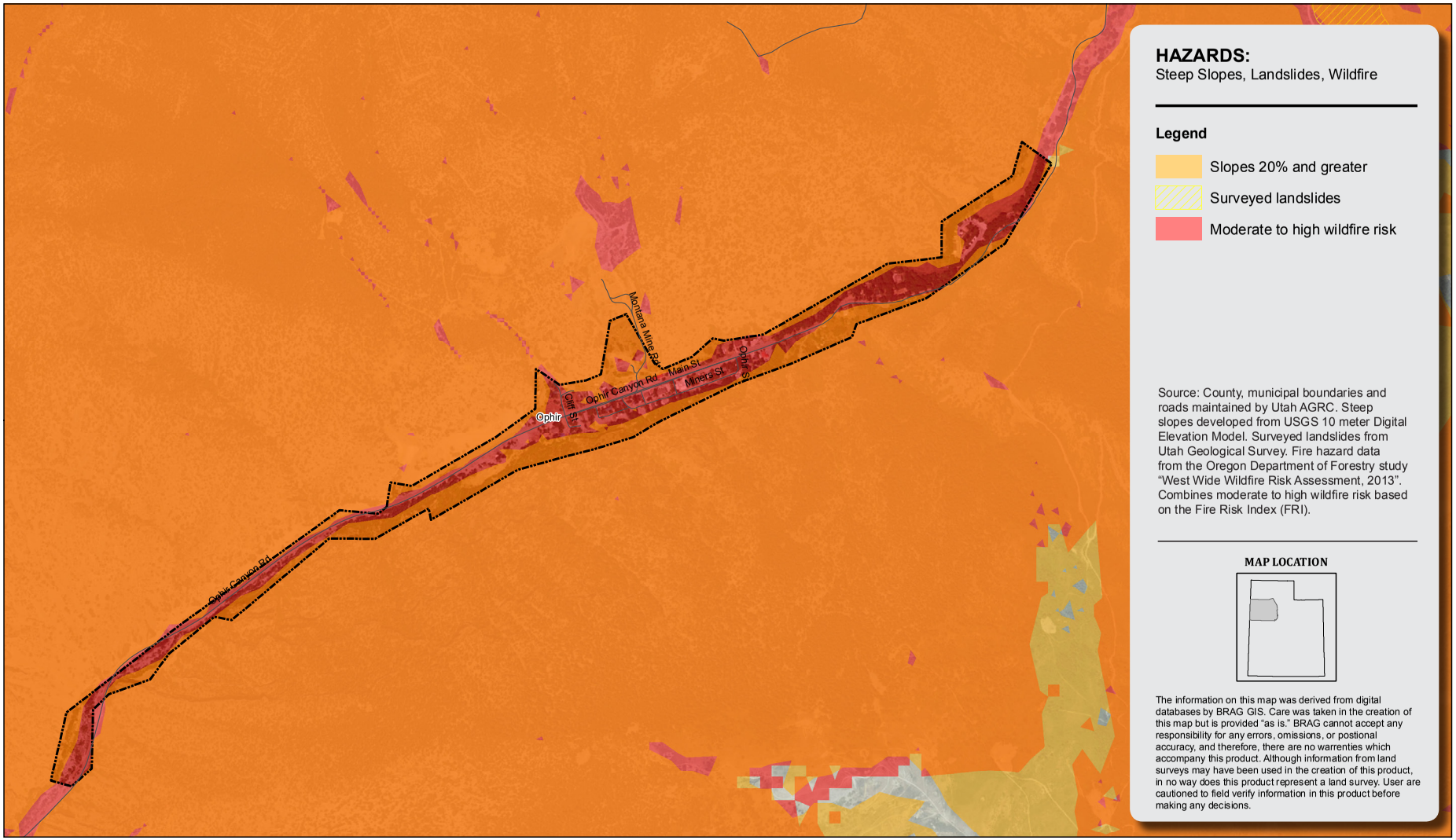
# SECTION 10: OPHIR TOWN COMMUNITY RISK ASSESSMENT


