

8.12 SPRING CITY

RISK SUMMARY

Spring City was a city of approximately 995 residents (U.S. Census Bureau, 2017) located along Oak Creek and Canal Creek in eastern Sanpete Valley (see Figure 8.12.1). Problem soil and wildfire were identified as the city's highest rated natural hazard risks (see Table 8.12.1). The city had a history flood and wildfire (see Table 8.12.2 on the next page).

FUTURE DEVELOPMENT RISK

If the city continues its historic growth rate of 0.9% per decade and a household size of 3 people, it will grow by about 80 new households (250 residents) over the next decade. If new homes are developed following historic growth patterns, the city will experience new development along the edge of the city, including the southern part of the city and along Pigeon Hollow Road/Old Highway 89. Flood, problem soil and wildfire would have significant impact to new developments in those areas.



Figure 8.12.1. Aerial map of Spring City. The city was located along the foothills of the Wasatch Plateau.

Table 8.12.1

Spring City Risk Summary

	Probability of Occurrence	Population Impact	Property Impact	Economic Impact	Future Development Impact	OVERALL RISK
Dam Failure	-	-	-	-	-	-
Earthquake	-	-	-	-	-	-
Flood	low	low	low	moderate	low	Low
Landslide	-	-	-	-	-	-
Problem Soils	-	high	high	high	high	Moderate
Wildfire	moderate	moderate	moderate	-	high	High

Table 8.12.2

Spring City Natural Hazard History

Natural Hazard	Date	Name	Cause, Size
Wildfire	9/4/2006	SP Fire	1 acre
Wildfire	6/17/2002	Corbett	0.5 acres
Flood	7/22/1998		
Wildfire	7/26/1989	Spring City #1	Fireworks, 0.25 acres
Flood	7/31/1965		
Flood	1983		

RISK ASSESSMENT RESULTS

FLOOD

The floodplain data was used to analyze and summarize flood risk, in addition a FEMA flood zone map and loss table were provided (see Table 8.12.4 and Figure 8.12.3 on the next page). The city had an overall low risk to floods. The city had 3 floods on record, therefore it had a low probability of occurrence. Flooding would occur along Oak Creek in the north, Canal Creek in the south and Mill Race running from the southeast through the northeast of the city. If a flood were to occur it would have a moderate impact to economy, and low impact to population, property and future development (see Table 8.12.3). Future development in the southern part of the city near the Canal Creek floodplain would be impacted by a flood (see Figure 8.12.2). Significant losses include:

Population

- 5% of homes impacted with a loss of \$1,980,000

Property

- 1 substations
- 25 culverts

Economy

- 25% of businesses impacted with a loss of \$193,000
- 55 acres of farmland

Table 8.12.3

Spring City Floodplain Loss Table

Loss	# Unit	\$ Value
Commercial Business	2	\$193k
Culvert	25	
Electrical Substation	1	
Farmland	55 acres	
Housing Unit	20	\$1.98m
Local Road	2.2 miles	\$1.15m
Natural Gas Pipeline	0.2 miles	

Table 8.12.3 cont

Spring City Floodplain Loss Table

Loss	# Unit	\$ Value
Riparian Area	8 acres	
Spring	1	
Stream	3.2 miles	
Well	2	
Wetland	8.3 acres	

