

# MEMORANDUM

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Planning and Zoning Division  
Department of Community Development

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**TO:** Planning Commission

**FROM:** Jackie Gasparik, Principal Planner

**DATE:** May 10, 2006

**SUBJECT:** Salt Lake City Critical Lands Inventory and Preservation Priority Assessment

Salt Lake City applied for and received the Lee Ray McAllister Find Grant to develop a classification system of nearly 27,000 acres of land zoned Open Space, Foothill Preservation or Agricultural Use. The classification system will provide a framework for defining critical open lands and making informed planning decisions.

The Planning Division hired a consultant; Landmark Design Group Incorporated, to conduct the research and draft a report of the findings (please see attached report). First a matrix of the parcels was developed; the matrix identified specific parcel data for each property. The matrix consists of ownership, land use, geologic, environmental, and physical characteristics derived from existing Geographic Information Systems (GIS) data sources. The matrix information was then used to develop a process for identifying critical characteristics affecting development potential. Based on the attached report and inventory, the Planning Division will be drafting the recommended new Open Space Hierarchy Zones for adoption by the City, which will be mapped in the future on a parcel-by-parcel basis.

# SALT LAKE CITY CRITICAL OPEN LANDS INVENTORY AND PRESERVATION PRIORITY ASSESSMENT



## INTRODUCTION

In 1995 Salt Lake City adopted a new zoning ordinance, in which nearly 27,000 acres were zoned for open space, foothill preservation, or agricultural use. When the properties were zoned, very little information was assembled regarding their ownership, land use, development potential, or physical and environmental characteristics.

Decision-makers had little reliable and conveniently accessible information on which to evaluate development proposals and make critical decisions. To alleviate these concerns, Salt Lake City applied for and received a Lee Ray McAllister Fund grant to develop a classification system which will provide a framework for defining critical open lands and making informed decisions. The objectives of the Inventory and Assessment are to:

- Evaluate the natural development and ownership constraints on the lands; and
- Develop a hierarchical classification of designated open lands.

The intent is that the process develops a matrix which includes specific parcel data for each property zoned Open Space, Foothill Preservation, or Agriculture. The matrix data consists of ownership, land use, geologic, environmental, and physical characteristics derived from existing Geographic Information Systems (GIS) data sources. The matrix is then used to develop a process for identifying critical characteristics affecting development potential. The process delineates types of crucial open lands and will assist the City in making policy and ordinance recommendation that support the City's sustainable development goals.

## DATA SOURCES

Numerous sources of data have been identified, some from original sources, and some from Salt Lake City Departments and Divisions that have already compiled data. The data represents the "best available" information to date, and it is intended that this data will be updated and amended as new sources of information become available. The matrix and GIS data are flexible, allowing a myriad of maps to be produced using various layers interchangeably, singly, or in multiple layers.

Data were received directly from the following sources. Some data had already been compiled from multiple other sources including Salt Lake County, Utah State Geologic Survey, and National Wetlands Inventory, and was included in the directly referenced sources.



USDA - United States Forest Service – Wasatch Cache National Forest  
 USDA – Natural Resource Conservation Service  
 Utah State Automated Geographic Reference Center  
 Utah State Division of Wildlife Resources  
 Salt Lake City Planning Division  
 Salt Lake City Department of Public Utilities  
 Salt Lake Engineering

**CRITICAL LANDS MATRIX CATEGORIES**

The following indicates the categories or land characteristics found on the matrix, defines the characteristic, and indicates the source of the information. They are organized as they appear from left to right in the matrix.

**Parcel Number**

Each parcel of land has a parcel number assigned by Salt Lake County. These numbers are the reference link between the matrix and the mapping. They were obtained from Salt Lake County and occur on a data layer received from Salt Lake City Planning GIS.

**City Area**

Salt Lake City is divided into Planning Communities or districts. Each Planning Community is defined by a boundary which appears on a data layer from Salt Lake City Planning GIS. Planning Communities include:

Matrix Code	Planning Community
A	Avenues Community
CC	Central Community
CH	Capitol Hill Community
EB	East Bench Community
NW	Northwest Community
NWQ	Northwest Quadrant Community
OS	Open Space Community
SH	Sugar House Community
WSL	West Salt Lake Community

**Acres**

The acreage of each parcel is part of Salt Lake County’s Parcel data base. This information was received from Salt Lake County and appears on data layers from Salt Lake City Planning GIS.

**Address**

The physical address of each parcel is included when it is available. When “Number Null” appears in the column, it indicates that the parcel is no longer being tracked by the Salt Lake County Assessor and is not taxed. Location information is received from Salt Lake County and appears on data layers from Salt Lake City Planning GIS.



