

# 10 ENVIRONMENT

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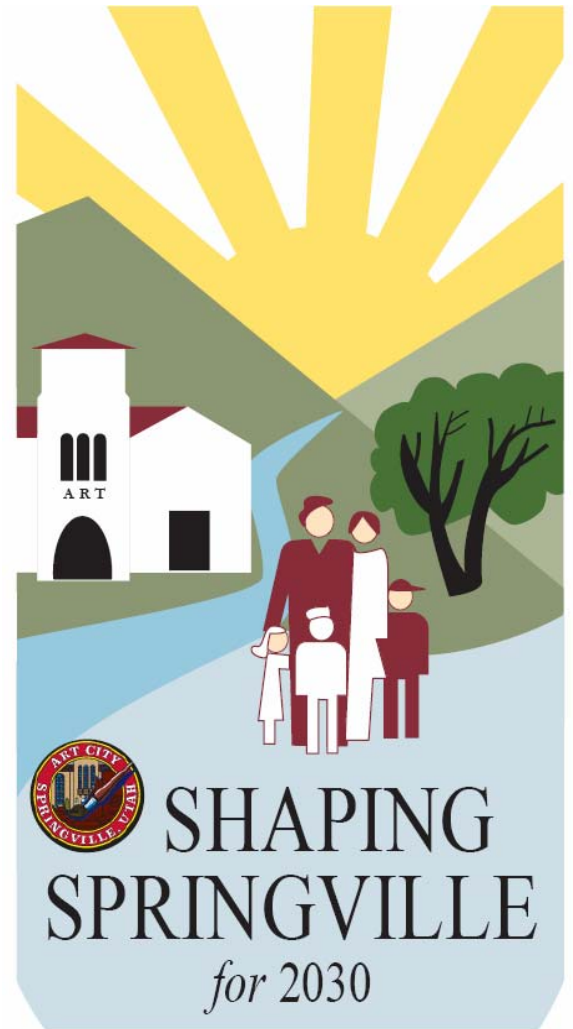
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**GOAL:** *To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.*

## 10.1 Overview of Environmental Considerations

Environmental issues affect everything from quality of life to economic development. It is important that we are mindful and respectful of environmental constraints that need to be considered in connection with the development process. The environment also provides important resources for quality of life measures such as recreation and natural setting and beauty. The sunrise over the Wasatch Range and sunset over Utah Lake and West Mountain are all part of the daily ritual of life in our community. Hobble Creek and other waterways, along with Utah Lake, provide visual interest and opportunities for a variety of water sports. They are part of the reason people choose to live in Springville.

## 10.2 Hydrology

The local waterways have a major impact on the community's daily activities. They are a source for recreation, irrigation, habitat for plants and animals, and an aesthetic resource. The high water table and proximity to Utah Lake in the western portion of the City has created wetlands, flooding, unstable soils, and potential for liquefaction. Also, areas along waterways are at risk for flooding. As development occurs around waterways these areas require special considerations.

### 10.2.1 Hobble Creek

Hobble Creek is the most notable waterway corridor within the City. It is an important part of the identity and heritage of Springville. The Creek was a central part of the daily life of Springville's early residents. It was the primary water source for many daily activities, such as drinking water, washing clothes, watering crops, gardening, and recreating. As such, the first settlement in Springville was focused on Hobble Creek.

As development of Springville continued, Hobble Creek was changed to accommodate irrigation. The creek was channelized and several diversion dams were added. As many as six dams are located along Hobble Creek.

Today Hobble Creek is a changing resource for the community. The amount of land being irrigated for agricultural purposes is decreasing as more and more of it is developed. However, there is a growing concern about the environmental impact the diversions and channeling has caused. Plans to modify dams below the Springville-Mapleton lateral located at approximately 2550 East are being developed. These plans will mitigate some of the impact caused to fish habitat over the years.

June Sucker, an endangered fish species, has been particularly adversely affected by changes to Hobble Creek. Channelizing rivers in the area has prevented the June Sucker from spawning and from being self-sustaining. Utah Transit Authority provided funding to restore access to June Sucker spawning habitat as part of mitigation efforts for the Frontrunner commuter rail system. The project improved the ecological state of Hobble Creek west of I-15 where it drains into





Figure 10-1 View of Hobble Creek June Sucker Restoration.



Figure 10-2 View of June Sucker Restoration

Utah Lake as shown in **Figure 10-1** and **10-2**. After this project was completed, studies indicated 100 June Sucker used the area for spawning in the first year.