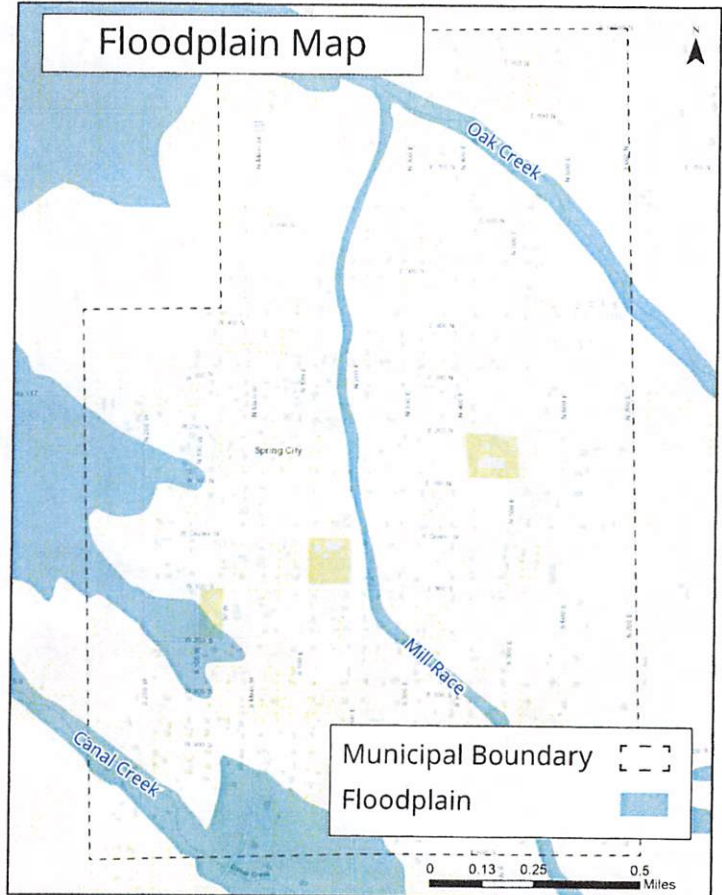


Figure 8.12.2. Spring City floodplain map. A flood would occur along Oak Creek, Mill Race and Canal Creek.

Table 8.12.4

Spring City FEMA Flood Zone Loss Table

Loss	# Unit	\$ Value
Culvert	21	
Farmland	11 acres	
Housing Unit	10	\$994k
Local Road	0.9 miles	\$472k
Riparian Area	7.9 acres	
Stream	2.95 miles	
Water Protection Zone	13 acres	

PROBLEM SOIL

The city had an overall moderate risk to problem soil. It had no recorded problem soil occurrences. Problem soil would have high impact to population, property, economy and future development (see Table 8.12.5). Future development in the northeast half of the city would be impacted by problem soils (see Figure 8.12.4 on the next page). Significant losses include:

Population

- 63% of homes impacted with a loss of \$27,400,000

Property

- 1 school
- 1 substation

Economy

- 38% of businesses impacted with a loss of \$289,000

Table 8.12.5

Spring City Problem Soil Loss Table

Loss	# Unit	\$ Value
Cemetery	1	
Commercial Business	3	\$289k
Contaminated Land	22	
Electrical Substation	1	
Farmland	155 acres	
Housing Unit	276	\$27.4m
Local Road	16 miles	\$8.4m
Natural Gas Pipeline	0.7 miles	
Park	1	
School	1	
Spring	1	
State Highway	0.6 miles	
Stream	2.7 miles	
Trail	0.2 miles	
Well	1	

