

Environmental Quality and Preservation

The preservation, development and management of environmental and open space resources are essential to growth, diversity, and quality of life in the Emigration Canyon Community. The canyons and streams combine to make the area unique and attractive to residents. The preservation of these elements is crucial to the future vitality of the Community.

The protection, conservation, development, and use of natural resources, including the quality of air, forest lands, soils, waterways and other water features, wildlife, minerals and other natural resources are all considered as part of the environmental element.

The Emigration Canyon Community is fortunate in that there is an abundance of wide-open and undeveloped lands present today. One effective method of environmental protection and management is the designation and preservation of open space. The preservation of open space serves a number of important public objectives, including,

- natural resource and habitat protection;
- managed utilization of natural resources;
- outdoor recreation;
- creation of buffers between developed areas and natural areas;
- protection of public health, safety and welfare;
- prevention of damage to natural areas by development.

The provision of adequate open space and protection of sensitive areas is closely related to the quality of life within the Community. While residents may derive recreational opportunities and aesthetic benefits from open space in the form of natural areas, trails, etc., many important environmental advantages are also related to this use of land. Open space designation is effective for the protection and management of critical environmental

areas such as wetlands, floodplains, significant ridgelines and hillsides, watersheds and wildlife habitats. This both minimizes the potential for destruction of sensitive land and protects the public from avoidable hazards. The Utah State Division of Water Quality classifies Emigration Canyon as an Anti-Degradation Area. Protection of sensitive lands in the Canyon is crucial, for the preservation of amenities for future generations, as well as the health and safety of existing Canyon residents, their water supply and visual amenities.

Environmental preservation and open space policy statements will be described individually.

Groundwater Supply and Quality

The health of the community's residents and environment depends on an adequate and safe supply of water. Unless the Canyon installs and connects to a canyon-wide water system, the existing community and new development will continue to receive water

services from the Emigration Improvement District. The absence of a sewer system requires that all existing and future development use a septic system. The continued reliance on septic systems may seriously impede the long-term preservation of ground water quality. Emigration Canyon residents presently rely on groundwater supplies drawn from individual wells and must dispose of waste water through an individual septic system, with the exception of the Emigration Place P.U.D., which gets its water from Salt Lake City. Land

As new development occurs, the supply and quality of groundwater should be monitored to ensure protection.

development affects both the quantity and quality of the groundwater. Because of this link, the impacts of existing and future development on this sensitive resource should be studied and managed effectively.

The presence of wildlife in the Canyon will also continue to affect water quality. The use of watershed areas as breeding, feeding and nesting grounds for wildlife does impact water quality. The ability for wildlife to use stream channels for drinking water, a food source in which to find edible plant life, and as a travel corridor, all contribute to the impact of wildlife on streams.

All of Emigration Canyon has been designated an Anti-Degradation Area by the Utah State Water Quality Division. This designation indicates the need for water quality preservation efforts. Most of these efforts will come in the form of enforcement of best management practices, and through regulation and monitoring by the Salt Lake City-County Health Department and site plan review by the Salt Lake County Development Services Division.

Developments in the Canyon are required to submit an erosion control plan for all disturbed areas in accordance with the Grading Plan Submittal Requirements of the Foothills and Canyons Overlay Zone. These plans must also comply with Title 42 of the Utah State Code and §402(p) of the Clean Water Act.

The state requires developments over 5 acres to obtain a storm water discharge permit and submit an erosion control plan in accordance with Section R-317-8, Utah Pollutant Discharge Elimination System (UPDES), of the Utah Administrative Code.

Visual Resources

The visual resources of a community combine to create the amenities that attract residents and visitors. The identification and protection of these resources are necessary to preserve the community's environment and integrity.

Wildlife

The presence of wildlife is a unique community resource. Protection and management of wildlife resources is important in maintaining the

quality of life people have come to expect in the Emigration Canyon Community. Wildlife is a unique resource and one of the factors attracting residents to the area. Wildlife and available habitat should be kept in balance and managed to prevent overpopulation, disease and other problems. This should be done through consultation with the State Division of Wildlife Resources. Critical wildlife habitats are shown on the map on page 37.

Wildlife needs should be considered in land use decisions. While some species of wildlife can adapt to human encroachment to a certain extent, careful planning is needed to ensure

that important wildlife habitats are not destroyed and that wildlife-human conflicts are minimized.

Mule Deer, Elk, Moose and Beaver are common sights. The ability to observe wildlife at close range is one of the factors that attract people to this area.

The presence of wildlife is a unique community resource.



Emigration Canyon contains many fawning areas for wildlife.

