

**SECTION 7: RICH COUNTY RISK
ASSESSMENT & COMMUNITY SECTIONS**

History and Background of Natural Hazards in Rich County

Flooding

The flood risk for Rich County seems minimal. The county is sparsely populated and the communities are generally not located near a flood source. The Bear River passes through Rich County in an area with some agricultural use. It flows primarily through rural areas with little or no development. However, it is difficult to tell where flood risk exists for the entire county, since only Woodruff currently has a Flood Insurance Rate Map for their community. The Army Corps of Engineers did a study in 2003 which generally defines flood risk for communities that do not participate in the National Flood Insurance Program. This study was also useful in the risk assessment for Rich County communities.

All of the four incorporated cities in Rich County have small streams and drainages that pass through the communities. These communities have historically experienced minimal impacts from flooding.

The southern half of Bear Lake is located in Rich County. A great deal of beach front development has occurred along the shores of Bear Lake. The rising lake level has rarely threatened lakeshore development but some flooding of homes has occurred. PacifiCorp operates a hydroelectric facility on the lake and has purchased some of the flood prone lakeshore properties to mitigate the impact of high lake level flooding.

One other major concern regarding flood hazards in Rich County, as with many other Utah counties, is that of canal breakage flooding. Many of the canals in the region were built a century ago, and if any fail there could be damage to homes and property. Also, the connection between flooding and landslides should be considered. As water saturation levels increase, the potential for mud/sediment/debris flows also increase.

In Rich County, only Woodruff Town has a delineated flood plain. Laketown is listed as being a NSFHA (No Special Flood Hazard Area) which is all Zone C on the FEMA floodplain maps.

While FEMA floodplains are a great planning tool for hazard mitigation, most of Rich County has never been mapped by FEMA. An August 2003 report entitled Flood Hazard Identification Study: Bear River Association of Governments by the U.S. Army Corps of Engineers was completed to help communities without floodplain data. This study generally identified areas of flooding concern for municipalities lacking data (See Appendix B for the full report). However, the report was only intended to give communities very general estimates of where flood risk may exist. Also, many flooding events happen outside of the FEMA 100-year floodplain delineations (around 40%). There are other ways that flooding occurs as well, such as canals, reservoirs/ponds, wildfire, incorrect grading, and plugged sewer and storm water systems (Scott Stoddard, personal communication, 11/13/08). Below is a discussion of flooding risks for communities in Rich County. Only those communities thought to be at risk for flooding have been included.

Wildfires

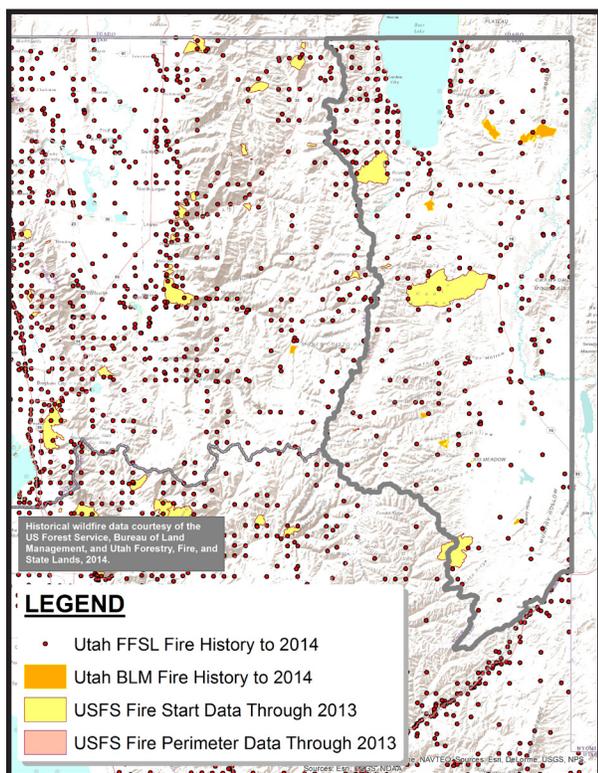
Wildfires occur with some frequency in Rich County. The vast majority occur in areas that are predominately sage and scrub vegetation on Bureau of Land Management (BLM) owned land. Most fires rarely threaten human safety or property and are often allowed to burn. The primary conflict area in terms of threat to property is related to wildfire areas above Garden City town proper, in mostly secondary home developments associated with the Bear Lake Recreation area. Some of these homes are built in heavily timbered areas. Bridger Village and Sweetwater developments are great concerns to local emergency planners in regard to wildfire.