**Salt Lake City Zoning**

All properties on the matrix are zoned as either agricultural, foothill protection, or open space. Agricultural uses are generally considered “holding zones,” which are expected ultimately to transition into other uses. Foothill Protection areas occur along the foothills and are generally larger parcels with minimum areas of disturbance. Open Spaces are generally parks, watershed areas, and undeveloped lands that have limited development potential.

Matrix Code	Definitions
AG	The purpose of the AG Agricultural District is to preserve and protect Agricultural uses in suitable areas of the City until the lands can be developed for a more appropriate use. Residential (10,000 s.f. min.) and agricultural uses are permitted.
AG-2	The purpose of the AG-2 Agricultural District is to preserve and protect Agricultural uses in suitable areas of the City. Residential (2-acre min.) and agricultural uses are permitted.
AG-5	The purpose of the AG-5 Agricultural District is to preserve and protect Agricultural uses in suitable areas of the City. Residential (5-acre min.) and agricultural uses are permitted.
FP	The purpose of the FP Foothills Protection District is to protect the foothill areas from intensive development in order to protect scenic values and minimize flooding and erosion. Sixteen-acre lots are required.
OS	The purpose of the OS Open Space District is to preserve and protect areas of public and private open space and exert a greater level of control over any potential redevelopment of existing open space areas.

**Salt Lake City Land Use**

Land Use data occurs on a GIS data base prepared by Salt Lake City Engineering, and generally indicates if the property is developed, and how it is being used. City Land Use designations generally coincide with actual City zoning designations.

Matrix Code	City Land Use Designation
AIR	Airports and Transportation
AG	Agricultural
APTR	Apartment
GCO	General Commercial
INS	Institutional
LIN	Light Industrial
PARK	Parks and Recreation
RR	Railroads
SCO	Service Commercial
SFR	Single Family Residential
STE	Streets
TFR	Two Family Residential
UTL	Utilities



VAC	Vacant Land
n/a	Not Available

### Salt Lake County Land Use

County Land Use data occurs on a GIS data base prepared by Salt Lake City Engineering using information provide by Salt Lake County. County Land Use data indicates how the property is being taxed. Some properties are tax exempt.

Matrix Code	County Land Use Designation
AGG	Agricultural Production (Grain)
AGR	Agricultural Production (Ranch)
AMHL	Associated Multi-Housing Land
APT	Apartment
COM	Commercial
COMM	Commercial Mixed
DUP	Duplex
EX	Exempt Property
GB/L	Government Building/Land
INDM	Industrial Mixed
IRL	Improved Residential Lot
MOR	Mortuary
PP	Public Property
PUD	Planned Unit Development
RCO	Residential Improvements on Common Land
RE	Retail
RP	Related Parcel
SCH	School
SFR	Single Family Residential
SG	Service Garage
UP	Underdeveloped Property
VACC	Vacant Land (Commercial)
VACI	Vacant Land (Industrial)
VACMH	Vacant Land (Mobile Home)
VACR	Vacant Land (Residential)
n/a	Not Available

### Ownership

Land ownership generally falls in either public or private ownership. Two categories of private ownership are indicated; the remaining categories all involve government agencies or entities, or quasi-public agencies and service providers.

Matrix Code	Ownership
PI	Private Individual (individual property owners' names or trusts)
PO	Private Other (large land holding companies, i.e. Mt. Olympus Hills, Johnson Land Co., Temple View Properties, churches, Kennecott, Bothwell Swanner, Country Club, etc.)



BOE	Salt Lake City Board of Education
CVW	Central Valley Water Reclamation Facility
NSL	North Salt Lake City
PRJ	Provo/Jordan River Parkway Authority
PU	Public Utility (Questar, Union Pacific, Railroads, etc.)
SHP	Sugar House Park Authority
SLC	Salt Lake City
SLO	Salt Lake County
SL2	Salt Lake City and Salt Lake County
SSL	South Salt Lake City
USA	United States Government
UT	State of Utah (State Roads, State Parks and Recreation, etc.)
UU	University of Utah
n/a	Not Available

### Flood Plains

Flood plains are determined by the Federal Emergency Management Act (FEMA) and provided to local jurisdictions for planning purposes. This data was received from Salt Lake City Department of Public Utilities.