Hobble Creek improves the quality of life for residents by offering a place for hiking and biking on trails, fishing, tubing, and other water activities. The City has adopted a master plan for trails that includes a trail along one side of the Hobble Creek corridor wherever possible. The two new community parks and library park will take advantage of the recreation and visual resources the Creek offers, while providing opportunities for creek revitalization.

In addition to recreational opportunities, Hobble Creek plays an important role in the City storm water system. Allowing storm water to drain to the creek channel helps break down pollutants and puts less of a burden on the City to pipe storm water. It is important however, to maintain storm water as pollution free as possible to minimize adverse impacts on Hobble Creek.

### 10.2.2 [Utah Lake](#)

Springville is located on the southeast corner of Utah Lake in an area that includes properties with many environmental concerns. Hobble Creek and other waterways flow into Utah Lake creating wetlands and shoreline area, which make it an important area for the





Figure 10-3 View of Hobble Creek near Jolley's Ranch

ecosystem of the lake (see **Map 10-1 Creeks, Canals, and Waterways**). This is the area where the June Sucker spawning habitat has been restored.

The compromise elevation of 4,489 feet is the Utah Lake water level, except during periods of drought. The lake is kept at this level by pumping water into the Jordan River to prevent flooding. The contour elevation at 4,495 feet is the FEMA 100 year floodplain. Development below the 4495 contour is discouraged, but where it does take place the area needs to be filled at least a foot above the 4,495 contour.

Several years ago, the Utah Lake Commission was formed as an advisory board for development around the lake. The commission was responsible for development of a Master Plan and model land development ordinance have been developed for the lake and shoreline areas.

### 10.2.3 Wetlands

The majority of Springville's wetlands are located in the northwest and west portion of the City near Utah Lake (see **Map 10-2 Wetlands**). According to the U.S. Army

Corps of Engineers, wetlands are defined as areas that are periodically inundated or have saturated soils during the growing season, such as a marsh or swamp. Wetlands benefit Springville economically, socially and environmentally in many ways including but not limited to the following:

- Filtering water from surface runoff pollution;
- Preventing erosion to Utah Lake;
- Control flooding;
- Providing habitat to plants and animals;
- Recharging ground water; and,
- Storing carbon.

The Clean Water Act and the Rivers and Harbors Act protect wetlands by allowing the U.S. Army Corp of Engineers to regulate any wetland disturbing activities. All new development on a property with a possible or known wetland must hire a qualified professional to delineate the wetland area. A permit is required to show that steps have been taken to either avoid or minimize wetland impacts. Any wetlands that have been unavoidably impacted need to be replaced elsewhere.



10.2.4 Floodplain

The majority of floodplains are located near Utah Lake and in between Hobble Creek and Spring Creek (see **Map 10-3 Flood Hazards**). The high flooding potential, especially near Utah Lake, will affect development. For flood hazard analysis purposes, floodplains for the area have been defined for either the 100-year or 500-year event. This means there is a 1 and 0.02 percent chance, respectively, of these events being equaled or exceeded in any year.

Development within the 100-year floodplain is highly discouraged because of the increased risk of flooding.

Development is allowed in the 500 year floodplain recognizing the greater risk for flooding than in areas outside of the flood plain.

Over the years as development has occurred near Hobble Creek the stream appears to have been illegally altered. Property owners are liable for these alterations, and restoration of waterways to their earlier configuration may be required by the U.S. Army Corps of Engineers which administers the federal floodplain program.

10.3 Natural Hazards

Springville is located between mountains to the east and Utah Lake to the west. Springville’s unique physical setting creates abundant recreation, beautiful views, habitat for plants and animals, and improves the overall quality of life for its citizens.

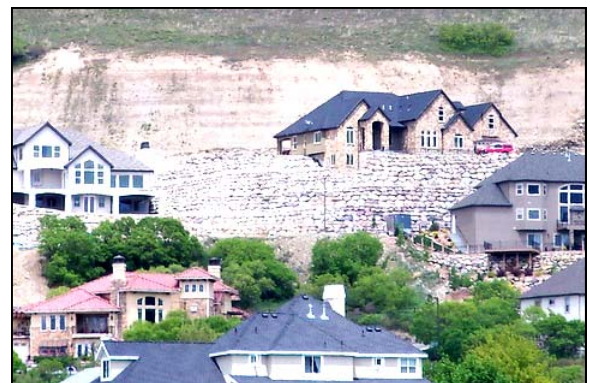
The City’s beautiful location also includes potential natural hazards. Natural hazard concerns for Springville include earthquakes, landslides, rock falls, debris

flows, and flooding. To minimize the damage these hazards can cause, sensitive lands overlay regulations have been created (e.g., floodplain and hillsides).