Portions of the Uinta-Wasatch-Cache National Forest are located in western Rich County. Transitioning down slope from the forest into the Bear Lake valley and Garden City, a significant number of cabins are located along hillsides above the town center. Some of these homes are built in heavy vegetation and timber. Many are surrounded by lower sage type vegetation communities.

These areas are at risk from wildfire originating

in the Forest Service managed land to the west and also human caused fire within or below the developments. Much of this development in Bridger Village is bisected by U.S 89 as it makes its rather steep descent into Garden City from Cache County. Sparks caused by overheating brakes on heavy trucks have been known to start fires adjacent to the road. In the right conditions, these types of fires can quickly spread to portions of this development and others.

Below is a map showing historic wildfire locations in Rich County:



Landslides/Steep Slopes

There are really no accounts of landslide activity in the County which has been particularly destructive to infrastructure, structures, or other lands. However, the Utah Geological Survey completed statewide mapping of landslide potential. The Rich County data set includes high landslide risk areas on some of the hillsides north and east of the Sweetwater development, east of the public beaches on the west shore near Rendezvous Beach, northeast of Round Valley, and in South Eden Canyon.

One thing that should be considered regarding landslides, were they to occur in populated places

of Rich County, is that flooding can increase the destructiveness of landslides. As saturation levels increase, the chance for mud/sediment/debris flows also increases.

Earthquakes

Although not as seismically active as Box Elder and Cache Counties, Rich County does have recorded seismic activity. The predominant and most active faulting potential is on the East Bear Lake Fault east of the lake. However, there is risk on the west side of the lake also, where the most recent earthquake in the region started from the West Bear Lake Fault in 1884 (Covington, 2008). Another issue to consider when looking at earthquake risk is that of liquefaction potential. While there have not been any studies done to delineate liquefaction potential for Rich County, there is a potential given the right soils and saturation levels during an earthquake event. Also, it is possible that a Tsunami large enough to cause damage could be produced on Bear Lake during an earthquake given the fault locations under the lake. Damage to shoreline residences could happen during such an event.

On November 9, 1884 the Bear Lake valley experienced an estimated 6.3 magnitude earthquake with the epicenter southeast of St. Charles, Idaho followed by aftershocks of 2.3 magnitude. The earthquake was felt as far away as Ogden.

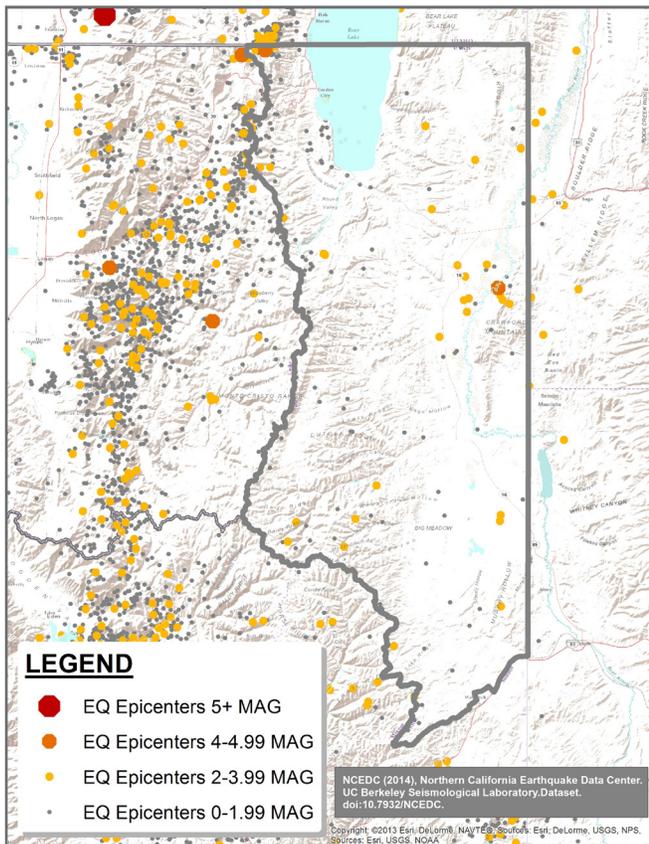
Kaliser indicates that the Bear Lake East Fault is active with evidence of large earthquakes in the recent past. He reports a continuous line of scarplets in recent sediments on the east shore of the lake. In addition, the delta fans at the mouth of North and South Eden Canyons are displaced by faulting (Kaliser, 1969).

Some faulting has been reported by bathograms in the bottom of Bear Lake.