HAZARDS:
Steep Slopes, Landslides, Wildfire
Legend
Slopes 20% and greater
Surveyed landslides
Moderate to high wildfire risk
Source: County, municipal boundaries and roads maintained by Utah AGRC. Steep slopes developed from USGS 10 meter Digital Elevation Model. Surveyed landslides from Utah Geological Survey. Fire hazard data from the Oregon Department of Forestry study "West Wide Wildfire Risk Assessment, 2013". Combines moderate to high wildfire risk based on the Fire Risk Index (FRI).
MAP LOCATION
The information on this map was derived from digital databases by BRAG GIS. Care was taken in the creation of this map but is provided "as is." BRAG cannot accept any responsibility for any errors, omissions, or postional accuracy, and therefore, there are no warrenties which accompany this product. Although information from land surveys may have been used in the creation of this product, in no way does this product represent a land survey. User are cautioned to field verify information in this product before making any decisions.
Montana Mine Rd
Main St
Miners St
Ophir Canyon Rd
Cliff St
Ophir
Ophir Canyon Rd
1:9,000
0 0.075 0.15 0.3
Miles

# OPHIR, UTAH

**HAZARDS:**
Geological Faults, Problematic Soils

**Legend**

- Fault rupture
- Quaternary faults
- Soils with engineering concerns

Source: County, municipal boundaries and roads maintained by Utah AGRC. Fault rupture and quaternary faults from Utah Geological Survey. Buffers of 1000 feet on both sides of quaternary faults were considered damage zones for this analysis. Soils with engineering concerns from Natural Resource Conservation Service (NRCS) soil survey.

**MAP LOCATION**



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# OPHIR, UTAH

1:9,000
0 0.075 0.15 0.3
Miles

**OPHIR TOWN NATURAL HAZARDS, POTENTIAL LOSSES, AND MITIGATION STRATEGIES**

## OPHIR

Analysis of hazard risk involving the community of Ophir revealed that there is potential risk resulting from **steep slopes, and wildfire**. These hazards have varying potential to impact human life, property, critical facilities, infrastructure, environmental, and recreational features within municipal boundaries. Currently, wildfire has the greatest potential to impact human life, property, and various community amenities based on potential loss values. Potential impacts from steep slopes appear to have less potential for impacts, yet still pose risks. Other natural hazard types not mentioned were found to have no potential impacts to Ophir. See the following tables for more detailed descriptions of potential losses associated with each natural hazard.

**Table 25:** Ophir Potential Loss Figures

**Natural Hazards**

***Slopes.*** Ophir has risk associated with steep slopes within its boundaries. Areas of greatest concern have slopes of over 20%, which are commonly found in areas directly adjacent to the Oquirrh Mountain Range. Areas bordering streams and rivers also appear to have an increased risk. Steep slopes have the potential to impact life, property, infrastructure, and environmental, recreational and agricultural features in the jurisdiction. Nearly 20 people and 6 structures are estimated to be at risk within the jurisdiction from steep slopes.

***Wildfire.*** Ophir is susceptible to high-severe risk of wildfire in portions of the city in which there are significant slopes in the Oquirrh mountains. Wildfires have the potential to impact over 35 people in the City, as well as nearly 12 structures.

**Future Development**

No concerns involving potential future development within Ophir were reported by city representatives.

| Ophir, UT, Residential & Commercial Development at Risk | | | | | | |
|---|---|---|---|---|---|---|
| Hazard Type | ~Residents at Risk* | Residential Units at Risk | | Commercial Units at Risk | | |
| | | # Units | $ Value** | # Units | $ Value** | $ Potential Revenue Loss*** |
| Dam Failure | 0 | 0 | $0 | 0 | $0 | $0 |
| Faults | 0 | 0 | $0 | 0 | $0 | $0 |
| Wildfire | 35 | 11 | $1,430,303 | 1 | $59,266 | $642,261 |
| Flood (FEMA) | 0 | 0 | $0 | 0 | $0 | $0 |
| Flood (Soils) | 0 | 0 | $0 | 0 | $0 | $0 |
| Liquefaction | 0 | 0 | $0 | 0 | $0 | $0 |
| Landslide | 0 | 0 | $0 | 0 | $0 | $0 |
| Slope | 19 | 6 | $757,050 | 0 | $0 | $0 |
| High Water Table | 0 | 0 | $0 | 0 | $0 | $0 |
| Unsuitable Soils for Buildings | 35 | 11 | $1,172,903 | 1 | $8,252 | $642,261 |

* Based on average persons per owner household for Tooele County from 2013 American Community Survey, which is 3.2.