Matrix Code	Definition
A	This flood insurance risk zone corresponds to the 100-year floodplains determined in the Flood Insurance Safety (FIS) by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no Base Flood Elevations or depths are shown within this zone. Mandatory flood insurance is required
AE	This flood insurance risk zone that corresponds to the 100-year floodplains determined in the Flood Insurance Safety (FIS) by approximate methods. In most instances, Base Flood Elevations derived from detailed hydraulic analyses are shown at selected intervals. Mandatory flood is required.
X	This flood insurance risk zone corresponds to areas outside of the one percent annual chance floodplain, and areas of one percent annual chance sheet flow flooding where average depths are less than 1 foot; areas of one percent annual chance stream flooding where the contributing drainage area is less than one square mile; or areas protected from the one percent annual flood chance by levees. No Base Flood Elevations or depths are shown within this zone.
X500	An area inundated by 0.2% annual chance flooding; an areas inundated by 1% annual chance flooding with average depths of less than 1 foot or with drainage areas of less than 1 square mile; or an area protected by levees from 1% annual chance flooding.

### Wetlands

Wetlands were documented during the National Wetland Inventory using air photography and soils data, and were mapped by the United States Fish and Wildlife Service. Many of them have not been field-verified; however, this is the only city-wide data available. The data was received from the Utah State Automated Geographic Reference Center (AGRC).



Salt Lake City is currently developing a Special Area Management Plan (SAMP) for the western portion of the City which will identify existing wetland resources, wildlife habitat, and other site specific information to help direct future action for these lands. The SAMP study area is identified on the wetlands map, and indicates that data specific to the area will be available in the future, at which time the mapping can be updated.. The data was received from Salt Lake City Planning GIS, through their environmental consultant.

Matrix Code	Presence of Wetland
Yes	Wetlands occur on all or a portion of the parcel.
No	Wetlands do not occur on the parcel.

### Salt Lake City Watershed

Salt Lake City's Department of Public Utilities owns or controls thousands of acres in the foothills and canyons that are part of the watershed. Lands that are within the watershed have development and use restrictions. The watershed boundary was obtained from Public Utilities, and the matrix indicates whether any portion of the parcel occurs in the watershed area.

Matrix Code	Watershed Areas
Yes	Indicates that some portion of the parcel occurs within the watershed.
No	Indicates that no portion of the parcel occurs in the watershed.

### Water Bodies

Water bodies are ponds, streams, rivers, reservoirs, springs, and others. The information was received from the Utah State Automated Geographic Reference Center and the Salt Lake City Department of Public Utilities. The matrix code indicates whether any portion of the parcel contains one or more types of water bodies.

Matrix Code	Water Body Description
FH	Fish Hatchery
ILP	Intermittent Lake or Pond
LP	Lake or Pond
MS	Mud or Sand Flat
MSW	Marsh, Swamp, or Wetland
SR	Stream or River
RE	Reservoir
SP	Spring
U	Uncoded



### Water Table – 10’ Depth

Water table data was received from the Utah State Automated Geographic Reference Center and confirmed by Salt Lake City Public Utilities (Brad Stewart, November 2005). The data available indicates if there is ground water within 10 feet of the ground surface.

<u>Matrix Code</u>	<u>Water Table Depth</u>
Yes	Indicates that the water table is within 10 feet of the ground surface.
No	Indicates that the water table is deeper than 10 feet.

### Aquifer Recharge Zones

Salt Lake City Department of Public Utilities provided information for locations where aquifer recharge takes place, using data prepared by the U.S. Geologic Survey. The matrix indicates whether any portion of the parcel occurs in an aquifer recharge area which is either Primary or Secondary. Primary Recharge Areas are the most sensitive because they move downward and do not have a clay lens that protects them from sources of contamination. Secondary Recharge Areas also move downward but they do have a minimum 20 foot layer of clay that protects the water from sources of contamination.

The data also includes Drinking Water Source Protection Zones.

<u>Matrix Code</u>	<u>Aquifer Recharge Areas and Drinking Water Source Protection Zones</u>
No	Indicates that no portion of the parcel intersects with aquifer recharge areas.
P	Indicates a Primary Recharge Area
S	Indicates a Secondary Recharge Area
250	Indicates an area where it takes 250 days for a source of contamination to reach the margin of a collection area or the boundary of an aquifer.
3	Indicates an area where it takes 3 years for a source of contamination to reach the margin of a collection area or the an aquifer.
15	Indicates an area where it takes 15 years for a source of contamination to reach the margin of a collection area or an aquifer





**High Lake Level Interface Potential – 4218’**

Great Salt Lake varies in depth and therefore extent depending on precipitation cycles. At its highest level it is considered to reach an elevation of 4217 feet above sea level. Information received from the Utah State Automated Geographic Reference Center shows the extent of the Lake at various depths, one of which is 4218. Since this is closest to the elevation typically considered as flood level, elevation 4218 is indicated on the map and the matrix.

<u>Matrix Code</u>	<u>Interface With Great Salt Lake Shoreline</u>
Yes	Indicates that some portion of the parcel intersects with the contour 4218.
No	Indicates that no portion of the parcel intersects with the contour 4218.