While a geological fault may not be very wide physically, damage around the fault can be detrimental. This is often referred to as the “damage zone (Susanne Janecke, personal communication, 9/25/08).” This damage zone is now thought to be much larger than recognized previously. While geologists used to recommend a

general fault buffer of fifty feet on either side of the fault, they now recognize a much larger damage zone. According to the Utah Geological Survey, up thrown sides of well defined quaternary faults require planning for a 250 foot damage zone; while down thrown sides of well defined faults require planning for a 500 foot damage zone. For those faults not well defined, a general 1,000 foot damage zone should be considered (Richard Giraud, personal communication, 10/6/08; Christopher Duross, personal communication, 10/30/08; Christensen et al., 2003). Because of data inaccuracies in geologic fault data, a standard 1,000 foot damage zone was analyzed for all quaternary faults in the region.

Below is a map showing historic earthquake locations in Rich County:



Dam Failure

There are 541 regulated dams located in Rich County. Most of these dams are small detention ponds, small agricultural reservoirs or livestock watering facilities and most pose a minimal threat to human safety or property.

Of the 541 regulated dams most are designated

as “low hazard” by the State of Utah Division of Water Rights. As defined by state statute, low hazard dams are those dams which, if they fail, would cause minimal threat to human life, and economic losses would be minor or limited to damage sustained by the owner of the structure.

A total of 4 dams have been designated as “moderate hazard” by the State of Utah in Rich County. Moderate Hazard dams which, if they fail, have a low probability of causing loss of human life, but would cause appreciable property damage, including damage to public utilities.

The State of Utah has rated 2 dams in Rich County as “high hazard” which means that, if they fail, have a high probability of causing loss of human life or extensive economic loss, including damage to critical public utilities.

Dam failure inundation maps and emergency action plans for each of the high risk dams can be found on the Utah Division of Water Right’s website at: <http://waterrights.utah.gov/cgi-bin/damview.exe?Startup>.

High Risk Dams

Woodruff Narrows Dam

Woodruff Narrows Dam is actually located in Wyoming, east of Woodruff Town and southeast of Randolph Town, the largest town in Rich County. While the dam is in another state, most of the potential losses from dam failure would be in Utah, and specifically in Rich County. There seems to be limited information on the potential effects of dam failure on any local communities. However, since the Bear River flows in and out of the reservoir, it is believed by local residents that a dam failure could result in damage of homes located near the river channel.

Birch Creek No. 2

Birch Creek Reservoir is located west of Woodruff Town. It is utilized for irrigation and is a popular trout fishery. Dam inundation area includes the entire town of Woodruff.

Natural Hazard Profiles

Table 93: Rich County Flood Hazard Profile

| | |
|--|---|
| Frequency | Infrequent |
| Severity | Moderate |
| Location | Generally along rivers, streams, and canals. |
| Seasonal Pattern | Spring flooding as a result of snowmelt. Mid-late summer cloudburst events. |
| Duration | A few hours or up to three weeks for snowmelt flooding |
| Speed of Onset | 1-6 hours |
| Probability of Future Occurrences | Moderate - there is a 1% chance of flooding in any given year in the 100-year floodplain. |

Table 94: Rich County Wildfire Hazard Profile

| | |
|--|---|
| Frequency | Annually (to some extent) |
| Severity | Moderate |
| Location | Dispersed throughout the whole county |
| Seasonal Pattern | Generally the worst from early July to mid September (depends on drought conditions) |
| Duration | A few hours to two weeks |
| Speed of Onset | 1-6 hours |
| Probability of Future Occurrences | High (Based on data from 1973-2008, there is a 22.9% chance a fire of at least 1,000 acres will occur every year) |

Table 95: Rich County Landslide/Steep Slopes Hazard Profile

| | |
|--|--|
| Frequency | Infrequent |
| Severity | Moderate |
| Location | The hillsides north and east of the Sweetwater development, east of the public beaches on the west shore near Rendezvous Beach, northeast of Round Valley, and in South Eden Canyon. |
| Seasonal Pattern | Generally the worst in the wetter spring months. |
| Duration | Up to two weeks |
| Speed of Onset | No warning |
| Probability of Future Occurrences | Low |

Table 96: Rich County Earthquake Hazard Profile

| | |
|--|--|
| Frequency | Occasional |
| Severity | Moderate |
| Location | Entire County with highest frequency in the Bear River Mountain Range. Surface fault ruptures are likely to occur in fault zones on the east shore of Bear Lake. |
| Seasonal Pattern | None |
| Duration | A few minutes with potential aftershocks |
| Speed of Onset | No warning |
| Probability of Future Occurrences | Based on 1962-2001 data, there is a 7.7% chance every year of an earthquake of 3.0 magnitude or greater. |

