost Totals Min./Max.</b>		<b>\$790</b>	<b>\$4,325</b>



### **Garden Coordinator, Steward, and Treasurer Job Descriptions**

As the community garden nears completion, the volunteer garden staff positions should be created and filled. In the “Forming a Planning Committee” section three staff positions were discussed: a Garden Coordinator who acts as the garden contact person and coordinates gardeners and plot assignments, water access, and communication with the landowner; a Treasurer, to handle the fees and money generated by fundraising, and maintain the checking account; and a Garden Steward, who is the link between the Garden Coordinator and the gardeners, the person responsible for making basic repairs in the garden (water system, fence, etc.), and making sure the garden is well-maintained and the rules followed. The division of responsibilities can vary as the committee sees fit. Therefore, more than recommending indispensable positions, those noted above serve to highlight responsibilities and essential tasks. Some Garden Coordinators may also serve as the treasurer. Other gardens

may have more than one Garden Steward. The most essential issue is to have at least one person in the garden managing it and acting as a liaison between the gardeners and the garden organizer, and one person who deals with administrative issues such as community relations, finances, and plot assignment.

If the community garden is a youth garden then the positions outlined above will differ in responsibilities. For example, instead of assigning plots to individual community gardeners, the Garden Coordinator might assign them to different youth groups or simply coordinate the garden educational series and select or develop curriculum. Regardless of the type of garden, it will still need people to manage the garden, coordinate administrative affairs, and to handle the money. Other possible positions include an ongoing Fundraiser and an Events Coordinator. Given the minimal budget of most community gardens payment for staff persons is not often possible. Offering plot fee waivers for the term of service is a nice way to compensate volunteers for their services.

Examples of job descriptions for the Garden Steward, Garden Coordinator and Treasurer positions are given below. These documents are primarily intended to give guidance to the committee and staff persons, as every community garden’s needs, purpose and organizational structure will be different.

## **Sample: Garden Steward Job Description**

### **Term of Service/ Selection Process**

One year (November-October)

Appointed by Community Gardening Committee (application must be filled out)

### ***Preseason Responsibilities***

Lay out community garden goals for Garden Steward program

Understand roles, responsibilities, expectations of garden organization, community gardeners and Stewards

Define authority, rule enforcement process (warning system) before the season begins

Know how to operate garden—steward should know basics in irrigation system maintenance repair, tool box/shed combo, etc.

Investigate leadership styles, different ways to operate garden, how to deal with difficult people, conflict resolution

Develop goals and strategies for achieving them

Example Goals for the Season

*Take every step possible to reduce water usage in all gardens*

*Increase gardener attendance at workshops*

*Increase gardener participation in maintaining communal areas*

*Hold a community celebration in each garden*

*Increase composting in each garden*

Determine calendar for coming year

### ***Continual, In-season Responsibilities***

Conduct routine clean-up/inspection rounds

Address community gardeners concerns in a timely manner

Act as a spokesperson for your garden - communicate garden needs

Act as a link between the Community Gardening Coordinator and the gardeners in your garden

Help Community Gardening Coordinator plan and implement social events, garden gatherings, and work projects in the garden

Make basic repairs on the garden water system

Implement positive change in your garden

Attend three update meetings per year with other Garden Stewards and Program Coordinator

Monitor the garden for signs of theft and/or vandalism

Monitor the garden for chemical usage (e.g. Miracle Grow, Round Up)

Make and post spring and fall checklist for individual plots and communal areas

### ***Tips for Garden Stewards Position***

Proximity is important—Steward should live close to garden to pay frequent visits to it

Ask each gardener what they could contribute to the garden—use their strengths

Understand Steward's strong points —technical knowledge, people person, well-organized

Understand and work on Steward's weaknesses

Enforce rules quickly—when some gardeners obey rules and some don't, tension and animosity can result.

Maintain garden systems such as the drip irrigation system, compost bins, etc.

### **Who to Contact in Case of:**

Water emergency

535-6900 Water Company

Vandalism (Graffiti Hotline), Violence, Police (non-emergency)

799-3000 Salt Lake City

Emergency

911

### Sample: Garden Coordinator Job Description/Responsibilities

Coordinate and Train Garden Steward, enable them to handle gardener disputes and organize communal space work projects

Organizes Community Garden Committee meetings

Recruit gardeners for garden each season as space is available

Assign garden plots

Plan and conduct garden orientations for community gardeners, work projects, and general garden meetings

Help committee determine which community gardeners would make good Garden Stewards and Treasurers--ask them if they're interested in volunteering for the job.

Determine roles, responsibilities, expectations of garden organization, community gardeners and Garden Coordinator

Lay out community garden goals with the Garden Steward and Treasurer

Determine method of communication with Garden Steward (check-in schedule)

Investigate leadership styles, different ways to operate garden, how to deal with difficult people, conflict resolution

Understand water and compost systems, policies and enforcement

Maintain good community relations, active public outreach, community contact list (community councils, churches, businesses, neighbors, non-profits, government staff, etc.)

Resolve conflicts that the Garden Steward and gardeners were unable to resolve

Sign lease on behalf of garden committee

Renew garden insurance plan

Help treasurer with fundraising

Help Garden Steward plan and implement social events, garden gatherings, and work projects in the garden

Develop goals and strategies for achieving them

Example Goals for the Season

*Take every step possible to reduce water usage in all gardens*

*Increase gardener attendance at workshops*

*Increase gardener participation in maintaining communal areas*

*Hold a community celebration in each garden*

*Active composting in each garden*

Determine calendar for coming year with Garden Steward and Treasurer

### Sample: Treasurer Job Description

The treasurer position doesn't take as much of a time commitment as the Garden Steward or Coordinator positions, but it does entail a lot of responsibility.

Tasks include:

Managing the organizations finances and bank account

Paying the bills—water, insurance, utilities, resources, etc.

Issuing checks for expenses requested and approved by committee

Depositing rental fees

Helping the Garden Coordinator and planning committee raise funds

## Prepare and Develop the Site

Once the garden plan has been finished and the necessary materials and funds gathered, it's time to prepare and develop the site. This is when the sweat and toil endured over the planning table begins to fruit, tangibly and the committee and community gardeners actually get to stick their fingers into the earth and be glad.

Several tasks need to be completed during this stage:

- 1) Organize one or more garden workdays to develop the garden space
- 2) Notify all volunteers and prepare them for the workday
- 3) Have utility companies mark out any water, gas, or utility lines and hook-up water before the workday
- 4) Amass all the input material, supplies and tools needed to create the garden

When planning the garden workdays it's important to pick a day(s) based on when you think the most volunteers could participate, and then publicize the event widely. Get the word out to all neighbors, community gardeners, anyone who at any time expressed even a modicum of interest, and to the general public. Recruit volunteers from universities, high schools, churches, County Cooperative Extensions Offices (they have master gardeners who have a number of volunteer hours for community projects they must complete to become certified), neighborhood council groups, girl scouts, boy scouts, and any other community groups you can think of. Also, the Utah nonprofit, Information and Referrals (a program of the Community Services Council), may be a helpful resource. Among other services they recruit and refer volunteers and publicize volunteer needs. Call them at 211 or 972-3333. Their website is [www.informationandreferral.org](http://www.informationandreferral.org). The more volunteers are recruited, the faster the tasks will be accomplished and the more community interaction and cohesion.

Hopefully this will be the first of many community gatherings that will occur in the garden space.

Before breaking the ground it's important that the whereabouts of all water, gas, or utility lines are known. This can be determined (for residents of Utah) by calling the non-profit Blue Stakes of Utah, who will contact utility companies and instruct them to mark-off their lines according to a pre-established color-coding scheme. It takes a week or so before the land can be marked, so it's a good idea to call and schedule the markings to occur before the date of the workday. Blue Stakes of Utah can be reached at 801-208-2100, or 1-800-662-4111. It's also a good idea to make sure the water is hooked up and spouting by the workday so when the garden has been developed community gardeners can immediately begin planting and seeing the benefits of their planning efforts.

It's helpful to establish one or more event coordinators for the workday(s) to see that the event runs smoothly, i.e. to coordinate the materials and volunteers the day of the event, and act as the contact person. The event coordinators should be easily identifiable, wearing some form of insignia so that volunteers can find them and be directed. Before the workday begins, the event coordinator should refer back to the layout map and plan made during the garden planning stage. This will keep the volunteers organized and make sure that the garden develops according to the decisions made during the planning stages. The planning committee may also want to contact and invite local press to catch some positive publicity for the community garden. In addition, someone should be assigned the task of taking pictures before, during, and after the workdays to document the changes and compare them with the garden later on in the season.

During the workday, all the tools, supplies, and input resources needed for preparing and developing the site must be gathered at the site. Some of these items are listed at the end of the section. Be sure to ask volunteers to bring their own tools if they are needed.

Once onsite, the first task is to clear the site of garbage, rubble, and large rocks. It's also good to remove weeds before tilling to avoid chopping and dispersing weed roots and seeds. After it's cleared the lot should either be tilled all together, or each individual plot should be delineated with string and stakes (or untreated wood for raised beds), and then tilled individually. The latter option may be more efficient as pathways and sitting areas don't need to be tilled. If the parcel is covered with sod, remove the sod, then go forward with the above task. Sod can be removed by hand and shovel, or by a sod cutter. If by hand, cut into the sod with shovel to a depth of three inches, lift up the edge of the sod, wedge a shovel underneath, pry up the section and remove it.

Compost and extra topsoil (if needed) can be added before or after tilling. Either way it's more cost efficient to add these materials to individual plots rather than waste them on the paths and other areas that will not be cultivated.

Once plots have been marked and tilled, each one can be double-dug (mixing in any compost or soil amendments if they haven't been already). This will aerate, loosen and enriching the soil up to two feet deep, and is thought to create the optimal growing conditions. This is good to do in addition to tilling because even deep-tined tillers usually do not penetrate deeper than a foot. However, some people use broadforks instead of the double-digging methods to avoid damaging soil

structure and disrupting the upper soil layer that contains the most biological activity. For more information about the double-digging technique, see the "Double-digging" handout included in this booklet. For raised beds, the soil and compost may be sufficiently loose, aerated and mixed, simply by the act of filling them up, and therefore require no additional preparation.

After each plot has been clearly marked, tilled and double-dug, it's time to layout the waterlines and setup the timer (for drip irrigation or sprinkler systems) or hook-up the hoses. If no one in the group has experience setting up irrigation systems, find a local expert and ask them to donate their expertise.

Once all the plots and paths have been created, the remaining designated areas should be established. These include setting up the compost area, building or assembling the shed or tool box, creating the meeting spaces and shady spots, building the fence, erecting the sign and bulletin board, laying down woodchips or mulch over the paths, and planting the communal garden plots. With a sufficient number of volunteers working these tasks together, the community garden should be completed in no more than a couple of days. At this point the planning committee may want to throw a grand opening party to publicly acknowledge the efforts of those involved in its creation, and to celebrate the new asset of the community. All volunteers, neighbors, community gardeners, contributors of any kind and the general public should be invited. The press should be contacted to gain some positive publicity. The party could be in barbeque/potluck style with music. During the event, every individual, church, foundation or business that contributed time, materials or funding should be publicly acknowledged and thanked.