10.3.1 Slopes

Steep slopes can be found in Springville along the foothills and the mouth of Hobble Creek Canyon. These areas are at greater risk for landslides, rock falls, and debris flows as shown on **Map 10-4 Slope Hazards and Map 10-5 Terrain Slope by Percentage**. Development on steep slopes is highly discouraged (see **Figure 10-3**). Due to the fragile environment, there is an increased risk of damage to property and injury to people.

Where development does occur in these areas, compliance to the hillside overlay regulation is required. The hillside overlay regulation helps mitigate some of the issues associated with development along slopes. The current regulations require lower densities, no building on slopes greater than 25%, and as little disturbance as possible. The hillside overlay regulations need to be reviewed and updated to better reflect current scientific understanding and legal consensus.



**Figure 10-4** Excessive Hillside Development Scars the Mountain Side





## 10.3.2 Fault Lines

### Map 10-6 Faults and Liquefaction

**Potential** identifies the location of two main fault lines that pass through Springville. One fault line follows the eastern boundary of Springville, while the other line breaks from the foothills to run north to south through the western half of Plat A. Both fault lines run through areas that include structures and infrastructure improvements.

Proximity to the fault line results in greater risk for damage during an earthquake. As new construction occurs, it is important that geotechnical studies be performed to identify areas of concern and that specific means of mitigation be met to help improve safety in these areas. Updating the sensitive lands sections of the zoning ordinance to better address these types of concerns is also important.

## 10.3.3 Liquefaction

Liquefaction occurs when a water saturated sandy soil is shaken, and the soil liquefies making it unsuitable for support of structures. Earthquakes are often the cause of liquefaction. Liquefaction often causes property damage from causing buildings to sink or the ground to shift. Springville has areas of very low, moderate and high liquefaction potential as shown on **Map 10-6 Faults and Liquefaction Potential**.

The highest liquefaction potential is located on the west side of the City toward Utah Lake where the soil is sandy and water saturated (see **Figure 10-5**). Development in this area may require additional mitigation in order to lessen the impacts of liquefaction. Generally, the City has not permitted basements in areas of high liquefaction potential.



Figure 10-5 Wet soils in western Springville

## 10.4 Soils

Soil is an important environmental element for a high quality of life. Stable soils will allow structures to retain their integrity, plants to thrive during drought, and water to drain during floods. A wide variety of soils are found throughout Springville. As seen on **Map 10-7 Soil Taxonomy**, the majority of the soils in west Springville are silty-clay, silty-clay loam, and silt loam. Soils along the foothills are mostly stony-loam and loam.

New development plans for landscaping and storm water drainage should consider the effects they will have on the soil, such as exposed slopes that should be immediately vegetated in order to prevent runoff from eroding soils. Best management practices (BMPs) should be followed, so that surface runoff can be managed in a way that will be effective. Each development will warrant a different BMP for the most effective management of surface water.

## 10.5 Solid Waste

Solid Waste in Springville is taken to the transfer station located west of I-15 on 400 South, where it is compacted and then





taken to the Bayview Landfill located northwest of Elberta. This allows more time for garbage to be collected rather than driving it to the landfill. According to the Transfer Station website it takes in 600 tons of garbage a day. It is used by Provo, Spanish Fork, Springville, Mapleton, Salem, Goshen and Woodland Hills. There are future plans for moving the transfer station further West on 400 South. This site is within the boundary of Springville's declared future annexation.

### 10.5.1 [Recycling](#)

Springville has a voluntary curbside recycling program. In 2010, 10% of Springville garbage subscribers also subscribed to curbside recycling. There was a total of 220 tons of recyclable materials collected in 2009. In order to get more residents to participate in the recycling program, education and availability need to continue.

In addition to curbside recycling there are bins for recycling paper set up around the City. The paper is bought by Green Fiber, and money is given to local schools. Green Fiber uses the recycled paper to make insulation.

### 10.5.2 [Green Waste](#)

Green waste can be disposed of by taking it to the Springville City Yard Waste Disposal Center located on 850 North. There is no charge to dispose of yard waste. The waste is then processed into mulch or compost that is available for purchase.

## 10.6 Noise Pollution

Springville City has ordinances preventing anyone from creating unreasonable noise which disturbs others. Springville also considers the level of noise pollution new

industrial and commercial business will have on surrounding residential areas.

## 10.7 Light Pollution

Lighting is an important concern because of the balance between security and being a nuisance to adjacent properties. When new development occurs the impact of lights, signs, headlights, and glare on adjacent properties is considered and addressed. Lighting should be directed away from neighboring properties, or indirect lighting should be used. To provide security, new development may be required to add security lighting.