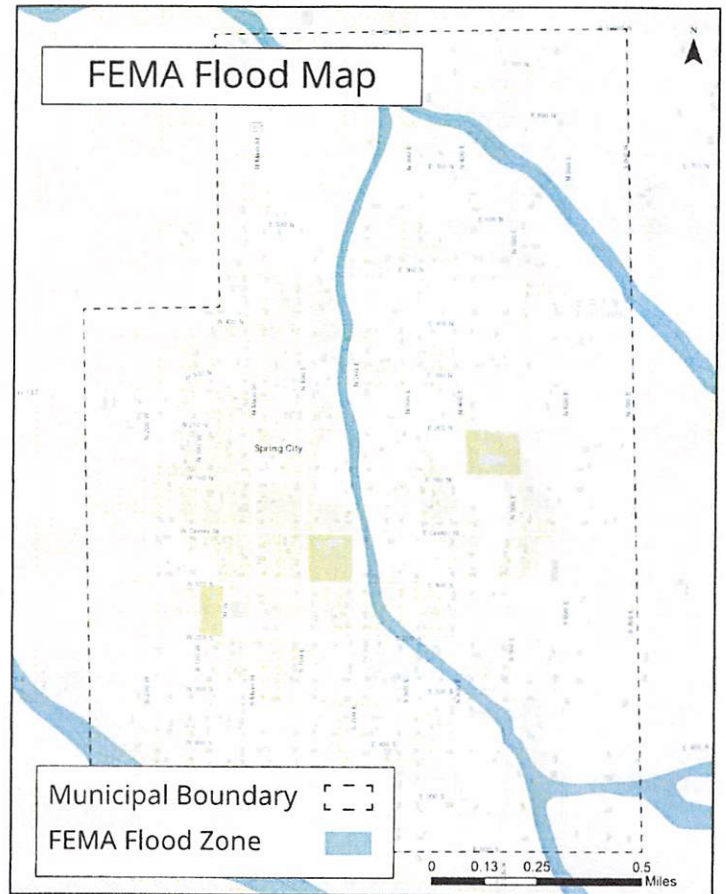


Figure 8.12.3. Spring City FEMA flood zone map.

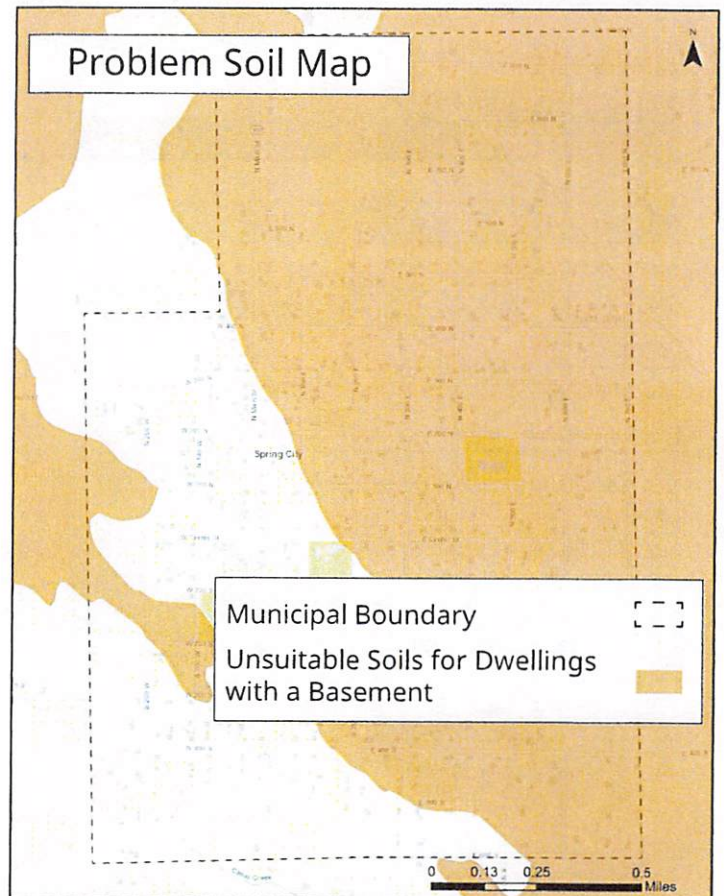


Figure 8.12.4. Spring City problem soil map. Problem soil would impact future development in the northeast of the city.

WILDFIRE

The Oregon Department of Forestry wildfire threat data was used to analyze and summarize wildfire risk, in addition a wildfire potential map and loss table were provided (see Table 8.12.7 and Figure 8.12.6 on the next page). The city had an overall high risk to wildfires although the exposure analysis found the city to have a moderate risk. The change in overall risk was based on the Utah Forestry, Fire and State Lands' Community at Risk Assessment which found it to be at high risk to wildfires. The city had 2 wildfires in the last 20 years, therefore, it had a moderate probability of occurrence or a 10% chance of a wildfire occurring annually. A wildfire would have high impact to population, property, and future development (see Table 8.12.6). Future development along the eastern foothills would be impacted by a wildfire (see Figure 8.12.5). In addition, the Forestry, Fire and State Lands' Community at Risk Assessment also found the city's watershed to be at risk to wildfire. Significant losses include:

Population

- 33% of homes impacted with a loss of \$14,100,000

Property

- 1 school

Table 8.12.6

Spring City Wildfire Threat Loss Table

Loss	# Unit	\$ Value
Contaminated Land	2	
Culvert	2	
Emergency Site	1	
Farmland	51 acres	\$14.1m
Housing Unit	142	
Local Road	6.1 miles	\$3.20m
Natural Gas Pipeline	0.1 miles	
Park	1	
School	1	
State Highway	0.1 miles	
Stream	1.2 miles	
Town Hall	1	
Water Protection Zone	11 acres	
Wetland	0.9 acres	

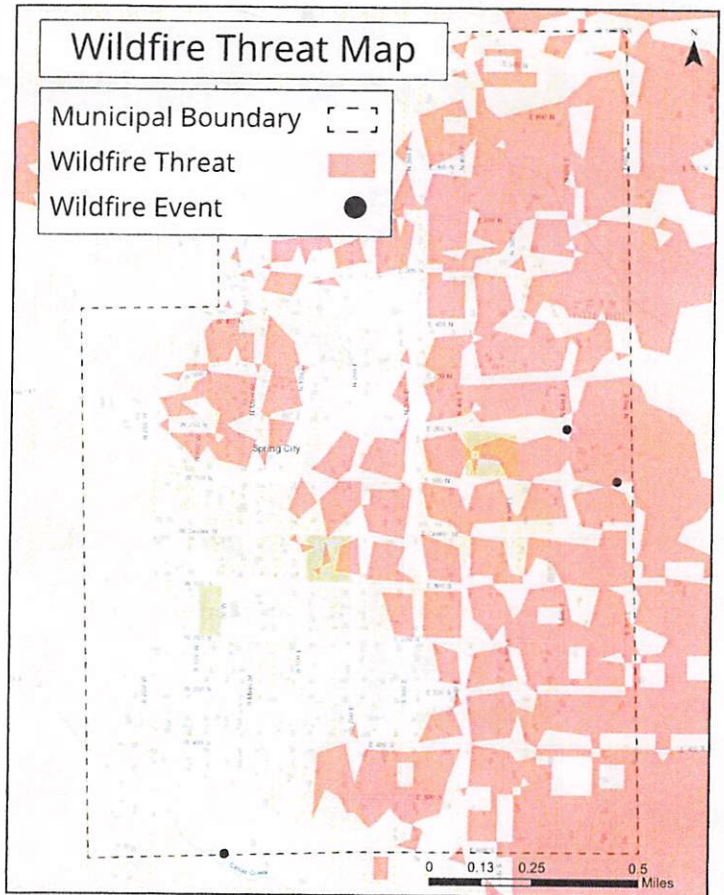


Figure 8.12.5. Spring City wildfire threat map. Wildfire would impact the eastern half of the city.

Table 8.12.7

Spring City Wildfire Potential Loss Table

Loss	# Unit	\$ Value
Culvert	3	
Farmland	23 acres	
Housing Unit	22	\$2.18m
Local Road	2.7 miles	\$1.41m
Stream	0.4 miles	
Trail	0.1 miles	
Water Protection Zone	19 acres	