**Lake Bonneville Historic Shoreline**

Lake Bonneville once covered all of the Salt Lake Valley and beyond. Its historic shoreline is approximately 5100 feet above sea level however, there may be some slight variation. Information was received from the Utah State Automated Geographic Reference Center. The matrix code indicates if any portion of the Lake Bonneville Historic Shoreline occurs on the parcel.

<u>Matrix Code</u>	<u>Interface With Lake Bonneville Historic Shoreline</u>
Yes	Indicates that some portion of the parcel intersects with the historic shoreline.
No	Indicates that no portion of the parcel intersects with the historic shoreline.

**Wildlife Status - Threatened, Endangered, or Sensitive Wildlife Species**

Certain wildlife species are protected or listed as threatened, endangered, or sensitive. The Utah Division of Wildlife Resources and the Utah Natural Heritage Program maintain the lists and provided the data used on the maps and in the matrix. If a threatened, endangered or sensitive wildlife species is found on a portion of the parcel, the name of the species is indicated.

<u>Matrix Code</u>	<u>Wildlife Status</u>
No	There are no threatened, endangered or sensitive wildlife species associated with the parcel.
Species Name	If there is a threatened, endangered or sensitive wildlife species associated with the parcel it is listed by species name in the column.



**Wildlife Habitat – Mule Deer**

The Utah Division of Wildlife Resources has mapped important habitat for various wildlife species. Within Salt Lake City, only mule deer habitat is specially mapped; however, DWR personnel indicate that key drainages such as river and stream corridors and wetland areas are also important to migratory songbirds and wetland birds. Stream and river corridors and other water bodies are identified under the category Water Bodies, and wetlands are identified under the category Wetlands.

Matrix Code	Mule Deer Habitat
Yes	Indicates that mule deer habitat occurs on some portion of the parcel.
No	Indicates there is no mule deer habitat on the parcel.

**Dominant Vegetation**

Most of the City is covered with urban development and landscaped parcels however, natural vegetation occurs in the foothills and in undeveloped areas primarily in the western and northwestern portions of the city. Dominant vegetation type data was received from the Utah State Automated Geographic Reference System. The matrix code indicates the dominant vegetation type or types found on the parcels.

Matrix Code	Dominant Vegetation Type
CI	Cities (urban areas)
DF	Douglas Fir
GW	Greasewood
PW	Pickleweed
MA	Maple
O	Oak
SG	Saltgrass
W	Water
n/a	Not Available

**Wildfire Hazard**

The U.S. Forest Service commissioned a study entitled “Wasatch Front Fuels Assessment Report”, prepared by David Evans and Associates Inc. in September 2002. The report designates areas of fuel hazard as Non-Burnable, Low, Medium, Medium/High, High, and Very High. For purposes of the matrix some categories have been combined.

Matrix Code	Wildfire Hazard
NB	Non-Burnable
L	Includes fuel hazard assessed areas identified as Low.
M	Includes fuel hazard assessed areas identified as Medium.
H	Includes fuel hazard assess areas identified as Medium/High, High, and Very High.
n/a	Not Available



### Soils – Soil Association, Percent Slope, and Runoff Potential

Soils are classified by Associations by the USDA Natural Resource Conservation Service (formerly Soil Conservation Service), and mapped. Each soil association is described, including information about its structure (clay, sand, silt, etc.), where it is typically found (along streams, hillsides, flat lands, etc.), its drainage characteristics, runoff potential, permeability, and other data. The most important for this purpose is the Soil Association which describes slope characteristics and runoff potential.

The Soil Association Code and designations established by the Soil Conservation Service are shown for information only. Percent Slope is shown on the matrix with the range contained in the soil association description; and Runoff: Potential is indicated as either S – Slow, M – Moderate, or R – Rapid. n/a indicates that the data is not available.

Soil Assoc. Code	Association	Percent Slope	Runoff Potential
BEG	Bradshaw	25-80	M
BhA	Bingham	1-3	M
BhB	Bingham	3-6	M
BhC	Bingham	6-10	M
BkC	Bingham	3-10	M
BrB	Bramwell	0-3	S
Ch	Chipman	0-2	S
Ck	Chipman	0-2	S
Cl	Chipman	0-2	S
DCG	Deer Creek	30-60	M
DGG	Deer Creek	30-60	M
De	Decker	0-5	S
Dk	Decker	0-5	S
DPE	Dry Creek	10-20	R
Du	Dumps	n/a	n/a
EMG	Emigration	40-70	R
FOG	Foxol	40-80	R
GEG	Gappmayer	30-60	M
Gp	Gravel Pits	n/a	n/a
HDF	Harkers	20-50	R
HGG	Harkers	20-50	R
HHF	Harkers	6-40	R
Ir	Ironton	0-6	S
Jo	Jordan	0-1	S
LcA	Lasil	0-2	S
LdA	Lasil	0-1	S
Lk	Leland	0-1	S
Lo	Loamy Borrow Pits	n/a	n/a
Ma	Made Land	n/a	n/a
Mc	Magna	0-2	S
PeA	Parleys	0-3	S