## 10.8 Air Quality

While air quality is a regional issue, Springville should consider working with county officials to help develop means to decrease air pollution, which is a threat to health, economic productivity, and quality of life. The main pollutants found in Utah County are carbon monoxide, ground-level ozone, and particulate matter. These pollutants are highest during the winter and summer months.

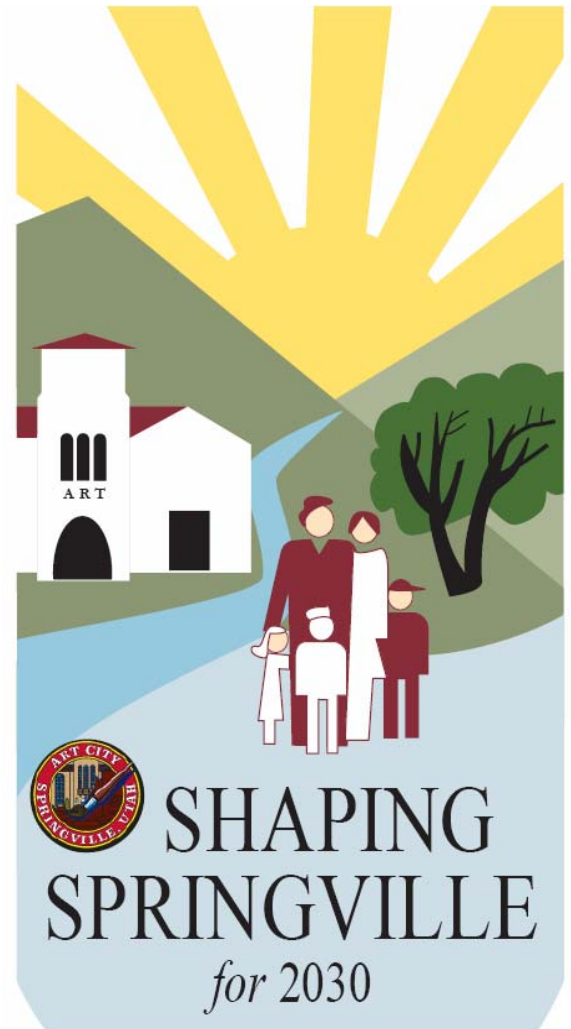






## 10.9 Goals, Objectives, and Strategies

The goals, objectives, and strategies section is comprised of specific goals and actions for Springville during the next 20 years. The following pages present the goals, objectives, and strategies for this element.





**GOAL** To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.

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## OBJECTIVE 1

Minimize damage from natural hazards to citizens, public property, and private property.

### SYNOPSIS

Natural disaster education and preparation can increase the safety of Springville's citizens. Springville's risk for geological hazards and flooding are the main disasters citizens should be made aware of. Possible impacts from natural disasters should be reviewed and mitigated by Springville City as best as possible.

Mitigating against such hazards is an important role for the City. This includes identifying and addressing preventative measures that can be taken as part of the development and construction process.

Knowing what to do in these situations is also important. The City has adopted an Emergency Preparedness Plan that provides helpful and life saving information. It is important that this plan is current and readily accessible to community leaders and citizens in general.

### STRATEGIES

- 1A Update the hillside and sensitive lands ordinances as needed.

*Implementation: City Staff, Planning Commission, City Council.*

- 1B Evaluate environmental risks present in Springville, and utilize that information in revising development proposals.

*Implementation: City Staff, Planning Commission, City Council.*

- 1C Educate the community about environmental hazards and what can be done to mitigate the hazards.

*Implementation: City Staff, Planning Commission, City Council.*

- 1D Prevent development that is inappropriate in environmentally fragile areas.

*Implementation: City Staff, Planning Commission, City Council.*

- 1E Identify and adopt density bonus programs to help protect environmentally sensitive areas as open space.

*Implementation: City Staff, Planning Commission, City Council.*

- 1F Review and update the City's Emergency Preparedness Plan, and help make citizens more aware of the Plan and its content.

*Implementation: City Staff, Planning Commission, City Council.*



**GOAL** To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.

**OBJECTIVE 2**

Protect and preserve the waterways located in Springville.

**SYNOPSIS**

Waterways in Springville increase the overall quality of life. Reducing the impact of urbanization adjacent Springville’s waterways will provide safe drinking water, prevent erosion, prevent flooding, and provide habitat for plants and animals. Participation of residents in the protection and preservation of waterways will improve the ability to preserve the waterways.