*List of tools, supplies, and other resources for preparing and developing the garden*

*Tools:*

- \*Long handled, Round-nosed Shovels, for general turning soil and compost
- Short/D-handled, Square-nosed Digging Spade, for double-digging and sod removal
- Rectangular Digging Spade, for digging straight-edged holes (for trees or larger shrubs)
- \*Steel, Level-head or Bow Rakes, for smoothing and grading soil, incorporating compost into the soil surface, and covering seeds
- Garden Hoes, for weeding, cultivating soil, and making furrows to plant seeds into
- \*Hand Shovels and Trowels, for weeding, cultivating and planting seedlings in prepared beds
- Small Front-tine or larger, more powerful, Rear-tine Rotary Tillers, (depending on the size of the area to be tilled and the hardness of the soil) for initial preparation and aeration of beds, and working compost into soil
- \*Wheel-barrows, for moving soil/compost or if removing sod from the site
- \*Spading (Digging) Fork, for turning and aerating soil and compost, and digging for root crops
- Broadfork, (if needed) for loosening and aerating soil with minimal structural disturbance to soil and soil organisms (sometimes used instead of the double-digging method)
- Mattock, (if needed) used if the soil is very hard
- Sod Cutter, (if needed) for removing sod (manual or motorized), but you can use shovels
- Loopers, for pruning small-diameter tree and shrub branches
- Swivel Saw, for pruning back shrubs and trees

*Supplies:*

- Gardening gloves
- 100+ ft. measuring tape
- Building tools and supplies if building a fence, tool box/shed, raised beds, signs or a bulletin board
- Irrigation system supplies: timer, hoses, drip line, filter, sprinklers, etc. depending on which type of irrigation system has been chosen.
- Garbage bag for litter
- String and stakes for delineating plots
- Untreated wood for raised beds, lining the paths, etc.
- Benches and tables

*Other Resources:*

- Compost
- Extra topsoil
- Wood chips for the path
- Mulching materials
- Plants and trees that will occupy the communal spaces (If individual plot renters have been assigned plot space by this time, they may wish to bring plants or seeds and begin planting immediately)

(\* indicates most essential tools)



## Organize the Gardeners

Once the groundwork has been laid, you will have more people who are interested in being a part of the garden. If you anticipate having room in the garden for more people beyond the Planning Committee, now is the time to recruit more gardeners. Post flyers in your neighborhood, make small presentations at local

churches and community centers, and always communicate through word of mouth. Explain what people need to do to be involved, how the garden is laid out, any garden rules that have been established, and how soon they can get started. Below is a sample orientation outline to help the Garden Coordinator acquaint new gardeners with the garden.

### Sample: Orientation Outline

All Community Gardeners are required to attend a garden orientation in their assigned garden before they are assigned a specific plot. Returning gardeners are encouraged to attend Spring Orientations, but are not required to do so. The Garden Steward can also help plan and should attend the meeting. The following information should be used when planning spring orientations.

#### 1. Preparation

- A. In January, set the dates for Orientations
  - i. Each garden should have two options scheduled – Orientation and alternate Rain Date
  - ii. Try to schedule on a Tues., Wed. or Thurs. evening to catch those who work
  - iii. Schedule Spring Garden Cleanups on Saturdays soon after the orientation date
  - iv. Usually Orientations are scheduled at the end of March, beginning of April. This gives gardeners enough time to work their plots before the May 1 deadline.
- B. Notify gardeners of Orientation dates
  - i. Print the dates in the Spring Newsletter
  - ii. Print postcards and send to new and returning gardeners
  - iii. Do not tell people about the orientation until they have returned their registration form.
  - iv. Reminder phone calls might be helpful, but not required
- C. Materials
  - i. Print any handouts you will need at least a week before the first Orientation
  - ii. Prepare drip irrigation demos
  - iii. Make sure that you have access to dry erase board and writing implements

#### 2. Orientation

- A. Orientation should take 30-45 minutes
  - i. Some gardeners will have more questions than others
  - ii. Be prepared to repeat items for latecomers
- B. Use Gardener Information and Policies sheet as a guide for discussion topics
  - i. Remember to discuss rules for "subletting" garden plots (not on sheet)
  - ii. Be sensitive to group dynamics; maintain group attention
  - iii. Emphasize importance of community/working together
- C. Goals
  - i. To discuss and familiarize gardeners with garden policies
  - ii. To emphasize drip irrigation protocol
  - iii. To emphasize appropriate planting practices
  - iv. To assign plots to new gardeners
  - v. To provide gardeners with an opportunity to get to know each other
- D. Do a short garden tour
  - i. Tool bin
  - ii. Bulletin board or place to communicate
  - iii. Water source
  - iv. Compost pile(s)
  - v. Combination Lock
  - vi. Garden Layout
- E. Assign plots to new gardeners
  - i. Gardeners must complete Orientation before receiving plot assignment

## Long-term Planning

At last the community garden is in full operation. The gardeners are becoming acquainted with their soil, neighbors are chatting merrily under shady trees, children are constructively playing in their youth plots, squash plants are sinuously vining and flowers blossoming prolifically. Now it's time to consider how to maintain the urban paradise you've so laudably created. This is the long-term planning stage, crucial for sustaining the garden.

There are a number of issues to consider regarding the long-term viability of a community garden. How can you ensure that the land will remain available to your gardeners over the long run? One of the most common threats to community gardens is land loss. The property owner could decide to develop the land, the garden organization could crumble due to a lack of financial support, the land could be rendered unproductive due to intensive unsustainable gardening practices, the community gardeners could lose interest, or a group of neighbors or government official could campaign against the garden leading to its expulsion from the site. Although in some instances the community garden will not be able to avoid these challenges and must be relocated, a little foresighted planning can go a long way.

### The Land

When signing a lease for a particular property, try to negotiate as lengthy a lease as possible. Wasatch Community Gardens recommends a minimum of 3 to 5 years, but the longer the better. Some gardens have been able to negotiate a 10, 20 and even a

99-year lease. In addition to lease length if the property owner agrees, it's a good idea to include a clause outlining the lease renewal procedure and an "option to buy" clause in the lease. Organizing a fund raising drive to buy the land is the surest way to maintain the garden for perpetuity. Again, maintaining active and solid public support will aid in the success of such a campaign. In the case that the property owner is determined to develop the property, it may be necessary for the garden to relocate. However, because the garden administration and gardeners are already organized the search for land should be easier than the initial hunt.



Lastly, attention should be given to the garden's ecological sustainability. For example, growing heavy-feeder crops such as corn on the same plot of land without adding organic matter, rotating crops or planting cover crops will eventually deplete the soil. Periodically adding compost, cover cropping and rotating crops will help the soil retain adequate nutrient levels and help prevent the proliferation

of soil born pests such as nematodes and pathogens. Good stewardship and cultivation practices will help community gardens stay productive over the long run. By predominantly using inputs grown and prepared on site, a garden can come close to achieving a self-reliance that will contribute to its sustainability. (See "Introduction to Sustainable Gardening Practices" section for more on gardening sustainably).

### Neighborhood Support

It's essential that the community and especially the direct neighbors of the garden remain invested and in positive relation with the garden. Maintaining strong community contentment with the garden will assure future support in case the garden becomes

endangered in the future for any of the reasons mentioned above. This point has been mentioned before but it can't be stressed enough. Furthermore, the larger and more diverse the coalition of supporters, the more successful and secure the garden will be in the long run. (See the "Challenges..." section to follow for more on neighborhood support).

By working with city officials you may also be able to have community gardening or your particular garden included into neighborhood city plans by means of garden-friendly zoning ordinances or other municipal community garden policies. Even if no policy initiative is attempted, the garden will be more secure simply by maintaining good relations with government officials and community leaders. (See *Policy References* in the "Resources" section).

Lastly, by actively recruiting new gardeners and volunteers using the same methods employed during the planning stages, the garden will never have to worry about losing community support. Most successful gardens with have a waiting list for interested gardeners or gardening groups until plots become available.

#### **Administrative and Organizational Issues**

There are some administrative questions that should be answered to prepare for changes that may occur in the long-term. These include: how will your organization make amendments to the Rules & Regulations if they are needed? How will new Coordinators, Steward and Treasurer positions be filled as individuals come and go? And, how will they be trained once they're elected? (Revisit the "Job Description" sections for more on these topics).

As time passes the garden organization, firmly rooted in the community, may wish to expand their role. This may arise from the

internal desires of the organization, or in reaction to changes in the community as demographic turnover occurs. It's a good idea to keep up communication with the community immediately surrounding the garden to address their changing needs. This will maintain the garden's usefulness and therefore the community's support for it. Some of the organization's goals and objective may entail offering more public education programs, opening up additional gardens, or offering new services to the public. It's helpful to stay cognizant of long-term issues in the present to help steer the organization in the desired direction. Also, when expanding programs and operations it is advisable to take manageable steps to avoid overwhelming the organization and triggering its collapse. Such changes in direction might merit updating the organizations official mission statement.

#### **Finances**

As mentioned earlier, if your garden charges a fee for plot rental, it is sometimes possible to determine the rental fees so that they cover the yearly cost of maintenance (for water, repairs, etc.) Otherwise it will be necessary to engage in fundraising campaigns each year. See the earlier "Fundraising" section for fundraising ideas. The Treasurer should keep up a checking account, and if possible, maintain a small balance to help the organization in case unforeseen costs arise.

#### **Maintenance**

Having a maintenance plan that assigns necessary tasks and schedules community garden workdays will help keep up a comely appearance prevent weed infestations, and keep the surrounding community satisfied. (See *Maintaining the Gardens Appearance* from the "Challenges..." section for more on garden maintenance).

## **Maintaining the Site and Promoting Positive Community Relations**

Once the garden has been established and plants begin to grow, don't forget that it will need continued attention throughout the year. Weeds will be a problem the first season. The best way to battle them is to pull them out before they go to seed – this will require communal effort. You may experience vandalism. Be prepared with the number of the graffiti hotline and get to know the officer who patrols your neighborhood. You will undoubtedly have problems with your new water system. Make sure that you retain good relations with the person who helped install it. Be sure to turn the water off before the ground freezes, and don't turn it on again until the ground thaws. Don't forget to have a harvest party at the end of the season to thank everyone for their hard work and to celebrate the fruits of your labor.

Maintain community involvement by attending community council meetings, posting flyers in your neighborhood, making presentations to youth groups, civic groups, church groups. Always notify neighbors of the garden of any changes you plan or any events that will be taking place – they can be your best allies.

## **Challenges Community Gardens May Face**

### ***Lack of Community***

After the first few seasons, interest may plateau or even start declining without any active outreach. This is when the community garden (if not owned) may become vulnerable to development or collapse. There are a number of outreach activities that can help sustain community interest over the long run, such as holding biannual garden festivals and offering public classes on gardening techniques.

In addition, keep friendly terms with the neighbors. Up-date them about the garden's status and any events held there—both to invite them and to give them a heads up.