Table 97: Rich County Dam Failure Hazard Profile

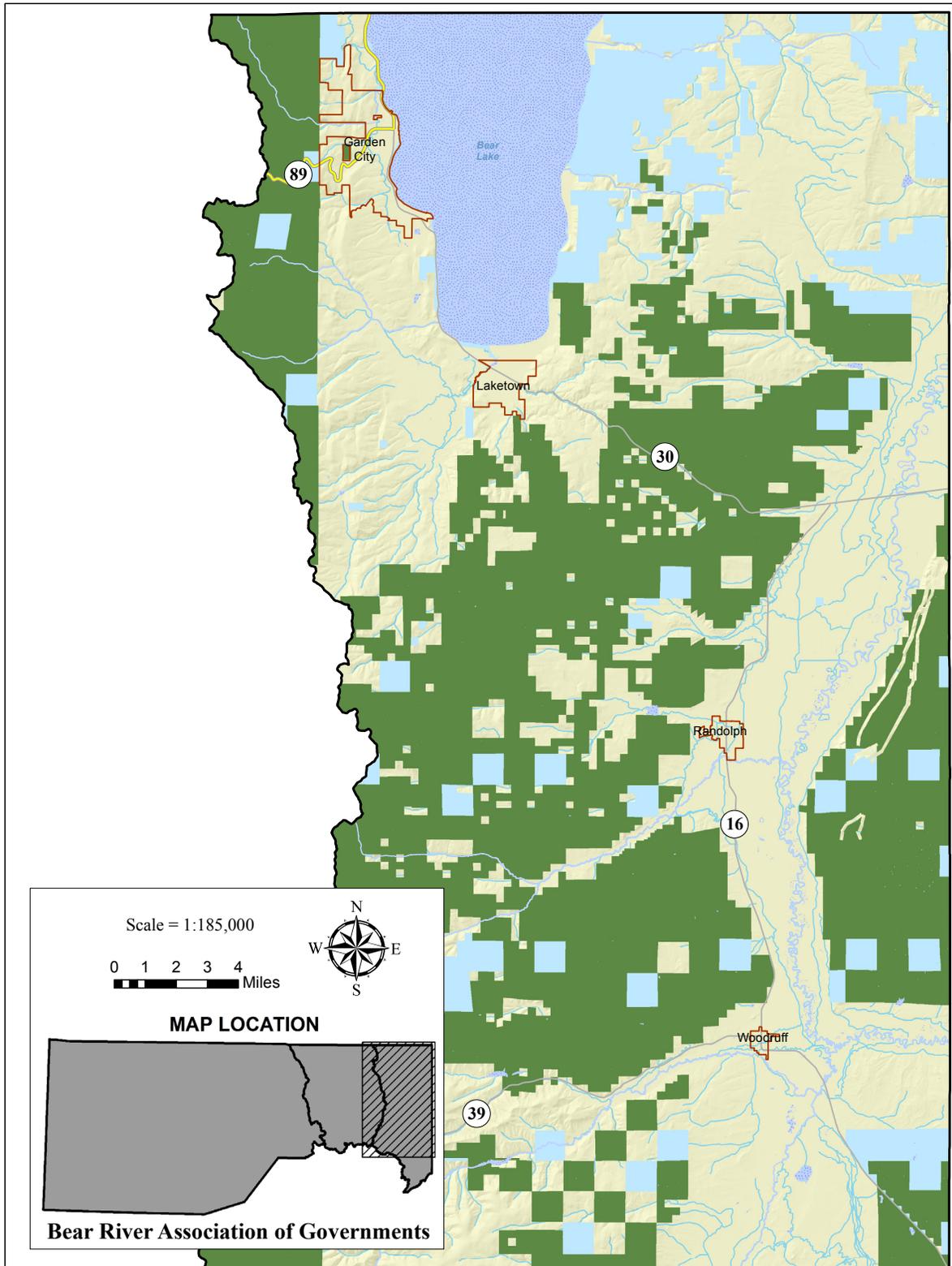
| | |
|--|--|
| Frequency | Rare |
| Severity | Potentially Catastrophic |
| Location | Areas downstream of failed dam. |
| Seasonal Pattern | Anytime. Highest risk in spring during snowmelt. |
| Duration | A few hours |
| Speed of Onset | No warning |
| Probability of Future Occurrences | Low |

Repetitive Loss Properties

There are no repetitive loss properties in Rich County (FEMA, 2015).