There is a need to teach the community about the significance of the waterways. This may be done in connection with learning stations along the trail system on those portions adjacent the creek or Utah Lake.

**STRATEGIES**

2A Preserve waterways from erosion and flooding by restoring natural vegetation where applicable.

*Implementation: City Staff, Planning Commission, City Council.*

2B Enforce ordinances regarding removal of debris and junk around and in waterways.

*Implementation: City Staff, Planning Commission, City Council.*

2C Provide opportunities to educate the public about the significant role of waterways and how they can be protected, preserved, and restored.

*Implementation: City Staff, Planning Commission, City Council.*

2D Consider optional land uses such as, open space, natural areas, agriculture, or wildlife habitat in flood prone areas.

*Implementation: City Staff, Planning Commission, City Council.*





**GOAL** To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.

## OBJECTIVE 3

Preserve and enhance Hobbble Creek so that it continues to be a primary resource in the community.

## SYNOPSIS

Hobbble Creek has historically been and continues to be a vital resource to Springville. As Springville grows and is developed the role of the creek is changing. As this role changes and Springville grows, a Master Plan for the Hobbble Creek Corridor should be considered (see **Figure 10-6**).

A master plan for the Hobbble Creek Corridor would identify opportunities for areas of Hobbble Creek to be improved or protected. Efforts to improve and protect Hobbble Creek have already begun, such as the June Sucker restorations and the consideration of dam alterations.

## STRATEGIES

- 3A Develop and adopt a Master Plan for the Hobbble Creek Corridor that addresses the multi-use nature of this important amenity.

*Implementation: City Staff, Planning Commission, City Council.*

- 3B Preserve the historical significance of Hobbble Creek.

*Implementation: City Staff, Planning Commission, City Council.*

- 3C Identify funding, such as grants, to help restore and rehabilitate Hobbble Creek to be an ecologically stable waterway.

*Implementation: City Staff, Planning Commission, City Council.*

- 3D Continue to provide public access to Hobbble Creek without causing degradation to the creek.

*Implementation: City Staff, Planning Commission, City Council.*



**Figure 10-6** View of Hobbble Creek near 1500 West





**GOAL** To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.

**OBJECTIVE 4**

Protect hillsides by preventing soil erosion and preserving aesthetics.

**SYNOPSIS**

Springville’s backdrop of mountains in the east are an important part of the City’s identity. To protect the hillside, little or low density development is best. The steep slopes and location along fault lines make this area susceptible to landslides, erosion, and earthquakes. In the past excessive development has been allowed along the hillside, however there is now a hillside overlay regulation to minimize the potential risk of building on slopes (see **Figure 10-7**). A big risk to the integrity of the hillside is exposed soils. When this occurs re-vegetation needs to be done in a timely manner.

**STRATEGIES**

- 4A Review new hillside development to ensure it meets the hillside overlay regulations.

*Implementation: City Staff, Planning Commission, City Council.*

- 4B Protect and conserve soils, natural vegetation, drainage ways, and other natural resources on hillsides.

*Implementation: City Staff, Planning Commission, City Council.*

- 4C Explore the use of transfer development rights or other similar methods to minimize impacts from development in hillside areas.

*Implementation: City Staff, Planning Commission, City Council.*

- 4D Preserve and enhance the visual and environmental quality of the area through the use of natural vegetation and prohibition of excessive excavation and terracing.

*Implementation: City Staff, Planning Commission, City Council.*



**Figure 10-7** Excessive Hillside Development





**GOAL** To ensure a balanced, clean, and safe environment while supporting and promoting energy conservation.

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## OBJECTIVE 5

Evaluate and respond to environmental concerns.

### SYNOPSIS

Springville has several environmental concerns which include natural hazards, waterways, soils, solid waste, lighting, noise, and air quality. To protect the health and safety of the citizens of Springville environmental concerns are evaluated and responded to. Harm to persons or properties in Springville should be avoided and addressed.

### STRATEGIES

5A Develop improved recycling options for Springville City residents.

*Implementation: City Staff, Planning Commission, City Council.*

5B Educate the public regarding options for solid waste, such as green waste and recycling.

*Implementation: City Staff, Planning Commission, City Council.*

5C Evaluate and respond to noise impacts on adjacent properties.

*Implementation: City Staff, Planning Commission, City Council.*

5D Evaluate and respond to light pollution on adjacent properties.

*Implementation: City Staff, Planning Commission, City Council.*

5E Work with regional groups to reduce air pollution.

*Implementation: City Staff, Planning Commission, City Council.*



# 11 COMMUNITY, DISTRICT, AND CORRIDOR PLANS

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### 11.1 The Westfields Plan