### ***'Enemies' of Garden***

It's important to invite anyone and everyone with any possible interest in the community garden project to participate in the creation of the garden from the beginning. People that feel left out may develop an ultimatum against the garden. Maintaining good relations and communication with the community, making lots of friends, and keeping a good track record by dealing with complaints quickly and respectfully are the best ways to limit the number of 'enemies' of the garden. In the case that someone has a determined and rigid hatred of the garden, try understanding their concerns and invite friendly dialogue. Avoid degenerating to name calling. If their attack continues, your history of good relations and solid community support will serve as your best protection.

### ***Vandalism and Theft***

It's a good idea to be prepared for vandalism and theft in a new community garden. However, the problem tends to be an exaggerated one that most gardens experience only minimally. Fences are used to deter vandals and keep stray dogs out. Neighbors and gardeners are asked to keep an eye out for strangers who may not be respecting the garden property. Signs can be posted requesting visitors to refrain from picking community gardeners' produce. Also, by inviting the whole community to participate in the garden early on, potential troublemakers become positively involved in the garden rather than causing problems. Refer back to the "Neighborhood" paragraph in the "Investigating Land Options and Choosing a Site" section for more information on how to avoid crime related issues with good planning. Lastly, including youth programs or plots in the community garden will invite their positive participation in the garden and give them a sense of ownership. Neighborhood children

who have no relation to the garden may be more likely to vandalize it.

### ***Rule Enforcement and Conflict Resolution***

In general, good communication between gardeners, the garden coordinator and stewards, and the garden organization will help avoid animosity in the garden. If ever a conflict arises between any of these entities, it's helpful to have a fair system established for resolving issues and for enforcing rules. Gardens need not be governed by draconian rules. However, in the rare case that someone continues to violate the rules that they agreed to obey when they applied, immediate enforcement will demonstrate the gravity and legitimacy of the rules. A warning system for rule violations is a good way to avoid problems getting out of hand. This may all seem strict for a friendly garden scene, but the rules and regulations serve a purpose—to maintain a safe, clean, beautiful and friendly environment for community gardeners and the community at large. Therefore, as community gardeners are applying for garden plots, be sure to communicate clearly the garden organization's expectations, and in turn, the expectation that gardeners should have for the organization. Everyone entering the garden should know the garden rules. One way to achieve this is to post them near the garden entrances and by giving all community gardeners copies of the rules as they sign them. In addition, make sure gardeners, neighbors, and garden stewards have a way to voice their opinion and influence the way the garden is run and maintained. Giving everyone a voice will channel differences of opinion towards productive means of resolution.

### ***Maintaining the Gardens Appearance***

Maintaining a clean and attractive appearance for a community garden is essential for keeping the surrounding community happy. Unkempt gardens elicit complaints, create garden adversaries, and generally diminish the quality of a

neighborhood. Good planning will help maintain a beautiful and attractive garden.

One possibility is to assign highly visible plots to experienced and dedicated gardeners or to plant the border plots communally or as well-kempt demonstration beds. Showy ornamentals can be planted along the fence lines. Evergreen species could be used to maintain a green boarder during the winter months. Having a nice sign for the garden, keeping clean and sightly pathways, and incorporating art into the garden are other ways to help maintain a good appearance.

Perhaps the most essential aspect of keeping the garden looking beautiful is establishing and enforcing garden rules that determine maximum weed height allowed, the dates for individual plot cleanup, as well as a minimum number of hours each community gardener must contribute to maintaining communal areas.

It's helpful if the garden steward lives within close proximity to the community garden, and if possible, if the community gardeners do as well. The closer the steward and gardeners are to the garden, the more they will use it and care for it. Those who don't live within walking distance are likely to visit the garden less often and, therefore, more likely to neglect their plots.

Lastly, if a composting site will be included into the garden plan, make sure the design of the compost bins keep rodents away, or prohibit the disposal of food waste into the piles.

## Resource Guide for Starting a Community Gardening

### Books/Articles/Websites on Community Gardening:

#### *Community Gardening Guides*

- A Handbook of Community Gardening, by Boston Urban Gardeners, edited by Susan Naimark Published in 1982
- Creating Community Gardens, by Dorothy Johnson, Executive Director, & Rick Bonlender, MN Green Coordinator, Minnesota State Horticultural Society Minnesota State Horticultural Society, 1970, Charles Scribner's Sons, New York
- Cultivating Community: Principles and Practices for Community Gardening As a Community-Building Tool, by Karen Payne and Deborah Fryman
- "Starting a Community Garden," American Community Garden Association (ACGA), <http://www.communitygarden.org/pubs/starting.html>
- "Community Garden Start-up Guide," University of California Cooperative Extension in Los Angeles, [http://celosangeles.ucdavis.edu/garden/articles/startup\\_guide.html](http://celosangeles.ucdavis.edu/garden/articles/startup_guide.html)

#### *Fundraising*

- "How to: Fund Raising," by Gary Goosman, in Community Greening Review 1998, ACGA
- The Complete Book of Fund-Raising Writing, Don Fey, The Morris-Lee Publishing Group, 1995
- The Complete Book of Model Fund-Raising Letters, Roland Kuniholm, Prentice Hall, 1995
- (See *Local* section for local assistance in becoming a nonprofit)

#### *Community Garden Policy, Municipal Programs*

- "Community Development through Gardening: State and Local Policies Transforming Urban Open Space", by Jane E. Schukoske. A PDF file that can be downloaded from NYU website.
- "Comprehensive Plans, Zoning Regulations, Open Space Policies and Goals Concerning Community Gardens and Open Green Space from the Cities of Seattle, Berkeley, Boston, and Chicago" Information compiled by ACGA Member Lenny Librizzi for the GreenThumb Grow Together Workshop "Lessons From Community Gardening Programs In Other Cities" given March 20, 1999. [www.communitygarden.org/links/cg\\_policies.pdf](http://www.communitygarden.org/links/cg_policies.pdf)
- "**National Community Garden Survey 1996**," ACGA Monograph by Suzanne Monroe-Santos, <http://www.communitygarden.org/pubs/Monograph1.pdf>
- "Making Policy in a Crowded World: Steps Beyond the Physical Garden," by Pamela R. Kirschbaum, in Community Greening Review, ACGA 2000

### General Gardening Resources:

- How to Grow More Vegetables, John Jeavons, Ten Speed Press, 1995
- Four-Season Harvest, Eliot Coleman, Chelsea Green Publishing Co., 1999
- Rodale's All-New Encyclopedia of Organic Gardening, Barbara W. Ellis (ed.), Rodale Press, 1992
- Encyclopedia of Organic Gardening, J. I. Rodale, Rodale Press, 2000
- Step by Step Organic Vegetable Gardening, Shepherd Ogden, Harper Perennial, 1994

#### *Companion Planting*

- Carrots Love Tomatoes, Louise Riotte, Storey Books, 1998
- Great Garden Companions, Sally Jean Cunningham, Rodale Press

#### *Pest Control*

- Rodale's Color Handbook of Garden Insects, Anna Carr, Rodale Press, 1979
- Rodale's Successful Organic Gardening Controlling Pests and Diseases, Michalak & Gilkeson, Rodale Press, 1994
- The Organic Gardener's Handbook of Natural Pest and Disease Control, Barbara Ellis, Rodale Press, 1996
- Bugs, Slugs, and Other Thugs, Rhonda Massingham Hart, Storey Books, 1991
- Dead Snails Leave No Trails, Loren Nancarrow and Janet Hogan Taylor, Ten Speed Press, Berkeley, CA 1996
- Good Bugs for Your Garden, Allison Mia Starcher, Algonquin Books, 1995
- 1,001 Old-Time Garden Tips, Roger B. Yepson, Rodale Press, 1998

#### *Edible Landscaping*

- Designing and Maintaining Your Edible Landscape Naturally, Robert Kourik (out of print)

#### *Gardening and the Environment*

- The One Straw Revolution, Masanobu Fukuoka (out of print)
- Introduction to Permaculture, Bill C. Mollison, Ten Speed Press, 1997

Gardening for the Future of the Earth, Howard-Yana Shapiro/John Harrison, Bantam Doubleday Dell Publishing, 2000

### ***Lead in Soil***

<http://ohioline.osu.edu/hyg-fact/1000/1149.html>

### ***Composting***

The Rodale Book of Composting: Easy Methods for Every Gardener, Martin & Gershuny, eds., Rodale Press, 1992

### ***Vermiculture***

Worms Eat My Garbage, Mary Appelhof, Flower Press 1982 Kalamazoo, Michigan

### **Periodicals:**

*Organic Gardening*, Rodale Press, <http://www.organicgardening.com>

*Mother Earth News*, Ogden Publications, <http://www.motherearthnews.com>

### **Tool Catalogs:**

Lee Valley Tools (800) 871-8158

PO Box 1780 Ogdensburg, NY 13669-6780

<http://www.leevalley.com>

### **Seed Catalogs:**

Bountiful Gardens

18001 Shafer Ranch Road Willits, CA 95490

<http://www.bountifulgardens.org>

The Cooks' Garden (800) 457-9703

PO Box 535 Londonderry, VT 05148

<http://www.cooksgarden.com>

High Country Gardens (800)925-9387

2902 Rufina Street Santa Fe, NM 87507-2929

<http://www.highcountrygardens.com>

Johnny's Seeds (207) 437-4301

184 Foss Hill Road Albion, ME 04910-9731

<http://www.johnnyseeds.com>

Peaceful Valley Farm Supply (888) 784-1722

PO Box 2209 Grass Valley, CA 95945

<http://www.groworganic.com>

Seed Savers Exchange (563) 382-5990

3076 North Winn Road Decorah, Iowa 52101

<http://www.seedsavers.org>

Seeds of Change (888)-762-7333

PO Box 15700 Santa Fe, NM 87592-1500

<http://seedsofchange.com>

Shepherd's Garden Seeds (860) 482-3638

30 Irene Street Torrington, CT 06790-6658

<http://www.shepherdseeds.com>

Tomato Growers Supply Company

(888) 478-7333

PO 2237 Fort Meyers, FL 33902

<http://www.tomatogrowers.com>

### **Local Resources:**

#### ***Compost***

Ranui Live Compost  
(435) 336-2813

City Landfill (California Ave./~6000 West) 974-6900  
For compost, mulch, wood chips

**Straw**

AA Callister 973-7058  
3615 South Redwood Road

Layton Farm and Home 544-5944  
164 S Main Layton 84041-3725

Ball Feed and Horse Supply 255-2621  
7500 South 700 West Midvale

Intermountain Farmer's Association  
1147 West 2100 South SLC 972-3009  
1045 East 12400 South Draper 571-0125

**Drip Irrigation**

Trickle Irrigation (Sherm Fox)  
Sprinkler World

4267 S Camille-2500E, Holliday  
8451 S Sandy Parkway, Sandy

272-2354  
562-4575

**Tools, Etc...**

Western Garden 364-7871  
550 South 600 East

Home Depot 467-3900  
300 West 2100 South

Gard'n Wise 936-0940  
360 North 700 West Ste. A  
(in NSL)