Human encroachment on wildlife habitat through development and increased recreation use is an important consideration in the planning process.

Problems for wildlife in developed and developing areas usually comes under several categories. First and foremost, is the loss of critical habitats needed for nesting, calving, wintering, and breeding. Second is the loss of historic movement corridors. Third is the direct loss of animal population that results from human interference, such as road kill and other man/animal accidents.



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In the Emigration Canyon area the needs of most wildlife species can be met by protecting several habitat types and prime habitat areas. The size of residential parcels is very important, as is the value of strategically located blocks of open land in public or private ownership. In addition, a network of public and private open space and natural trails should be developed to preserve wildlife habitats and provide areas where the public can view wildlife without disturbing these important habitats.

It is easy to identify valuable habitat for large species like Mule Deer and Moose, which are seen on a regular basis. It is more difficult to delineate which land, for example, is important for nesting birds and waterfowl that may use a different nesting site from year to year but is always found in the same general type of habitat.

The needs of other wildlife species can be met by ensuring that habitats typical of the Canyon

environment are protected. Especially important habitat types within the study area include meadows and riparian areas, mountain shrubland, particularly south facing shrublands, along with adequate forested acreages. Meadow habitats provide food supplies for a variety of species, such as Mule Deer, Elk, Moose, etc. Natural riparian areas are important because they provide nesting and feeding habitat for a large variety of species. As development continues to occur in these areas, this sensitive habitat rapidly disappears.

The Utah State Division of Wildlife Resources has provided data on critical wildlife habitats in the Wasatch Canyons that include the Emigration Canyon study area. Wildlife habitats for mammals are generally based on seasonal climate, range conditions for browse (forage) production, and areas suitable for protecting the newly born of the various species. Habitat for specific bird species is constrained mostly by the availability of nesting areas. The following habitats are designated critical wildlife habitats.

- Habitat of threatened or endangered species,
- Riparian habitat,
- Wetlands,
- Wildlife movement corridors,

A Wildlife Data map delineates the following habitats that must be considered in the planning process for the Emigration Canyon Township General Plan. The Critical Wildlife Habitat Map can be seen in Figure 4, page 33.

Mule Deer

Critical Winter Range Areas
High Value Yearlong Use Areas

Elk

High Value Yearlong Use Areas

Cougar

High Value Yearlong Use Areas

Black Bear

High Value Yearlong Use Areas

Vegetation

The many varieties of vegetation in Emigration Canyon contribute to its environment and quality of life. Vegetation distribution in the Wasatch Canyons follows belts or life zones, which correlate, to slope, elevation and soil types. The distribution of distinct vegetation belts are discussed schematically rather than specifically due to the lack of comprehensive information. Range and woodland site data is broken down into dominant species for overstory and understory including grasses, sedges, forbs, and shrubs that are the potential native vegetation for given soil types.

The vegetation distributions in the Emigration Canyon study area are described below.

- The foothill communities located at the lower part of the Canyon are dominantly Scrub Oak (*Quercus gambelini*) and Mountain Mahogany (*Cecocarpus ledifolius*). Scrub Oak is the most extensive plant community in the Canyon environment. It begins in the lower foothills at about 5000 feet and covers most of the areas up to about 7,500 feet. On south facing slopes, Scrub Oak extends much higher nearly reaching the timberline in some areas.
- Mountain Mahogany is normally found in south facing slopes where the soil is extremely rocky. Mountain Mahogany is not as extensive as scrub oak, but it does form some definite communities in some areas, usually between 6,000 and 8,000 feet.
- The Canyon streamside communities are dominated by Maple (*Acer glabrum*), Chokecherry (*Prunus melanocarpa*), Birch (*Betula fontinalis*), Alder (*Alnus tenuifolia*), and Cottonwood (*Populus Spp.*) The Maple - Chokecherry Community, especially the Maple forest, is found near the narrow Canyon mouth from 5,000 to 7,000 feet. The Birch - Alder - Cottonwood community represents the most prevalent of streamside trees beginning at about 6,000 feet and extending up to 9,000 feet in elevation. Alder is especially adaptable to the higher elevations. Many varieties of deciduous shrubs are also found in this community.
- The lower montane forests consist primarily of the Aspen (*Populus tremuloides*), White Fir (*Abies concolor*), and Spruce (*Picea pungens*). Aspen form



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a very extensive sub-climax community from about 7,000 to 10,000 feet. Aspens, being unable to grow in their own shade, are usually replaced by conifers. They are not confined to the lower montane region, but often constitute a sub-climax community in the upper montane forest as well.