PeB	Parleys	3-6	M
RO	Rock Land	n/a	n/a
Sa	Saltair	0-2	S
Sd	Sandy Alluvial Lands	n/a	n/a
Se	Sandy Borrow Pits	n/a	n/a
So	Stony Land	n/a	n/a
SP	Stony Terrace Escarpments	n/a	n/a
TaB	Taylorville	1-3	S
Te	Terminal	0-1	S
TtC	Timpanogos	6-8	M
TuB	Timpanogos	3-6	M
UL	Urban Land	n/a	n/a
W	Water	n/a	n/a

**Fault Lines**

Geologic fault lines occur primarily along the east bench of Salt Lake City. The most dangerous zone is immediately on top of the fault; however, information is also provided if a fault occurs within a 500 foot buffer on either side of the fault. Information was obtained from the Utah State Automated Geographic Reference Center, and indicates whether or not a parcel intersects with one of the faults, and/or the buffer area.

<u>Matrix Code</u>	<u>Fault Lines</u>
Yes	Indicates that a portion of the parcel intersects with one of the fault lines.
No	Indicates there are no fault lines intersecting the parcel.
B	Indicates that a portion of the parcel intersects with the 500 foot buffer on either side of the fault line.

**Liquefaction Potential**

Damage to structures and property due to liquefaction is most likely to occur in the valley. Data was obtained from the Utah State Automated Geographic Reference Center, which identifies liquefaction potential. Categories are shown below.

<u>Matrix Code</u>	<u>Liquefaction Potential</u>
VL	Very
M	Moderate.
H	High
n/a	Not Available



### Landslide Areas

Landslide data includes information on where landslides have occurred in the past or where they may occur. Information was received from the Utah State Automated Geographic Reference Center. Categories are shown below and the matrix codes indicate whether one or more landslide conditions occur on the parcels.

Matrix Code	Landslide Areas
A	Active Landslide Area
H	Historic Landslide Area
I	Inactive Landslide Area
P	Potential Landslide Area
No	Indicates there are no landslide areas on the parcel.

### Proximity to Developed Roads

Proximity to developed roads may affect the development potential of parcels. Road information was received from the Salt Lake City Planning Division. The matrix indicates whether the parcel is immediately adjacent to or is intersected by a road, and whether or not the roadway is within one-half mile of the parcel boundary.

Matrix Code	Proximity to Developed Roads
ADJ	Indicates that a developed road shown on the Salt Lake City Road Map either intersects the roadway or is adjacent to it.
0.5 mile	Indicates that a developed road shown on the Salt Lake City Road Map is within one-half mile of the parcel.
No	Indicates there are no nearby developed roads.

### Proximity to Developed Water

Proximity to developed culinary water systems may affect the development potential of parcels. Water system infrastructure information was received from the Salt Lake City Department of Public Utilities. The matrix indicates whether the parcel is immediately adjacent to or is intersected by a water service line, and whether or not water service is available within one-half mile of the parcel boundary.

Matrix Code	Proximity to Developed Culinary Water Service
ADJ	Indicates that developed water infrastructure either intersects or is adjacent to the parcel.
0.5 mile	Indicates that developed water infrastructure is within one-half mile of the parcel.
No	Indicates there are no nearby water service lines.



**Proximity to Developed Sewer**

Proximity to developed sewer infrastructure may affect the development potential of parcels. Sewer infrastructure information was received from the Salt Lake City Department of Public Utilities. The matrix indicates whether the parcel is immediately adjacent to or is intersected by sewer lines, and whether or not sewer lines are within one-half mile of the parcel boundary.

<u>Matrix Code</u>	<u>Proximity to Developed Sewer Infrastructure</u>
ADJ	Indicates that a developed sewer line either intersects the parcel or is adjacent to it.
0.5 mile	Indicates that a developed sewer line is within one-half mile of the parcel.
No	Indicates there are no nearby developed sewer lines.

**Archaeological Resources**

Utah State History is reluctant to show known sites due to the potential for vandalism and damage. Most sites in the City have been discovered during development. Archaeological resources within Salt Lake City are subject to regulation by the Utah State Antiquities Act, Cultural Sites Protection Act, Native American Grave Protection and Repatriation Act, and Abuse or Desecration of Dead Human Body regulations and other state and federal legislation. Essentially all of Salt Lake City has potential for archaeological resources, and there is a required protocol if there is a discovery.