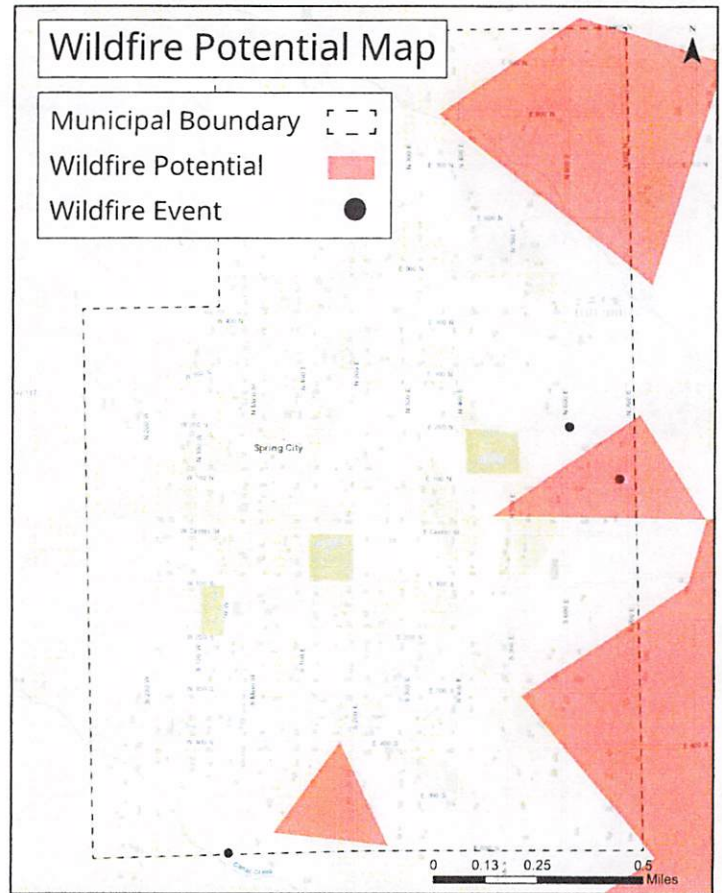


Figure 8.12.6. Spring City wildfire potential map.

SPRING CITY MITIGATION STRATEGIES

Utilizing city website and communication systems, help promote educational resources for residents about the hazards problem soils and potential life and property saving strategies that one can employ. Partner with the Utah Geological Survey to help establish this resource.	
Hazard(s)	Landslide, Problem Soil; 7C
Priority and Justification	Medium
NFIP Compliant	-
Timeframe	2021-2025
Funding Source(s)	FEMA, Spring City, Utah Geological Survey
Estimated Cost	Low
Responsible Entity(ies)	Spring City Council
Resources	SCAOG, Utah Geological Survey
Working with the local irrigation company, continue to pursue and implement an already underway flood mitigation project that involves creating a reservoir and flood control system up Oak Creek Canyon and widening the canals around the city to create more capacity for flood control.	
Hazard(s)	Flood; 4C, 12C
Priority and Justification	High
NFIP Compliant	Improves local drainage infrastructure to divert and reduce flooding in the city.
Timeframe	2021-2025
Funding Source(s)	FEMA, NRCS
Estimated Cost	High
Responsible Entity(ies)	Spring City Council, Spring City staff
Resources	SCAOG, Utah DPS, NRCS

Continue to enforce city ordinances requiring property owners to clear or mow their properties.

Hazard(s)	Wildfire; 6C, 8C
Priority and Justification	High
NFIP Compliant	-
Timeframe	Ongoing
Funding Source(s)	Spring City
Estimated Cost	Low
Responsible Entity(ies)	Spring City
Resources	

Reduce/remove fuel loads that would support a catastrophic fire from undeveloped and underdeveloped roadways by regrading roads and mowing properties.

Hazard(s)	Wildfire; 4C
Priority and Justification	High. The city has several undeveloped and underdeveloped roadways with overgrowing vegetation.
NFIP Compliant	-
Timeframe	2020
Funding Source(s)	FEMA, Spring City, volunteer firefighters, CERT volunteers
Estimated Cost	\$100,000
Responsible Entity(ies)	Spring City
Resources	Private contractors, Spring City Public Works, Spring City Fire, Firewise and other private organizations

Maintain cleared roadways and setup a natural firebreak in the spring.

Hazard(s)	Wildfire; 4C
Priority and Justification	High. Maintained cleared roadways from above action to continue reducing city's fuel hazards.
NFIP Compliant	-
Timeframe	2020 and annually
Funding Source(s)	Spring City Public Works budget
Estimated Cost	\$5,000 per year
Responsible Entity(ies)	Spring City
Resources	City government, citizens and Spring City Fire

Continue to enforce city ordinances requiring property owners to clear or mow their properties.

Hazard(s)	Wildfire; 6C, 8C
Priority and Justification	High
NFIP Compliant	-
Timeframe	Ongoing
Funding Source(s)	Spring City
Estimated Cost	Low
Responsible Entity(ies)	Spring City
Resources	