Steve Regan 268-4500  
4215 S 500 W

Harbor Freight 484-9556  
3470 South State

Burton Lumber 487-8861  
2220 South State

Sutherland's 538-0000  
1780 West North Temple

**Soil Testing**

USU Analytical Labs (435) 797-2217  
Ag Science Rm 166  
Logan, UT 84322-4830

**Horticultural Specialists**

Utah Extensions Service

Salt Lake County: 2001 South State Street #1200

Salt Lake City

801-468-3170

Davis County: 28 East State Street PO Box 618

Farmington

801-451-3403

Utah County: 51 South University Avenue #206

Provo

801-370-8460

Wasatch Community Gardens

400 South 345 East, SLC UT 801-359-2658

**Utah Fundraising, Incorporating, Legal Assistance**

Utah Nonprofits Association

260 S. Central Campus Drive, Room 214 Telephone: (801) 581-4883  
Salt Lake City, UT 84112-915

State of Utah Dept. of Commerce

160 East 300 South Main Floor, SLC (Walk-In)  
Information Center: (801) 530-4849 (877) 526-6438  
[www.commerce.utah.gov](http://www.commerce.utah.gov)

Internal Revenues Service

Tax Questions: 1-800-829-1040  
Tax Forms: 1-800-829-3676

Utah State Bar

645 South 245 East  
SLC, UT  
531-9077



## Web Sites:

<b>Wasatch Community Gardens</b>	<a href="http://www.wasatchgardens.org">www.wasatchgardens.org</a>
<b>Garden Guides</b>	<a href="http://www.gardenguides.com">www.gardenguides.com</a>
<b>Garden Gate</b>	<a href="http://garden-gate.prairienet.org">garden-gate.prairienet.org</a>
<b>Garden Web</b>	<a href="http://www.gardenweb.com">www.gardenweb.com</a>
<b>Cooks' Garden</b>	<a href="http://www.cooksgarden.com">www.cooksgarden.com</a>
<b>Organic Kitchen</b>	<a href="http://www.organickitchen.com">www.organickitchen.com</a>
<b>World Leader</b>	<a href="http://www.worldleader.com/garden">www.worldleader.com/garden</a>
<b>Backyard Gardener</b>	<a href="http://www.backyardgardener.com">www.backyardgardener.com</a>
<b>Seeds Blum</b>	<a href="http://www.seedsblum.com">www.seedsblum.com</a>
<b>Garden Forever</b>	<a href="http://www.gardenforever.com">www.gardenforever.com</a>
<b>ACGA</b>	<a href="http://www.communitygarden.org/index.html">www.communitygarden.org/index.html</a>
<b>Biodynamic Gardening</b>	<a href="http://www.biodynamic.net">www.biodynamic.net</a>
<b>Gardening</b>	<a href="http://www.life.ca/subject/gardening.html">www.life.ca/subject/gardening.html</a>
<b>Urban Harvest</b>	<a href="http://www.jumpnet.com/~arjun/UrbanHarvest">www.jumpnet.com/~arjun/UrbanHarvest</a>
<b>CSA info</b>	<a href="http://www.csacenter.org">www.csacenter.org</a>
<b>Garden Net</b>	<a href="http://www.gardennet.com">www.gardennet.com</a>
<b>National Gardening Assoc.</b>	<a href="http://www.garden.org/">www.garden.org/</a>

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## Sources

- A Handbook of Community Gardening, by Boston Urban Gardeners, Susan Naimark ed., Charles Scribner's Sons, 1982
- "Can Agriculture and Biodiversity Coexist?," by Catherine Badgley, in Fatal Harvest, Kimbrell ed., Island Press, 2002
- "Community Garden Start-up Guide," University of California Cooperative Extension in Los Angeles, [http://celosangeles.ucdavis.edu/garden/articles/startup\\_guide.html](http://celosangeles.ucdavis.edu/garden/articles/startup_guide.html)
- Coming Home to Eat, by Gary Paul Nabham, W.W. Norton & Company, 2002
- Creating Community Gardens, by Dorothy Johnson, Executive Director, & Rick Bonlender, MN State Horticultural Society, 1992
- Cultivating Community: Principles and Practices for Community Gardening As a Community-Building Tool, by Karen Payne and Deborah Fryman, American Community Gardening Association, 2001
- Encyclopedia of Organic Gardening, J. I. Rodale, Rodale Press, 2000
- Four-Season Harvest, Eliot Coleman, Chelsea Green Publishing Co., 1999
- "How to: Fund Raising," by Gary Goosman, in Community Greening Review, American Community Gardening Association, 1998
- How to Grow More Vegetables, John Jeavons, Ten Speed Press, 1995
- Internal Revenues Service
- Rodale's All-New Encyclopedia of Organic Gardening, Barbara W. Ellis (ed.), Rodale Press, 1992
- "Starting a Community Garden," American Community Garden Association, <http://www.communitygarden.org/pubs/starting.html>
- State of Utah Dept. of Commerce, [www.commerce.utah.gov](http://www.commerce.utah.gov)
- The Complete Book of Fund-Raising Writing, Don Fey, The Morris-Lee Publishing Group, 1995
- The Complete Book of Model Fund-Raising Letters, Roland Kuniholm, Prentice Hall, 1995
- The Garden Primer, Barbara Damrosch, Workman Publishing, 1988
- The New Organic Grower, Eliot Coleman, Chelsea Green Publishing CO, 1995
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### To obtain copies of this handbook contact us:

Wasatch Community Gardens  
 P.O. Box 2924  
 Salt Lake City, UT 84110-2926  
 801-359-2658



## **Appendix** ***Organic Gardening***

*Compose by Wasatch Community Gardens Staff or as Sited*

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## Introduction to Sustainable Gardening Practices

"We 'farm' as we eat. For example, if we consume food that has been grown using methods that inadvertently deplete the soil in the growing process, then we are responsible for depleting the soil. If, instead, we raise or request food grown in ways that heal the Earth, then we are healing the Earth and its soils. Our daily food choices will make the difference. We can choose to sustain ourselves while increasing the vitality of the planet." John Jeavons, *How to Grow More Vegetables*

The goal of gardening sustainably is to maintain a healthy environment, community, and economy while providing nutritious food. It is a “whole system” growing method. This means that all of its components—composting, companion planting, cover cropping, intensive planting, double digging, and water conservation—must be used together for the best results.

### Five Components of Sustainable Gardening Practices

#### 1. Composting

Composting is the keystone to a successful sustainable garden. Creating compost piles is one of the best investments you can make in your garden. As the soil's health improves, plants are more healthy and you will grow more food. Rather than sending your garden wastes to the landfill and spending upwards of \$50 a year on fertilizers, your compost pile allows you to invest your precious plant materials to produce nature’s finest fertilizer. Compost will:

- Add organic matter naturally
- Prevent plant and soil diseases
- Correct sandy or clay soil structure
- Make a great mulch or top dressing
- Provide a variety of nutrients when plants need them
- Aerate soil
- Improve drainage
- Prevent erosion
- Neutralize toxins
- Recycle garden wastes

#### 2. Companion Planting and Interplanting

Companion plants are ones that produce better yields and healthier plants when they grow near each other. Interplanting is the practice of sewing 2 or more varieties of plants together (e.g. beans using corn as a living trellis). Some plants are useful in repelling pests, while others attract beneficial insect life. Borage, for example, helps control tomato worms while its blue flowers attract bees. Many wild plants have a healthy effect on the soil; their deep roots loosen the subsoil and bring up previously unavailable trace minerals and nutrients. And there seems to be no obvious reason why some plants would be companions, like carrots and tomatoes. Companion planting charts are available on the web and from Wasatch Community Gardens.

#### 3. Cover Cropping

Cover crops are any type of planting that covers your soil when it is not being used for active production. Favorite cover crops are ones that produce a good amount of dry matter for the compost bin (rye, wheat, sudangrass) and ones that “fix” nitrogen from the air to the soil, called legumes (peas, vetch, clover). Cover crops should be harvested and composted to add organic matter and nutrients to your soil. Although cover cropping has traditionally been used by farmers

for maintaining healthy soil, many home and urban gardeners are using the same techniques on a smaller scale. Using cover crops can:

- Protect soil in winter months
- Attract beneficial insects
- Break up clay or hardpan
- Increase nutrients in your soil
- Conserve soil moisture
- Suppress weeds
- Cover & protect unused areas
- Prevent erosion by wind and rain
- Increase organic matter in your soil
- Recycle garden nutrients

#### **4. Intensive Planting in Double-dug Beds**

By spacing plants closely together, the home gardener can create a "living mulch" or mini-climate to protect and enrich the soil. Seeds or seedlings are planted in 3- to 5-foot wide beds using a hexagonal spacing pattern. Each plant is placed the same distance from all seeds nearest to it so that when the plants mature, their leaves barely touch. This provides a "mini-climate" under the leaves that retains moisture, protects the valuable microbiotic life of the soil, retards weed growth, and provides for high yields. Why not just mulch the soil around plants? Because the carbon wasted in the mulch you would use could have been recycled in the compost pile to enrich your soil in the future, and if you buy mulch, then you're simply depleting someone else's soil. Remember that there is only so much farmable land in the world to feed the millions of inhabitants, even though the U.S. seems to have more than enough.

Double digging is a method of preparing the soil that loosens and enriches 24 inches of soil—allowing plant roots to fully explore the fertile soil and produce healthy, productive crops. This digging method is easily learned from staff at Wasatch Community Gardens. Even though it may take a few hours to fully prepare a garden bed, the plant health benefits and lack of needing to weed with closely spaced crops more than make up for the up-front work.

#### **5. Water Conservation**

Paying attention to the amount of water we use in our homes and landscapes is important for the health of our communities and our gardens. Utah is the second driest state in the nation. It is surprising to know that our per capita water consumption levels are 290 gallons/day/person - the second highest in the nation, and far above the national average of 180 gallons/day/person. One of the best ways to reduce water consumption is to reduce your need for water. Intensive planting with closely spaced plants creates a microclimate above the soil that keeps soil from drying out as quickly. Cover crops also keep organic matter in the soil, which increases the soil's capacity to hold water. Bare soil is the #1 enemy to water conservation. Wasatch Community Gardens uses drip irrigation that slowly applies water at the base of the plant (where it's needed the most), over a longer period of time. Drip irrigation allows us to water deeply without wasting water. Water that is sprayed overhead with a hose or sprinkler risks being lost to evaporation when done at inappropriate times of the day. A great time to water is after 6pm or before 8am. Another way to conserve water is to choose plants that need less water or that have become acclimatized to our dry Utah conditions. Saving seeds from your best varieties of vegetables is a way to create your own store of vegetables that slowly adapt to our conditions.