This column has been left intentionally blank, and will be filled-in by the Salt Lake City Planning Division staff as information is obtained.

**Scenic Resources**

Scenic resources, views, and view corridors are sited in several neighborhood planning documents, but no clear process for including them in the planning process has been outlined to date. Consequently, the column has been left blank and will be filled-in by the Salt Lake City Planning Division as information is determined.

**PLANNING COMMUNITIES**

Each Planning Community is different, with different open land characteristics. All of the Planning Communities have open lands that are addressed in the matrix, mapping, and other documentation. Some contain hundreds of acres in undeveloped open lands such as the Northwest Quadrant, and some contain very little undeveloped land such as Central Community. The dominant open lands in most of the developed and nearly built-out areas of the City are parks, golf courses, and other public lands that are not likely to be developed for other purposes. The exception is the Salt Lake County Landfill, which will ultimately transform into other uses, but they will also have a recreation and open space focus. The open space lands with the most likelihood of developing are those found in the Northwest Quadrant, and much smaller, less concentrated areas along the benches and foothills.



In the following, each Planning Community is described briefly, highlighting the dominant open lands and any critical characteristics associated with them.

### **Avenues Community**

Most of the open lands in this community occur in and above City Creek Canyon, and along the northern foothills. Much of the land is publicly owned, but a large portion remains in private ownership. Because of the steep hillsides and foothills, and the environment along City Creek, steep slopes, flood plains, and wildfire hazard are the critical site characteristics affecting development. There are also two threatened, endangered, or sensitive wildlife species that occur along the creek and around the reservoir. Most open parcels are nearby developed roads, sewer, and water.

### **Central Community**

Virtually all of the open lands in this community are owned by Salt Lake City or Salt Lake County, and most are developed parks. One parcel remains in private ownership. Central Community is almost fully developed; however, there are limited parcels that are affected by flood plains, water bodies, and wetlands. All open parcels are nearby developed roads, sewer, and water.

### **Capitol Hill**

Capitol Hill is a mixture of public and private land, and includes the gravel pits along Beck Street, areas above the Capitol on Ensign Peak, and some portions of City Creek Canyon. Critical areas include the Ensign Peak hillsides with steep slopes and mule deer habitat; and two endangered, threatened, or sensitive species are found along City Creek and in the Beck Street area. Most open lands are nearby developed roads, sewer, and water.

### **East Bench**

The East Bench includes Hogle Zoo, Sunnyside Park, This Is The Place State Park, a golf course, and Carrigan Canyon. Much of the land is publicly owned, but there remains some undeveloped private land. The private parcels are primarily along the upper bench areas where steep slopes, wildlife habitat, faults, and landslides are characteristic.

### **Northwest Community**

The dominant open lands are public parks and golf courses, including lands adjacent to the Jordan River and the Jordan River Parkway. Land characteristics associated with the Jordan River and other water bodies are the most important in this area. Most areas have high water tables, and are susceptible to flooding along the river and in low lying areas below elevation 4218.

### **Northwest Quadrant Community**

The Northwest Quadrant holds the largest area of undeveloped land in the City, and includes large tracts of open space and agriculturally zoned land north and west of the Salt Lake International Center. The Salt Lake City Sanitary Landfill occupies another large tract. The land has high water table, and is susceptible to flooding in low-lying areas below elevation 4218. Much of the area is classified as wetland and is home to many species of shore birds and migratory waterfowl, among them the Burrowing Owl and American White Pelican which are



listed as threatened, endangered, or sensitive. Most of the land has ready access to roads; however, sewer and water may be some distance.

**Open Space Community**

The Open Space Community includes much of the land above City Creek Canyon and other mountain lands that are part of the Salt Lake City Watershed. All but one parcel are publicly owned, and are managed as watershed by Salt Lake City Department of Public Utilities. Their development potential is very limited.

**Sugarhouse Community**

The Sugarhouse Community is built-out. The dominant open spaces are parks (Sugarhouse and Fairmont), golf courses (Forest Dale, Nibley, and the Country Club), and the Hidden Hollow/Emigration Creek corridor.

**West Salt Lake**

Most of the open lands are public, including the Jordan Park, the Jordan River Parkway, a golf course and other public parks. Lands along the Jordan River are the most susceptible to flooding, and though there are no threatened, endangered, or sensitive species identified in the area, the corridor itself is an important resource for migratory song birds and other urban wildlife.