** Current Market Value per parcel, including building and land values. Data provided by Tooele County.

*** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm ($642,261 per firm). Derived from 2007 Survey of Business Owners for Tooele County, US Census Bureau.

| Ophir, UT, Critical Facilities at Risk | | | | | | |
|---|---|---|---|---|---|---|
| Hazard Type | Critical Facilities Types | | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure | Other |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 1 Fire Station | 0 | 0 | 0 | 0 | 0 |
| Flood (FEMA) | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood (Soils) | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0 | 0 |
| Slope | 0 | 0 | 0 | 0 | 0 | 0 |
| High Water Table | 0 | 0 | 0 | 0 | 0 | 0 |
| Unsuitable Soils for Buildings | 0 | 0 | 0 | 0 | 0 | 0 |
| Note: Critical facilites were identifed using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Resources, and public and community leader input. | | | | | | |

| Ophir, UT, Infrastructure at Risk | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Hazard Type | Infrastructure at Risk | | | | | | | | | |
| | Railroad Lines | | Natural Gas Lines | | Electrical Power lines | | Roads | | Canals | |
| | # of Miles | $ Value[1] | # of Miles | $ Value[2] | # of Miles | $ Value[3] | # of Miles | $ Value[4] | # of Miles | $ Value[5] |
| Dam Failure | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Faults | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Wildfire | 0 | $0 | 0 | $0 | 0 | $0 | 2.49 | $1,307,250 | 0.06 | $90,000 |
| Flood (FIRM) | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Flood (Soils) | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Liquefaction | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Landslide | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Slope | 0 | $0 | 0 | $0 | 0 | $0 | 0.25 | $131,250 | 0.06 | $90,000 |
| High Water Table | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 | 0 | $0 |
| Unsuitable Soils for Builings | 0 | $0 | 0 | $0 | 0 | $0 | 2.49 | $1,307,250 | 0.1 | $0 |

[1] Based on figures from 2009 Pre-Disaster Mitigation Plan for Bear River Region, Utah ($1,500,000/mi).
[2] Based on average replacement cost estimates for gas lines ranging from 2-inches-20 inches in diameter. These cost are based solely on labor and material costs, and may vary based on time, scope, and site specific variations (Questar, 2015).
[3] Based on estimates from Logan Light and Power, 2015 ($127,000/mi).
[4] Based on estimates derived from an average 28' wide, 4" thick asphalt county road with gravel subgrade replacement. Cache County, 2015 ($525,000/mi).
[5] Based recent Cache County and regional project cost estimates, 2015 ($1,500,000/mi).

| Ophir, UT, Environmental & Recreational Features at Risk | | | | | | | |
|---|---|---|---|---|---|---|---|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | | |
| | Wetland/ riparian | Lakes | Streams | Parks | Trails | Trails (Master) | Amenities |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Miles | # of Amenities |
| Dam Failure | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Faults | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Wildfire | 8.28 | 0.00 | 0.00 | 0.00 | 0.00 | 1.68 | 0 |
| Flood (FIRM) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Flood (Soils) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Liquefaction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Landslide | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Slope | 4.82 | 0.00 | 0.82 | 0.00 | 0.00 | 0.16 | 0 |
| High Water Table | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Unsuitable Soils for Buildings | 0.00 | 0.08 | 2.56 | 0.00 | 0.00 | 0.00 | 0 |

Note: Total acres of land and miles of streams and trails were identifed using multiple data sources including: Utah AGRC, U.S. Fish and Wildlife Service, U.S. Forest Service, U.S. Geological Survey, Utah Division of Water Resources, and public and community leader input.

| Ophir, UT, Agricultural Features at Risk | | |
|---|---|---|
| Hazard Type | Lands at Risk | |
| | Agriculture Production* | Grazing** |
| | # of Acres | |
| Dam Failure | 0.00 | 0.00 |
| Faults | 0.00 | 0.00 |
| Wildfire | 0.00 | 77.65 |
| Flood (FIRM) | 0.00 | 0.00 |
| Flood (Soils) | 0.00 | 0.00 |
| Liquefaction | 0.00 | 0.00 |
| Landslide | 0.00 | 0.00 |
| Slope | 0.00 | 38.29 |
| High Water Table | 0.00 | 0.00 |
| Unsuitable Soils for Buildings | 0.00 | 77.68 |

* Lands that are currently associated with agricultural activities involving water related land use, as described in the 2007 Utah Division of Water Resources, *Water Related Land Use* dataset.

** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)

**Hazard Mitigation Strategies**

**No mitigation strategies were reported for Ophir Town.**