##### **Resources:**

Wasatch Community Gardens' handouts on composting, double digging, intensive planting, companion planting, cover cropping, and water conservation

[How to Grow More Vegetables...](#), John Jeavons

## Composting

"Composting is a giant step toward recycling wastes, conserving precious energy reserves, and regaining control of our food supplies." ~ Rodale Book of Composting

### Why compost?

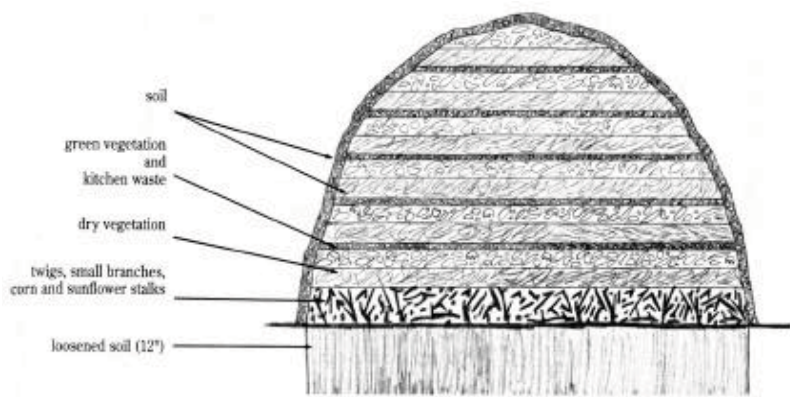
Creating a compost pile is one of the best investments you can make in your garden. Composting is the keystone to a successful, sustainable organic garden. Rather than sending your garden wastes to the landfill and spending upwards of \$50 a year on fertilizers, your compost pile allows you to invest your precious plant materials to produce nature's finest fertilizer. Compost will:

- Add organic matter naturally
- Prevent plant and soil diseases
- Correct sandy or clay soil structure
- Make a great mulch or top dressing
- Provide a variety of nutrients when plants need them
- Aerate soil
- Improve Drainage
- Prevent erosion
- Neutralize toxins
- Recycle garden wastes

### Building a Pile

As our favorite bumper sticker says, "Compost Happens." If you put organic material in a pile, it will eventually break down to composted matter. However, there are many ways to control this magical process through the size and shape of the pile and the various materials added to it. You can have a "cold pile" that you add materials, such as kitchen scraps, on an ongoing basis. This pile will compost rather slowly (1-2 years). The faster route requires the creation of a "hot pile", which should reach temperatures of 140° F. This pile is created with all the materials it will need, so by adding water and turning it regularly, you can help this pile finish composting within 6-8 months. All healthy compost piles require the following:

- **Browns** - "Browns" are dry materials such as leaves or straw that provide carbon. Browns should compose roughly one-quarter of your pile.
- **Greens** - "Greens" are green materials such as grass or weeds from your garden that provide nitrogen. Greens should compose roughly one-half of your pile.
- **Soil** - Adding soil brings organisms that decompose (this is particularly important for piles that are on concrete or in containers off the ground) and provides a structure for the finished product. Soil should compose roughly one-quarter of your pile (less for heavy clay soil).
- **Water** - The organisms in your pile need a moist environment to live in, especially in our desert climate. The inside of your pile should have the consistency of a wrung-out sponge.
- **Air** - Turning your pile adds air to the mix. Organisms in the pile need a source of oxygen if they are going to thrive.



There are a few different ways to shape your composting process. A gardener's choice of composting method should be convenient and reflect personal preference and aesthetics. Large farming operations often choose to create *windrows*, which are long, worm-shaped piles which are ideal for machinery. Home gardeners may opt for composting underground through *sheet-composting*, where plant material is buried under soil for a few months. A typical compost *pile* should be about 3 feet high and 3 feet wide. This pile can be contained in a bin made of wood or plastic. Some people even use wire cages. Before creating a pile, loosen the soil where

you intend to build it. Then layer a few sticks or more woody material for the base level of the pile. This improves drainage and creates an open invitation for decomposers to start working!

### Compost Organisms

Many different kinds of organisms work together to make compost happen. The types of decomposers you find within your pile will vary according to its stage of decomposition. These stages may be measured by temperature. Below 55° F, most microbes will be dormant. The microbes existing between 55-70° F are called *psychrophiles*, which burn carbon and raise the temperature of the pile, making way for *mesophiles*, which thrive at temperatures of 70-90° F. Mesophiles are the “work horses” of the pile, consuming everything in sight which raises the temperature of the pile to over 100° F. Between 90-200° F *thermophiles* take over, producing humic acid which improves soil structure, raises temperatures, and brings the pile to a finished state.

<i>Microscopic Decomposers:</i>	Bacteria	Actinomycetes	Protozoa	Fungi
<i>Physical Decomposers:</i>	Mites	Milipedes	Centipedes	Sow Bugs
	Spiders	Springtails	Beetles	Ants
	Nematodes	Flatworms	Rotifers	Earthworms
	Snails/Slugs	Flies		

### **Composting tips**

- A moist pile is crucial for composting in Utah – water may be needed daily in hot weather.
- The finished product, called humus (HUE-mis), is a dark, rich soil that is cake-like when you pick it up in your hands. Some studies suggest that uncured or partially-cured compost (3-9 weeks old) is not nearly as helpful for soil as fully cured compost.
- The more often you turn your pile, the faster it will produce finished compost.
- A compost pile should not smell bad. If your pile smells, it is probably too wet or the carbon:nitrogen ratio is off. The carbon:nitrogen ratio should be anywhere from 25:1 to 40:1
- Before starting a pile, dig up the soil where your pile will be (to welcome organisms to the pile), and lay down thick materials such as sunflower stalks or sticks to encourage good aeration.
- Don't add weeds such as bindweed or others that have gone to seed unless your pile is hot enough to sterilize the seeds (140° F)
- While most manures are a great source of nitrogen for your pile, don't add wastes from carnivorous animals (cats, dogs, humans), because they may contain harmful bacteria. \*If you want to use manure in WCG gardens, please contact our staff first.
- If you are composting at Wasatch Community Gardens, you may not add kitchen scraps. If you compost at home, do not use meat, dairy, or oily foods. Food wastes can attract rodents and should be deposited in closed composting containers.

### **Vermicomposting**

If you do not have space to create a compost pile outside, don't worry! You can compost indoors using red wiggler worms (*eisenia foetida*). All you need is a lidded container with holes drilled in the top and sides for proper aeration. It is also recommended that you drill holes in the bottom for drainage. The worms will require bedding (such as newspaper), and food from your kitchen. Remember to avoid meat, dairy, bread products, oily and citrus foods. The resulting compost is great for house plants!

### **Resources**

*Ranui Live Compost* (435) 336-2813 Available at many local garden centers and Wild Oats

*Organic Gardening Magazine.* Available at your local library branch

The Rodale Book of Composting: Easy Methods for Every Gardener, Martin & Gershuny, eds, Rodale Press 1992 Emmaus, Pennsylvania

Worms Eat My Garbage, Mary Appelhof, Flower Press 1982 Kalamazoo, Michigan

*Home Composting Made Easy*, C. Forrest McDowell & Tricia Clark-McDowell, 1998

\*Illustration reproduced from How to Grow More Vegetables, by John Jeavons, 10 Speed Press, Berkeley, CA, 1995 5<sup>th</sup> Edition (pg. 35)

## Cover Cropping

### Why use cover crops?

Have you been looking for ways to improve your soil's fertility and tilth? How about methods for suppressing weeds or retaining moisture? What about attracting those elusive beneficial insects? Your solutions may be found in cover cropping - a time-tested method for managing healthy gardens. Using cover crops can:

<i>Protect soil in winter months</i>	<i>Suppress weeds</i>
<i>Attract beneficial insects</i>	<i>Cover &amp; protect unused areas</i>
<i>Break up clay or hardpan</i>	<i>Prevent erosion by wind and rain</i>
<i>Increase nutrients in your soil</i>	<i>Increase organic matter in your soil</i>
<i>Conserve soil moisture</i>	<i>Recycle garden nutrients</i>

### What is a cover crop?

Also referred to by some experts as 'green manures,' cover crops are any type of planting that covers your soil when it is not being used for active production. Cover crops can be tilled under or harvested and composted to add organic matter and nutrients to your soil. Although cover cropping has traditionally been used by farmers for maintaining healthy soil, many home and urban gardeners are using the same techniques on a smaller scale. A good gardener recognizes that successful gardening is dependant on the soil. Many amendments may be employed to improve soil tilth and fertility, including compost, leaves, manure or grass clippings. Using cover crops is also an excellent option for soil improvement because other amendments may difficult to come by, and you can produce cover crops on your own space. When properly incorporated with your yearly garden plan, cover crops provide the added benefits of conserving moisture, increasing life in the soil, and even attracting beneficial insects to your garden.

### Using the right cover crop

Although at first it may seem challenging to understand all of the different kinds of cover crops and their benefits, the beauty of using cover crops is that you can select just the right plant for your soil, climate, and long-term plans. By learning about the benefits and cultural requirements of each crop, you will be able to make an informed decision for you and your garden. Cover crops can be divided into three main categories:

- **Legumes** – Legumes are a favorite cover crop because they fix nitrogen in your soil. Some legumes have large taproots that go deep into the soil and 'mine' nutrients from below. The legume family includes: *clovers, vetch, alfalfa, fava beans, Austrian winter peas, medic, and soybeans*. Legumes tend to do better in cooler climates, and are suited to spring and fall plantings.
- **Cereals** – Cereal plants are usually quick-growing. They make great green manures because they are easily harvested and composted, or tilled under, providing a great source for nitrogen and organic matter. Cereals include: *annual rye, wheat, oats, ryegrass, barley, sorghum and sudangrass*.
- **Broadleaf Plants** – Broadleaf plants include: *buckwheat, rape, mustard, turnips, daikon radish, and oilseed radish*. These plants tend to shade out competitive weeds. Buckwheat is very fast growing and comes right up in hot weather. The brassicas (rape, mustard, turnip/radish) tend to have taproots that can break up hardpan in the soil, and bring up previously untapped nutrients from deeper soils.

\*Please refer to the resources below for detailed information about each crop.

### Cover cropping tips

- Some crops may be used for 'undersowing' or interplanting. This allows you to plant a living mulch while your vegetables are growing. About 2 weeks after planting your primary crop, just sprinkle low-growing covers (like white clover) at the base of your planting to conserve moisture add nitrogen, and improve the soil structure.
- Most cover crops can be 'broadcasted' or spread evenly over the space that you have set designated. It helps to massage the seeds into your soil after you have prepared the bed for planting.

- Remember that it takes 2-3 weeks for a cover crop that has been tilled in to decompose. Resist the urge to plant during this period, as the decomposition process can inhibit seed germination and root growth.
- If you are planting a crop in the fall winter soil protection, you will need to plant your seeds about 30 days before the first frost date.
- Using a seed mix with a combination of good covers may be a good option if you are interested in seeing which crop works best for your needs.
- Some cover crops can spread to other parts of your garden. If you are concerned about this, remember to select an annual crop that winterkills, or a plant like vetch, that you don't mind popping up uninvited!
- By cutting down cover crops before they become mature or woody, you will be saving yourself a lot of effort when tilling or harvesting the plants.

### ***Inoculants***

When you 'inoculate' legume seeds, you are treating them in a powdery medium that contains *rhizobia*, a bacteria that has a symbiotic relationship with legume roots. When rhizobial bacteria are present, they provide access to nitrogen from the air. This nitrogen is stored in nodules on the roots of legumes. In return, the bacteria receive nutrition from the roots. Gardeners are often encouraged to use an inoculant when planting legumes because it increases the amount of nitrogen that becomes available to the soil after the plant dies. There are specific inoculants for specific legumes, so be sure to consult the seed source to make sure that you are using just the right one for your crop.