**PRIORITY CRITICAL OPEN LANDS CHARACTERISTICS**

The Critical Lands Matrix Categories described earlier are all important factors in determining the development potential or the preservation priority of a parcel of open land; however, some are more important than others. Therefore, it is important to establish priorities or key characteristics that may trigger a higher level of review during the development review process, or may identify a specific parcel for preservation. Some consideration in the development of evaluation criteria include effects on health, safety and welfare of the public; aesthetic, cultural, and social values; and characteristics related to location, ownership, and access to services.

The open land characteristics are identified below and ranked in order of importance with the most important characteristics occurring at the top of the list and the least important occurring at the bottom. All however, should be carefully analyze. Special consideration should be given to areas where several characteristics overlap and occur on the same parcel.

**Private Land Ownership** Most publicly-owned land will never be developed and will likely remain undeveloped; whereas privately-owned land is always subject to sale for development purposes.

**Proximity to Existing Roads, Sewer, and Water** Private properties with close proximity to existing roads, water, and sewer services are more highly valued for development that those that will require a large investment in infrastructure to make development possible.





<b>Steep Slopes and Runoff Potential</b>	Slopes with a gradient of over 30 percent are generally protected from development or development is very limited. Slopes are protected because they are often difficult to access, frequently include highly erosive or very fragile soils, and may be subject to landslides.
<b>Watershed Areas</b>	Open lands within the watershed and owned by a public agency are protected from development; however, there are still small parcels within the watershed that are privately held. These are vulnerable to development that could compromise the quality of Salt Lake City' drinking water.
<b>Flood Plains</b>	Open lands susceptible to flooding occur along most of the stream and river corridors, and in the low-lands where Great Salt Lake flooding may occur. Flooding is a hazard to property as well as life.
<b>Great Salt Lake Water Level 4218</b>	Low-lying lands along the edges of Great Salt Lake are susceptible to flooding.
<b>Threatened, Endangered, or Sensitive Wildlife Species</b>	These wildlife species are at risk because of habitat loss, and may be protected by federal and/or state legislation.
<b>High and Moderate Wildfire Hazard</b>	Certain conditions along urban/wild land interface areas are more susceptible to burning. Development in these areas requires additional considerations and design solutions.
<b>Wetlands</b>	Wetlands shown on the maps and designated in the matrix are very general; any parcel shown as wetland should be investigated by a professional wetland delineator approved by the US Corps of Engineers.
<b>Water Bodies</b>	Water bodies includes mud flats and marshes and other water-related characteristics that may indicate the presence of wetlands and wildlife habitat. A professional delineation and assessment should be required.
<b>Bonneville Lake Shoreline</b>	The ancient Bonneville Lake covered most of the Salt Lake Valley and left its mark along the benches and foothill of the Wasatch Range. Development above the historic Bonneville Lake Shoreline is discouraged.
<b>Mule Deer Habitat</b>	Mule deer occur in the foothills where winter grazing occurs. Access to and from winter grazing areas is as important as the grazing areas themselves. Special planning consideration that provide migration corridors should be evaluated during the development review process.



<b>Faults</b>	Geologic faults along the east bench have a history of activity and can become active again at any time. Development on top of the fault is a danger; development nearby a fault may be safe. Knowledge about faults and their locations require professional technical advise.
<b>Landslides</b>	Known landslide areas should be avoided and may affect the development potential of a parcel. Determination of development potential may require the professional technical opinion of a geologist.
<b>Recharge Areas</b>	Primary and secondary recharge areas put water back into the underground aquifers, some of which provide drinking water. In recharge areas, professional engineering may be required to address storm water and urban runoff by providing areas for recharge.
<b>Water Table</b>	Knowing that a high water table exists in an area can affect development, and may require professional engineering. It is not necessarily a deterrent to development.
<b>Dominant Vegetation</b>	Douglas Fir, Gamble Oak, and Maple are highly valued for their aesthetic qualities, but they provide numerous other benefits as well. Protecting existing vegetation, particularly in areas that will remain in a relatively natural condition is needed in order to reduce the spread of noxious weeds and maintain other desired land characteristics.
<b>Scenic Resources</b>	Scenic resources will be added by City Staff at a later date.
<b>Archaeology</b>	When development occurs and archaeological resources are discovered, the Utah Division of State History should be contacted for direction and assistance.

## **OPEN SPACE ZONING CATEGORY RECOMMENDATIONS**

The outcome of this process is the recommendation of open space categories that can be translated into open space zones. The open space zones described in the following are listed with those having the least potential for development or additional development at the top of the list. These open space lands are either already developed wholly or partially or they have virtually no potential for development. Open Space Zones toward the bottom of the list may receive pressure for development, and require the highest level of consideration and scrutiny when development proposals are put forward.