- The White Fir and Blue Spruce are the dominant trees of the lower coniferous forests. They form the climax vegetation in the same areas as the lower Aspen forests. Douglas Fir is also abundant in both upper and lower montane coniferous forests.
- The upper montane forests consist primarily of the Englemann Spruce (*Picea Englemanni*), Alpine Fir (*Abies Lasiocarpa*) community. This community extends from about 9,000 feet to the timberline. This is the only area where the climatic vegetation and the streamside vegetation are not markedly different.
- The alpine tundra community occurs above the timberline and is characterized by low shrubs and forbs. Some isolated areas above the timberline in

the upper Pinecrest Canyon are solid rock, consequently limiting the extent of this community.

Climatic Data

Utah's climate is determined by its distance from the equator, its elevation above sea level, the location of the state with respect to the average air flow paths from principal moisture sources of the area, namely, the Pacific Ocean and the Gulf of Mexico, and the mountain ranges in the western United States, particularly the Sierra Nevada, Cascades and Rocky Mountains. As moist air is forced to rise over these mountains, a large portion of the original moisture falls as precipitation. Thus the prevailing westerly air currents reaching Utah are dry, resulting in light precipitation over most of the state.

The Great Salt Lake has a modifying effect on Wasatch storms, increasing precipitation intensity. Summer precipitation is usually in the form of thunderstorms. These typically build up during the afternoon and dissipate after dark. Annual precipitation increases about two inches for every 1000-foot increase in elevation.

As is characteristic of mountain slopes with average temperatures near or below freezing, the principal winter precipitation falls as snow. On the average, a foot or more of snow can be found on the mountain slopes by the middle of November and this snow cover usually remains until the middle of May. On the average, only 10 days per month record 0.10 inches of precipitation or more. However, 24-hour snowfalls of two feet or more are common and have been observed during most of the winter and spring months. Snowfalls at locations along the Wasatch Front Range have reported the heaviest accumulations by observing stations in the state.

Three distinct climatic zones are recognized in the Emigration Canyon study area. These zones have been classified by the U.S.D.A. Soil Conservation Service based on differences in the average annual temperature, amount of moisture received, and the length of the growing season. The climatic zones include: 1) Upland Climatic Zone, 2) Mountain Climatic Zone, and 3) High Mountain Climatic Zone.

Air, Odor and Noise

Air, odor and noise are elements of the environment that contribute to the quality of community life. The quality of air is an important and cherished element of the environment. Proper planning and adherence to the established federal, state and county standards and regulations, increased ride sharing when possible, variable work schedules, and improved control of dust pollution are measures which should be encouraged County wide. Quietness is a component of privacy and a part of the character of this Canyon community. This resource should be protected from intrusions of unacceptable noise levels from automobile traffic or other potentially damaging land uses.

Goals

General

Protect, maintain and improve the environmental quality of the Canyon for future generations.

Groundwater Supply and Quality

Protect the community's groundwater supply from significant depletion or hazardous contamination.

Visual Resources

Development in the Emigration Canyon Community should complement the area's visual resources.

Wildlife

Enhance, maintain, and manage a balanced wildlife habitat to ensure the continued biological and aesthetic value of this resource.

Air, Odor, and Noise

Development in the Canyon Community should not result in degradation of these elements.

Objectives

General

Ensure that future development practices and trends recognize, protect, and sustain the Canyon environmental quality.

Groundwater Supply and Quality

1. Balance the availability of water and its use to ensure that water resources are not depleted.
2. Maintain and improve water quality as development occurs.
3. Residential development activities should be non-polluting, and ensure that groundwater quality is not affected.

Visual Resources

1. Preserve and maintain the significant vistas and landscapes that have special visual qualities and are seen frequently by many people.
2. Preserve the quality landscapes from unnecessary visual disruption by ensuring that all development makes maximum use of natural screening of the terrain.
3. Maintain the important view corridors and open areas in the Emigration Canyon Community through sensitive site and building design.

4. Protect identified ridge lines from incompatible development by compliance with the ridge line protection policy outlined in the Slope Protection Standards of the Foothills and Canyons Overlay Zone.

Wildlife

1. Protect critical habitats needed for nesting, calving, wintering and breeding.
2. Protect historic wildlife movement corridors.
3. Minimize human interference into critical wildlife habitat areas.
4. Protect, maintain, and where possible enhance wildlife access to water features and riparian habitats.

Air, Odor, and Noise

1. Protect the health of people from detrimental effects of vehicular, and home heating emissions.
2. Limit airborne particulates by mitigating man-made disturbances.
3. Maintain septic systems to prevent offensive odors by enforcement of current Health Department regulations.
4. Minimize noise and protect privately owned areas valued for their quietness.

SEE WILDLIFE MAP

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