### ***Resources***

Sustainable Agriculture Cover Crop Database: <http://www.sarep.ucdavis.edu/ccrop/>

*Cover Crops for Home Gardens in Western Washington and Oregon (EB1824)*, Washington State University Cooperative Extension, 1997

*Cover Crop Fundamentals (AGF-142-99)*, Alan Sundermeier, Ohio State University, 1999

*Fall Garden Cover Crops*, Charlie Nardozi, Gardener's Supply Company, 1997

*Green Manure*, Rodale's All-New Encyclopedia of Organic Gardening, pp. 293-295, Rodale Press 1997

The Garden Primer, Barbara Damrosch, Workman Press 1988, New York, New York

Four-Season Harvest, Eliot Coleman, Chelsea Green Publishing, 1992 White River Junction, Vermont

Managing Cover Crops Profitably, Sustainable Agriculture Network, 1998, Beltsville, Maryland



## BASIC COMPANION CHART FOR VEGETABLES & HERBS

Plant	Good Companions	Bad Companions
<b>Basil</b>	Pepper, Tomato, Marigold	
<b>Bush Beans</b>	Beets, Cabbage, Carrots, Celery, Corn, Cucumbers, Eggplant, Lettuce, Pea, Radish, Strawberry, Savory, Tansy, Marigold	Onion
<b>Pole Beans</b>	Carrots, Corn Cucumber, Eggplant, Lettuce, Pea, Radish, Savory, Tansy	Beets, Onion
<b>Beets</b>	Bush Beans, Cabbage, Onion, Sage	
<b>Cabbage Family</b>	Bush Beans, Beets, Celery, Onions, Tomato, All Strong Herbs, Marigold, Nasturtium	Strawberry
<b>Carrots</b>	Bush Beans, Pole Beans, Lettuce, Onion, Peas, Radish, Tomato, Sage	Dill
<b>Celery</b>	Bush Beans, Cabbage, Onion, Spinach, Tomato	
<b>Corn</b>	Bush Beans, Pole Beans, Cucumber, Melons, Peas, Squash	Tomato
<b>Cucumbers</b>	Bush Beans, Pole Beans, Corn, Lettuce, Onions, Peas, Radish, Marigold, Nasturtium, Savory	No Strong Herbs
<b>Eggplant</b>	Bush Beans, Pole Beans, Spinach	
<b>Lettuce</b>	Bush Beans, Pole Beans, Carrots, Cucumbers, Onion, Radish, Strawberries	
<b>Melons</b>	Corn, Nasturtium, Radish	
<b>Onion</b>	Beets, Cabbage, Carrots, Celery, Cucumber, Lettuce, Pepper, Squash, Strawberries, Tomato, Savory	Bush Beans, Pole Beans, Peas
<b>Parsley</b>	Tomato	
<b>Peas</b>	Bush Beans, Pole Beans, Carrots, Corn Cucumber, Radish, Turnips	Onion
<b>Pepper</b>	Onion	
<b>Radish</b>	Bush Beans, Pole Beans, Carrots, Cucumber, Lettuce, Melons, Peas, Squash	Hyssop
<b>Spinach</b>	Celery, Eggplant, Cauliflower	
<b>Squash</b>	Corn, Onion, Radish	
<b>Strawberry</b>	Bush Beans, Lettuce, Onion, Spinach	Cabbage
<b>Tomato</b>	Cabbage, Carrots, Celery, Onion, Mint	Corn, Fennel

Source: © GardenGuides, 2000  
([gardener@interpath.com](mailto:gardener@interpath.com))

## Double Digging: Soil and Biceps Improvement

### **What is Double Digging Anyway?**

Double digging is not a motivating concept. That's what machine cultivators are for, after all--to save gardeners from a sore back and bleeding blisters. Paradoxically, repeated machine cultivation can cause the situations that warrant double digging.

The reasons for, and the definition of, double digging are widely misunderstood. Double digging is not doing the same task twice; it is the equivalent of deep tilling or subsoil plowing. To double dig is to remove a layer of topsoil to "spade depth"--8 in. to 12 in., roughly the length of a spade's blade--and set it aside. Then, the next 8-in. to 12-in. layer of soil, the subsoil, is loosened, aerated, and often augmented by compost, aged manure, leaf mold, or peat moss. Organic matter improves the drainage of heavy clay soils and helps light sandy soils hold moisture longer. Finally, the top layer is put back in place.

### **Why Put Myself Through Grief?**

The reasons for double digging are twofold: to relieve subsoil compaction and to refurbish the topsoil. Soil particles in compacted subsoil, also known as hardpan, are tightly packed, with few air pockets. What causes compaction can be either a naturally occurring layer of clay and silt, or repeated use of machinery such as shallow tillers or construction equipment that compresses the soil underneath. Plant roots and moisture can't penetrate hardpan; poorly draining water and stunted plant growth are the result. Double digging mitigates these problems by breaking up the hardpan and improving root penetration and drainage. Plants grow best in soil that has been loosened before planting to allow ready penetration of the two things roots need most: oxygen and water.

Heavily and frequently cultivated topsoil not only leads to compaction but also tends to lose its mineral and nutritive value over time, as soil particles give up their stored minerals to plant growth. Occasionally, it is necessary to replace the soil particles in the topsoil with fresh soil from underneath. Double digging brings deep soil particles closer to the surface where plants' feeder roots can reach them.

### **Resources:**

<http://www.finegardening.com/kg/features/techniques/9digging.htm>

How to Grow More Vegetables..., John Jeavons

## Container Gardening

### Tips:

If you plant in clay pots you will need to water more often  
 South facing windows or balconies are best for sunlight  
 Drainage is important – add rocks to bottom of no-hole pots  
 Combat pests with soap sprays – take pots outside  
 Treat wood containers with non-toxic linseed oil

### Plant List:

Herbs	Veggies	Flowers
Chives	Tomatoes	Nasturtiums
Thyme	Peppers	Clematis
Parsley/Cilantro	Mustard/Arugula/Mizuna	Orchids
Basil	Lettuce Mesclun Mix	Lavender
Oregano	Beets/Chard/Radishes	Bulbs (Tulips...)
Dill	Peas	Roses
Fennel	Pole Beans	Alyssum/Lobelia
Sage	Carrots	Pansies
Rosemary	Spinach	Potato Vine
Mint	Strawberries	Sedum

### Supplies:

Containers (get creative! use what's around you!)  
 Organic Potting Soil & Compost (Ranui Gardens)  
 Spray Bottle and Watering Can  
 Dr. Bronner's Peppermint Soap for Pests  
 Working Space – use newspaper/old sheet/plastic

### Resources:

[The Edible Container Garden](#): *Growing Fresh Food in Small Spaces*, Michael Guerra, Fireside Books  
[Bountiful Container](#): *A Container Garden of Vegetables, Herbs, Fruits & Edible Flowers*, McGee & Stuckey, Workman Pub.  
[The Container Kitchen Garden](#), Anthony Atha, Sterling Pub. 2000  
[Gardening Without a Garden](#), Gay Search, DK Pub. 1997  
[The Complete Guide to Container Gardening](#), Stephanie Donaldson

## Hardening Off & Transplanting

### Why Harden Off Your Plants?

Transplanting seedling from the greenhouse or windowsill to the garden can put them through a lot of stress. Direct sunlight, wind and extreme temperatures can shock and damage tender seedling grown indoors. The more you can do to ease this stress the sooner the seedlings will recover from the transplant shock, toughen and begin to grow into healthy plants.

### When to Plant Seedlings into the Garden

Cool weather crops have natural tolerances to cold temperatures and can be planted in early spring or late-summer/early fall to grow in the fall and winter. They include: Beets, Broccoli, cabbage, cauliflower, peas, lettuces, onions, radishes, and spinach. Many cool weather plants will bolt as the days get longer and the temperature hotter.

Warm weather crop should be planted after the last frost when the soil begins to warm up in late spring/early summer. They include: melons, carrots, chard, corn, cucumbers, peppers, potatoes, pumpkins, beans, squash, tomatoes, and eggplants.

Most vegetable varieties can be started in a greenhouse, though many (both cool and warm season crop) are commonly sown directly into the soil. In Utah tomatoes, peppers, eggplants, brassicas (broccoli, kale, cabbage, cauliflower, etc.) some squash, herbs, and flowers are often started in the greenhouse and therefore should be hardened off.

### Hardening Off Your Seedlings

Two weeks before planting slow down the growth of your plant by watering and feeding less, and if possible, keeping the seedlings at a slightly cooler temperature. This will begin the hardening off stage by preserving the plants' energy for adjusting to the new outdoor conditions.

Begin acclimating your seedlings to the garden by gradually exposing them to outdoor conditions. First expose them to filtered sun in the shade of a tree or in a sheltered spot protected from the wind and direct sun. Leave them out for an hour in the morning or late afternoon the first day. Each day increase the exposure to the outdoors until after a week or so, they can withstand a full day of sun. While hardening the seedlings off, keep them well-watered and watch them closely for signs of stress (the leaves may start turning yellow and drying out if exposed to too much sun). You can cover the plants with shade cloth to help them adjust and to protect against wind and cold temperatures even after they've been planted into the garden.

### Transplanting

After you've hardened off your cool weather seedlings in mid-spring and your warm weather crop after the average last frost, it's time to transplant them into the garden. Pick a cloudy, windless afternoon to transplant your seedlings to lessen the stress on them.

### Transplanting Continued...

Make a hole or trowel out a row that is a little larger than the root ball of your seedling(s). Place a handful of compost in the hole or work some into the topsoil before you make the row. Fill the hole with water and let it sink in. Tap the sides of the pot to loosen the soil and root ball. Then carefully pull the seedling out by holding onto a leaf. Avoid holding the plant by its stem as it's easily damaged. Gently loosen and spread the roots and immediately place the seedling into the hole (limiting the roots' exposure to the dry air). Set the plant in the hole a little deeper than it was in the pot, fill in the rest with soil and gently firm around roots to eliminate air pockets. Make a saucer-depression around the stem to help catch water. Give each plant at least a quart of

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water directly after they've been planted. You may want to mulch around the base of the plant with straw to help keep weeds down and decrease evaporation.

After you have transplanted the seedlings, carefully observe your plants. Water them well until they have fully recovered (established plants show new growth). Watch the weather for the first week or two after the average last-frost date in case of a spell of cold or hot weather. If a late frost threatens to occur cover your warm-weather plants with weather cloth or a plastic tarp to protect your plants. Cold frames, wall'o'waters, cloches, hotcaps (milk jugs), and grow tunnels (with weather cloth or fiberglass) are other devices used to protect plants by trapping warm air during the day and insulating the plants and soil during the night, prompting faster growth. Remember to remove any of these devices on sunny days to avoid roasting your plants.

**Resources:**

Encyclopedia of Organic Gardening, Ed. Marshal Bradley and Barbara W. Ellis, Rodale Press 1997.