**Developed Open Space Zone**

This open space zone includes developed neighborhood and community parks, regional parks, the Jordan River Parkway, schools and universities, trail corridors, golf courses, and cemeteries. Ownership is held primarily by some private entity, although some golf courses and cemeteries may be privately owned. These lands are considered to have no development or redevelopment potential; they will remain in their current use, in public or private ownership, to serve community needs and services.

**Public Use Open Space Zone**

This zone includes lands in public ownership that are used for public purposes including the airport, utilities, water treatment facilities, and transportation entities. They have no development or redevelopment potential other than perhaps expansion of existing uses.

**Watershed Protection Open Space Zone**

This open space zone includes properties in public ownership that are protected as watershed by Salt Lake City Public Utilities. They have no development potential other than passive and managed recreation.

**Natural Open Space Zone**

This open space zone includes lands that are considered “pristine” or nearly so. The zone is applied generally with the agreement of the property owner, who is willing to maintain the property in an undeveloped state. The property may be in public (usually a municipality) or private ownership. These lands have no potential for development.

**Agricultural Preservation Open Space Zone**

This open space zone includes A-2 and A-5 agricultural land that is to be preserved. Other agricultural zones are essentially “holding zones;” whereas this zone seeks to preserve agricultural use and lifestyle into the future. Ownership is private. Lands have limited development potential based on zoning requirements.

**Open Space District Zone (existing City open space district)**

This zone includes all property in the City currently designated as open space. This open space district was created to preserve and protect areas of public and private open space and exert a greater level of control over any potential redevelopment of existing open space areas.

**Sensitive Lands Open Space Zones**

This zone includes lands that have environmental characteristics that need to be taken into consideration when development is considered. An environmental analysis should be conducted to verify the presence of sensitive conditions, if discovered they should be addressed in the planning, and either avoided or mitigated. Development potential of these lands varies depending on the kind and number of sensitive conditions that occur.

The chart below summarize the proposed open space zones, the matrix categories that apply to the zones, and the critical land characteristics within the matrix category that are applicable to



the zone designation. Other land characteristics may also be considered, but those shown are considered the most critical; having the most bearing on decision-making.

<b>OPEN SPACE ZONE NAME</b>	<b>MATRIX CATEGORY</b>	<b>CRITICAL LAND CHARACTERISTIC</b>
<p><b>Parks and Recreation</b> Parks, golf courses, cemeteries, schools and universities. <i>No Development Potential.</i></p>	<p>SLC Land Use SLCo. Land Use Ownership</p>	<p>PARK, INS SCH, MOR BOE, UT, UU, SHP, SLC, SLO, SL2, JRP</p>
<p><b>Public Use</b> Public facilities and uses. <i>No Development Potential</i></p>	<p>SLC Zoning SLC Land Use Ownership</p>	<p>OS AIR, RR, STE, UTL, EX, GBL, PP CVW, PU, SLC, SLO, SL2, SSL, NSL, USA, UT</p>
<p><b>Watershed Protection</b> Salt Lake City Public Utilities managed lands. <i>No Development Potential</i></p>	<p>SLC Zoning Ownership</p>	<p>OS, FP PU, SLC, SLO, SL2, SSL, NSL, USA, UT, Salt Lake City Watershed – yes,</p>
<p><b>Natural Open Space</b> <i>No Development Potential</i></p>	<p>SLC Zoning Ownership</p>	<p>OS PO, PI, SLC, SLO, SL2, SSL, NSL</p>
<p><b>Agricultural Preservation</b> <i>Limited Development Potential</i></p>	<p>SLC Zoning</p>	<p>AG-2, AG-5</p>
<p><b>Sensitive Lands</b> Lands with environmental characteristics in public ownership. <i>Varied Development Potential.</i> Require developer to conduct environmental analysis, identify areas not suitable for development, and/or mitigate impacts.</p>	<p>SLC Zoning SLC Land Use SLCo. Land Use Ownership Flood Plain Wetlands Water Bodies Water Table – 10’ Depth Aquifer Recharge Zones High Lake Level – 4218’ Lake Bonneville</p>	<p>AG, FP, OS AG AGG, AGR PI, PO A, AE, X, X500 Yes FH, ILP, LP, MS MSW, SR, RE SP, U Yes  P, 250  Yes  Yes</p>



	Shoreline	
	Wildlife Status – TS&E	Species Name
	Wildlife Habitat – Mule Deer	Yes
	Wildfire Hazard	M, H
	Percent Slope	25-80, 30-60, 40-70, 40-80, 20-50, 6-40
	Runoff Potential	M, R
	Fault Lines	Yes
	Liquefaction	H
	Landslide	A, H, I, P
	Dominant Vegetation	O, MA, DF