The Garden Primer, Barbara Damrosch, Workman Publishing 1988.

The New Seed-Starters Handbook, Nancy W. Bubel, Rodale Press 1988.

## Heirloom Vegetables: An Old Story with Hope for the Future

### Characteristics:

Heirloom varieties are the pure strain of a particular variety of a plant. They are not the standard hybrid – combination of two varieties of plants – that is often found in many nurseries and seed catalogs. Heirlooms are the old varieties you may have found in your grandmother’s garden. This may be why her tomatoes taste better than yours.

Heirloom plants are not suited to large scale production because they cannot be harvested mechanically or transported long distances to market. But they are often ideal for home gardeners, whose needs and preferences remain unchanged through the generations. Many heirloom crops taste better or are more tender than hybrid replacements, and many spread their harvest over a long period. If grown for years in one locality, they have adapted to the climate and soil conditions of that area and may out produce other hybrid varieties. Others may be less productive than today’s hybrids, but offer greater disease and insect resistance.

### Why Heirloom?

A more vital reason for growing old cultivars is that heirloom plants represent a vast and diverse pool of genetic characteristics – one that will be lost forever if these plants are allowed to become extinct. Even cultivars that seem inferior to us today may carry a gene that will prove invaluable in the future. One may contain a valuable but yet undiscovered compound. Another could have the disease resistance vital to future generations of gardeners and plant breeders (Bradley, F.M., Ellis, B.W.)

Heirlooms are also important because they contain higher nutrients and are better for the soil. Some hybrids produce food of lower nutritive value in comparison with older stains, and often use up nutrients from the soil at a more rapid rate than a living soil can sustain over time. Hybrids are also often very susceptible to a few diseases even when they are greatly resistant to many prevalent ones.

### Great Heirloom Tomato Varieties Grown and Tested in Salt Lake City:

Cherokee Purple  
 Brandywine  
 Tigerella  
 Marvel Striped  
 Striped German  
 Yellow Pear  
 Matt’s Wild Cherry

### Resources:

How to Grow More Vegetables...., John Jeavons  
Rodales Encyclopedia of Organic Gardening, F.M. Bradley, B.W. Ellis  
Seed to Seed, Suzanne Ashworth

## Heirloom Seed Suppliers

### Heirloom Seeds

P. O. Box 245  
 W. Elizabeth PA 15088-0245  
<http://www.heirloomseeds.com/>

**Johnny Selected Seeds:**

Foss Hill Road  
Albion, Maine 04910  
Phone: (207) 437-4301; Fax: 1-800-437-4290  
<http://www.johnnyseeds.com/>

**Native Seeds/SEARCH**

526 N. 4th Ave.  
Tucson, AZ 85705-8450  
<http://www.azstarnet.com/~nss/index.html>

**The Natural Gardening Company**

P.O. Box 750776,  
Petaluma, CA 94975-0776  
Phone: (707) 766-9303; FAX: (707) 766-9747  
<http://www.naturalgardening.com/shopping/>

**Seed Savers Exchange**

3076 North Winn Road  
Decorah, Iowa 52101  
<http://www.seedsavers.org/index.htm>

**Seeds of Change**

Order on-line or call us Toll-Free 1-888-762-7333  
<http://store.yahoo.com/seedschange/>

**Shepherds Seeds**

30 Irene St.,  
Torrington, CT 06790  
Telephone: 860-482-3638 Fax: 860-482-0532  
<http://www.shepherdseeds.com/>

## How do I save seeds?

Let the fruit become very ripe, but not so it falls to the ground or begins to heat up. Scrape out the seedy part of moist fruits. Wash off squash and pepper seeds and lay them out to dry right away. Put tomato seeds and pulp into a glass with water for a few days, stirring every day. You'll see the useless seeds and waste material float while the good seeds sink. Skim off the waste before washing and drying. You can thresh peas and beans to remove them from the pods, but don't be too rough on the seeds. It is important to let seeds of all varieties dry for days after harvesting (5-6 days for large seeds, 3-4 days for smaller ones).

## Organic Pest Management

Keeping a garden pest-free can be a challenge. Every gardener has lost a plant to pests or disease at some point in his or her gardening experience. It is easy to react with anger – many of us have sworn vengeance on each and every plant destroyer that has ever crawled on the earth! But before we place land mines around our beloved heirloom tomatoes, we should first ask ourselves to look at the big picture. Quite often the reason why the plant was lost was within our control from the beginning.

"I suspect that the insects which have harassed you have been encouraged by the feebleness of your plants... produced by the lean state of your soil... When earth is rich, it bids defiance to droughts [and] yields in abundance." *Thomas Jefferson, 1793, in a letter to his daughter*

For organic gardeners, the key to healthy plants is **prevention**. If your soil is healthy, your plantings are well planned, and your plants have access to adequate nutrients, you will have fewer problems with pests and disease. As the old saying goes, 'an ounce of prevention is worth a pound of cure.' So, rather than investing in chemical solutions to pest problems, try investing in the general health of your garden – your plants (and beneficial insects) will thank you.

### Eight Steps to a Healthy Garden:

#### 1. Build Healthy Soil

Soil that is rich in organic matter and microorganisms will provide a balance of nutrients for your plants. Most gardeners prefer a loamy soil, with a balance of sand, silt, and clay. Consider performing a soil test to determine if your soil is deficient in a certain area. Quite often a nutrient deficiency, such as a lack of calcium or nitrogen, may be attracting pests to your plants. Even if you have all the elements present in your soil, it is the small life forms (invertebrates, microbes, fungus) that work to create healthy soil. The three best things you can do to condition your soil and encourage microbial life are to grow cover crops, mulch around bare soil, and add compost that you've made from your leftover plant materials.

#### 2. Choose the Right Plants

Just as you would not plant a palm tree in the Arctic, you would not plant a mango orchard in Utah. We are fortunate here in Utah to be able to plant many kinds of fruits and vegetables, however certain plants do better in certain climates. Plants that are under stress are more susceptible to pests and disease. Many vegetable varieties have quickly adapted over time to do well here in our hot, dry growing season. Your local nursery and some seed catalogs will be able to recommend these varieties.

#### 3. Plan Diverse Plantings

When you create greater plant and animal diversity in your garden, you are supporting a better balance between garden pests and beneficial insects. Planting a large area of one plant (monocropping), is similar to leaving an open candy counter in a neighborhood full of children. Like the kid in the candy store, pests that are attracted to that crop will come from everywhere and eat everything in site. When you plant diverse crops, you are inviting many different insects, who will keep each other in balance. Remember that flowers attract beneficial insects. You will find numerous sources of information on companion planting, crop rotation, and interplanting in the resources listed below.

#### 4. Buy Healthy Plants

Healthy plants will resist pests and diseases. Once you have selected appropriate plant varieties, be sure to inspect the plants in the nursery to ensure that they are healthy and pest, disease and mold-free. This will give your garden a great head start.

#### 5. Provide Proper Plant Care

Again, if you plants are under stress, they will be more susceptible to attacks from pests. By providing adequate water (not too much, not too little), and monitoring nutrient needs, you are not only meeting immediate needs, but also preventing problems in the future.

#### 6. Keep Garden Records

Your records may be as elaborate or as simple as you'd like. Some gardeners like to keep journals of their gardening experience, while others prefer precise records of planting dates, compost application, and so forth.



Keeping records will help you track the appearance of pests over time, so that you can become better informed about when the pest appeared, how long it stayed, the damage created, and how the pest was dealt with. These records will help you to anticipate pests, and to determine whether it is worth being concerned about.

### 7. Scout for Problems

Taking a few minutes each time you are in the garden to look for signs of pest trouble will save you time and stress later on. Check under leaves for aphids. Look for slug and snail trails. Check under rocks and boards for pests that may be hiding during the day.

### 8. Choose the Right Controls

Know your enemy. Some plant diseases look like pest problems, and vice-versa. Once you have determined what has been eating your plants and how important it is to control it, it is time to decide which controls to use:

- **Cultural Controls** Adjust planting dates, modify pest habitats, etc...
- **Physical Controls** Traps, hand removal, water sprays, etc...
- **Biological Controls** Natural predators, nutrient balance, sprays and dusts, etc...

Remember, all things in the garden are connected. From the plants you grow to the microbes in the soil, from the beetles and snails to the lacewings and ladybugs, each has a presence and a function. Your job as a gardener is to allow Nature to maintain a healthy balance in the garden.

### Resources:

Good Bugs for Your Garden, Allison Mia Starcher, Algonquin Books, 1995

Pests of the Garden and Small Farm, Mary Louise Flint, Univ. of California, 1998

Garden Pests and Diseases, Lynne Gilberg, ed., Sunset Books, 1993

Great Garden Companions: A Companion-Planting System for a Beautiful, Chemical-Free Vegetable Garden, Rodale Press, Sally Jean Cunningham, 2000

Organic Pest & Disease Control, *Taylor's Weekend Gardening Guides*, Barbara Ellis, ed., Houghton Mifflin, 1997

The Organic Gardener's Handbook of Natural Insect and Disease Control, Barbara Ellis, ed., Rodale Press, 1996

Rodale's Pest and Disease Problem Solver: A Chemical-Free Guide to Keeping Your Garden Healthy, Gilkeson, Peirce, Smith, Rodale Press, 2000

Organic Plant Protection, Roger B. Yepsen, Jr., ed., Rodale Press, 1978 9<sup>th</sup> Edition

[www.invisiblegardener.com](http://www.invisiblegardener.com), [www.organicgardening.com](http://www.organicgardening.com), [www.ccof.org](http://www.ccof.org)

## Water Conservation

### Why Conserve?

Paying attention to the amount of water we use in our homes and landscapes is important for the health of our communities and our gardens. Utah is the second driest state in the nation. It is surprising to know that our per capita water consumption levels are at 290 gallons/day/person - the second highest in the nation, and far above the national average of 180 gallons/day/person. While it is important for us to use moderate amounts of water in our gardens, WCG also recognizes that vegetable plants need certain water levels in order to produce the desired harvest. It is our philosophy that it best serves our needs and the needs of our gardens to understand the requirements of our plants and water accordingly.

### How Much is Enough?

Your crops will need varying levels of water at different times of the growing season. On average, gardens need 1-2 inches of water per week. This level varies depending on the weather and time of year. Water will be lost to evapotranspiration when the sun is out and the temperature is high. Because of this, we suggest watering in the early morning, so that the soil has a chance to absorb water before the sun comes out. Remember, the watering needs of your plants will change as the weather changes. Be prepared to adjust your watering schedule accordingly. **You will need to water more often when you first plant your seedlings and during the heat of the summer.** Reduce watering when it has been raining. Overwatering can be just as harmful to your plants and soil as underwatering.

Most vegetable plants grow stronger root systems when they are watered deeply over evenly-spaced intervals. Watering a little bit each day encourages shallow root growth and hardpan in the soil, especially in our dry climate. Allowing your soil to dry completely before watering again will reduce fungus and disease in your soil. A good test for soil moisture is to stick your finger a couple of inches below the surface. If it is moist, your plants will not need watering.

There are more sophisticated ways to test the moisture level of your soil. Some soil moisture meters are highly advanced, but tend to be high in cost. A soil probe will take a vertical sample of your soil, showing you how far down water is penetrating after watering. Measuring the amount of water you use per week is also wise. A container can easily be placed outside when watering. By measuring the amount of water in the container, you can determine if you need to increase or decrease the amount of water that you are providing your garden.

### Ways to Conserve

One of the best ways to reduce water consumption is to reduce your need for water. Covering your plot with a straw or leaf mulch will help your plants grow by conserving moisture, keeping weeds down, and adding organic material to your soil. Smart gardeners don't go without mulch! Commonly used organic mulches include straw, leaves, grass clippings, hay, pine needles and even newspaper. Another way to keep your soil cool is to plant your crops close together. This creates a microclimate where plants protect the soil and each other from the sun. Studies have shown that healthy soil retains moisture longer than compacted, lifeless soil. The time you spend making sure that your soil is full of life-giving organic matter and plenty of nutrients will benefit your crops and most importantly, save water.

Mulch Material	Advantages	Disadvantages
Straw/Hay	Cheap, readily available, adds organic matter	May contain weed seed, insects, disease/mold
Leaves	Readily Available, free, rich in nutrients	Can mat down, be too acidic, may contain pesticide residue
Grass Clippings	Free, easy to apply, good source of nitrogen	Can mat down, may contain weed seeds, herbicide residue
Pine Needles	Good way to lower pH, easy to apply	May be too acid
Newspaper	Easy to obtain & apply, earthworms love it	Decomposes quickly, must be weighted down
Plastic	Total weed control, warms soil well, heavy plastic is durable and may be reused	Expensive, unattractive, may sterilize soil, must be weighted down

### Drip Irrigation

Three of the gardens operated by WCG have drip irrigation systems. By slowly applying water at the base of the plant (where it's needed the most), over a longer period of time, drip irrigation allows us to water deeply without wasting water. Water that is sprayed overhead with a hose or sprinkler will be lost to evaporation and might burn the leaves of your plants on sunny days. Drip irrigation also drastically reduces the amount of topsoil lost to erosion from overhead sprinkling systems or conventional irrigation. Fewer weeds crop up with drip irrigation because water is being applied to the plants you want to encourage, rather than the entire garden.

### Resources:

Jordan Valley, Water Conservation District (801) 565-8903 [www.jvwcd.org](http://www.jvwcd.org)

Sherm Fox , Trickle Irrigation Supply, (801) 272-2354

Colorado State Cooperative Extension [www.colostate.edu/depts/coopext/](http://www.colostate.edu/depts/coopext/)

Western Regional Climate Center [www.wrcc.dri.edu](http://www.wrcc.dri.edu)

How to Grow More Vegetables (than you ever thought possible) pp. 68-73, John Jeavons,  
Ten Speed Press, 1995

## Trellising

### *Trellising Basics*

One of the challenges of urban gardening is limited space. Trellising is an especially useful technique because it allows urban gardeners to utilize vertical space. Trellising vegetable plants helps to keep crops off the ground resulting in cleaner fruits that are less susceptible to rot, to certain soil born diseases and insects and to ground dwelling pests. Trellising also makes for an easier harvest and can be used to satisfy aesthetics preferences such as covering unattractive fences with flowering vines or welcoming garden visitors with a lushly arching entrance arbor.

Fruit and vegetable plants that are commonly trellised include squash, pumpkins, cucumbers, melons, gourds, beans, peas, raspberries, grapes, tomatoes, and sometimes peppers and eggplants. Gardeners also often use trellises for flowering vines such as Morning Glories or Trumpet Vines, or for ivy plants.

There are many trellis designs to consider. They include: teepee, A-frame, basic stake, double-armed T, square wire frame, cage, fence, branch, staked row and string, and living companion plant trellises (such as corn stalks for beans). However, you needn't limit yourself to existing styles. Be creative, there are dozens of possible trellis designs. If creating your own, make sure they are sufficiently strong to bear the weigh of your mature plants in varied weather. Also remember to include large openings in your design for easy harvest. If you choose to use trellises, set them up in the garden before planting to avoid damaging plant roots and match the trellis with the plant. Different trellis varieties are discussed below with each respective plant type they best accommodate (this handout with focus on peas, pole beans, and tomatoes).

### **Trellising for Legumes (Leguminosae)**

**Peas** One of the first signs of spring is the pea trellis raised over the thawing soil. There are a few commonly used trellises that work well for peas: the A-frame, the staked row with wide-meshed wire, or the simple branch or stake trellis.

*A-Frame Trellis:* Lean two wooden 4 by 5 ft. frames covered with wide-meshed wire or plastic mesh to make the letter “A” when viewed from the side (see picture below). Fasten the frames at the top with wire or hinges to stabilize the structure. Then simply sow your peas along the bottom of each frame at the desired depth and spacing.

*Staked Row/Wide-Meshed Trellis:* Sink 5 ft. tall stakes or poles into the ground at a depth of a 1-2 ft. and spaced every 3 ft. Pull tight and fasten the “sheet” of mesh at each stake/pole using a staple gun or wire for the length of the bed. Sow peas directly underneath and on both sides of the meshed trellis.

*Branch:* One of the simplest trellis structures for your peas is the discarded branch. Find branches that have 2 in. diameters and that twig out from the main limb after about 1 ft. —sinking the limb into the soil at a depth of 1-2 ft. Sow peas at the base of the branch.

**Beans** There are several popular ways to trellis pole beans: the teepee trellis, the single stake trellis, the A-frame trellis, the living corn stock trellis, and the wooden frame/vertical wire trellis. Pole bean trellises will require 8 ft. tall poles, stakes or frames. Otherwise their construction will be similar to those mentioned in the “Peas” section. Pole beans especially like simple vertical wires or poles to climb with no horizontal lines to interrupt their path. Be sure to set up the trellis before you sow your beans—after the average last frost date. Sow several seeds around each pole or stake and thin down to three when seedlings start to get larger.

*Teepee:* Place three poles together like a teepee and tie them together at the top with stout twine or wire (see below). The poles should be at least 8 ft. tall.

*Single Stake:* Drive a 9 ft. stake or pole into the soil 1-2 ft. deep and sow bean seeds directly underneath. The beans will wind naturally around the pole so no additional twine should be needed to hold the plant up.

*A-Frame:* Follow the same design as the pea A-frame trellis using the dimensions of 4 ft. wide and 8 ft. tall.

*Corn Stock Trellis:* If using the living corn stock trellis, sow corn at least 2-3 weeks prior to sowing your beans so they're sufficiently strong and tall to hold the beans when they begin to vine. The corn stock will serve as a support beam for the bean plants while the nitrogen fixing beans help to replenish the soil with nutrients that they heavy-feeding corn depletes. Corn should be spaced roughly a foot apart with two seeds per hole planted at a depth of 1 inch

**Frame and Wire:** Follow the directions for the bean *A-Frame* trellis above but make only one frame. Attach each side to 9 ft. stakes, posts or poles that are sunken into the bed 1-2 ft.

**Trellising for Tomatoes (Solanaceae)**

Most gardeners trellis their tomatoes. It’s less common to see peppers and eggplant trellised but it can sometimes be helpful. You can choose simply to let your tomatoes sprawl out on the ground. Tomatoes allowed to sprawl produce higher yields but they also take up more space. If you decide not to trellis your tomatoes mulch well underneath the plants to keep fruit from contacting the soil or being eaten by ground pests. Many types of trellises will work for your tomatoes.

**The Tomato Cage:** The most common tomato trellis is the cage variety with openings large enough to harvest through. Sinking two or three additional stakes on the inside of a cage will reinforce them to the extent that a tomato laden with fruit will be held sturdily (see below). If making your own cage bend a 6 by 5 concrete reinforcement wire mesh to make a circular cage. A variant of the wire tomato cage is the wooden box cage that is essentially the same design except square instead of circular and constructed with wood instead of wire. Be sure to avoid wood treated with toxic chemicals.

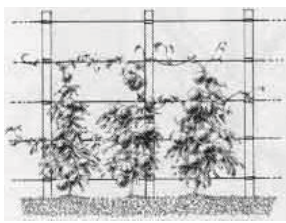
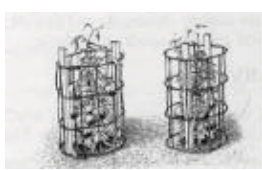
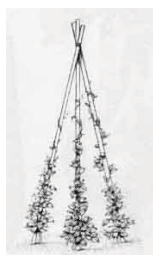
**Post and Mesh or String:** Another popular trellis for tomatoes planted in rows utilizes single 5 ft. tall 2 in. diameter posts sunken 1-2 ft. into the ground with sheets of plastic or wire mesh (trellis netting) fasted (stapled or tied with wire or twine) to each post and spaced 4 to 5 ft. apart down the row. Make sure the-mesh has large openings to make harvesting easy. If you don’t have plastic mesh you can tightly loop lines of twine around each post down the row in horizontal fashion every 6-12 in. up the post. When using one row of posts and mesh/twine, you may want to gently tie main vines to the trellis with a soft twine for extra support. If you’re planting 2 rows of tomatoes down a single bed they can be sandwiched together in between two rows of posts and mesh/twine (see below).

**Basic Stake:** If growing tomatoes up a single vertical stake (2 inch in diameter), prune the plants to one main stem and clip off the suckers that grow between leaf stems and the main stem. If using stakes you’ll need to tie the main tomato vines with soft but stout twine to the stakes using a lose knot to avoid damaging the stems. Each 6 ft. tall 2 in. diameter stake should be placed 2 ft. apart and sunken 1 to 2 ft. deep (see below).

**Trellising for Cucurbits (Cucurbitaceae)—Melons, Squash, Gourds, Pumpkins and Cucumbers**

Most melons, squash, gourds, cucumbers and pumpkins take up a lot of space, as they tend to vine and sprawl out vigorously in the garden. The main exceptions are bush varieties of cucurbits (such as bush zucchinis). Therefore, most cucurbits can be trellised. For any hanging melon, squash, gourd or cucumber larger than a hefty slicing tomato, you may want to tie a sling to the trellis and wrap it around the fruit to hold it secure. Panty hose or old rags work splendidly for this. Teepees, A-Frames, and fences do well for cucurbits; however, most trellis designs will accommodate these opportunistic plants (follow building directions under the other sections and see pictures below).

- A- Basic Stake
- B- A-Frame
- C- Teepee
- D- Cages
- E- Frame & Wire
- F- Branch Trellis
- G- Post & Wire Row



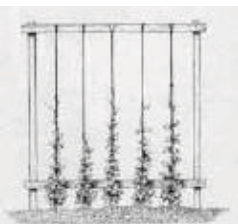
G

D

A



E



F



**Resources**

The Garden Primer, by Barbara Damrosch, Workman Publishing 1988  
Rodale’s Illustrated Gardening and Landscaping Technique, Ed. Bradley and Ellis, Rodale Press 1990  
Rodale’s All-New Encyclopedia of Organic Gardening, Ed. Barbara Ellis, Rodale Press 1997



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