COUNTY-WIDE NATURAL HAZARD MAPS

(Please see pages 7-251 to 7-258)



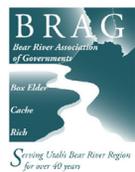
Scale = 1:185,000

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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. Land ownership layer from Utah School & Institutional Trust Lands Administration (SITLA), 2010.

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 positional accuracy, and therefore, there are no warranties 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. Users are cautioned to field verify information in this product before making any decisions.

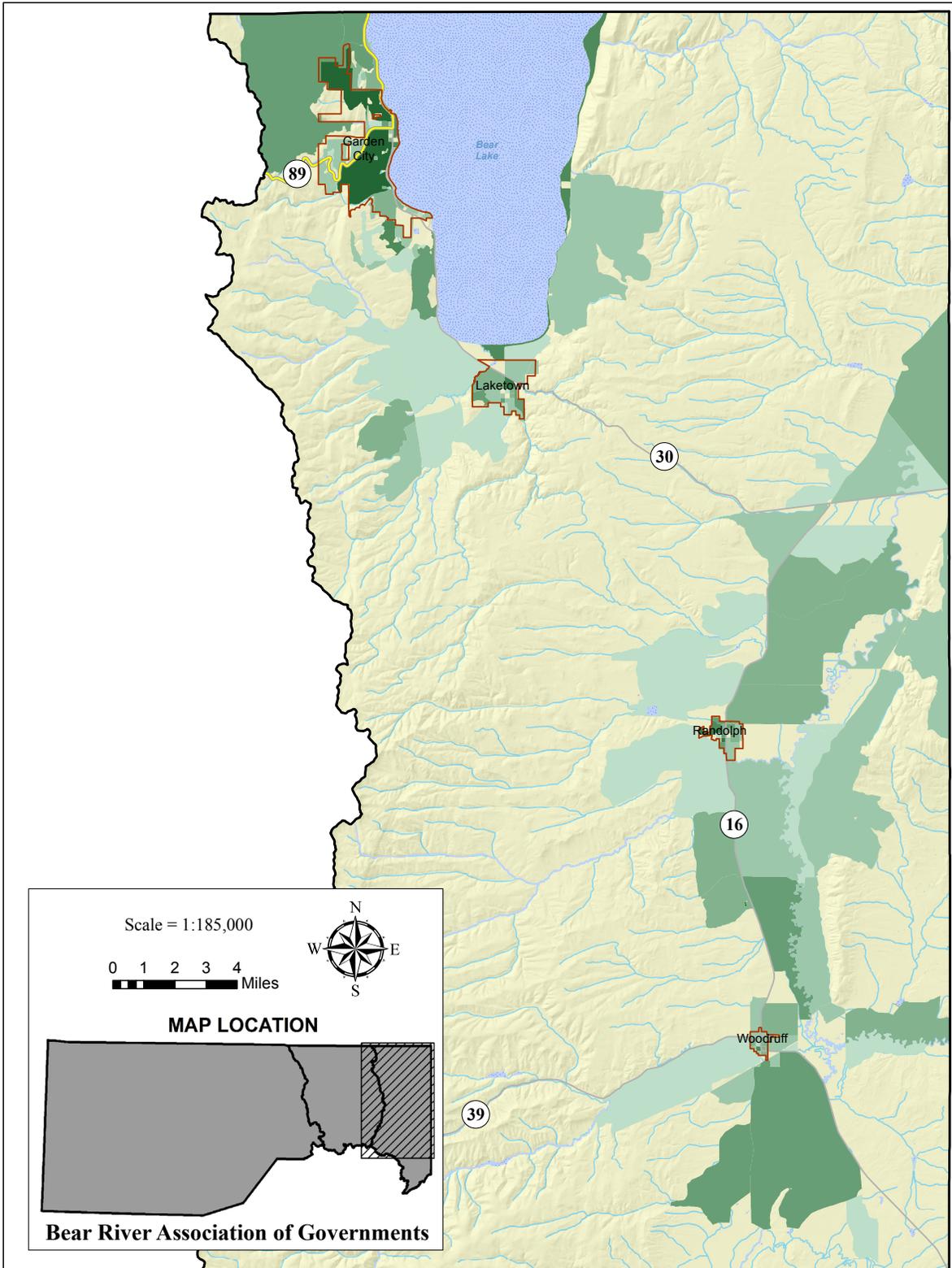
Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes

Land Ownership

- Private
- State Lands
- Federal Lands

RICH COUNTY - Land Ownership



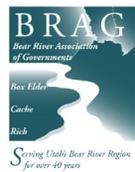
Scale = 1:185,000

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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. County population was derived from US Census Bureau, 2010.

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Legend

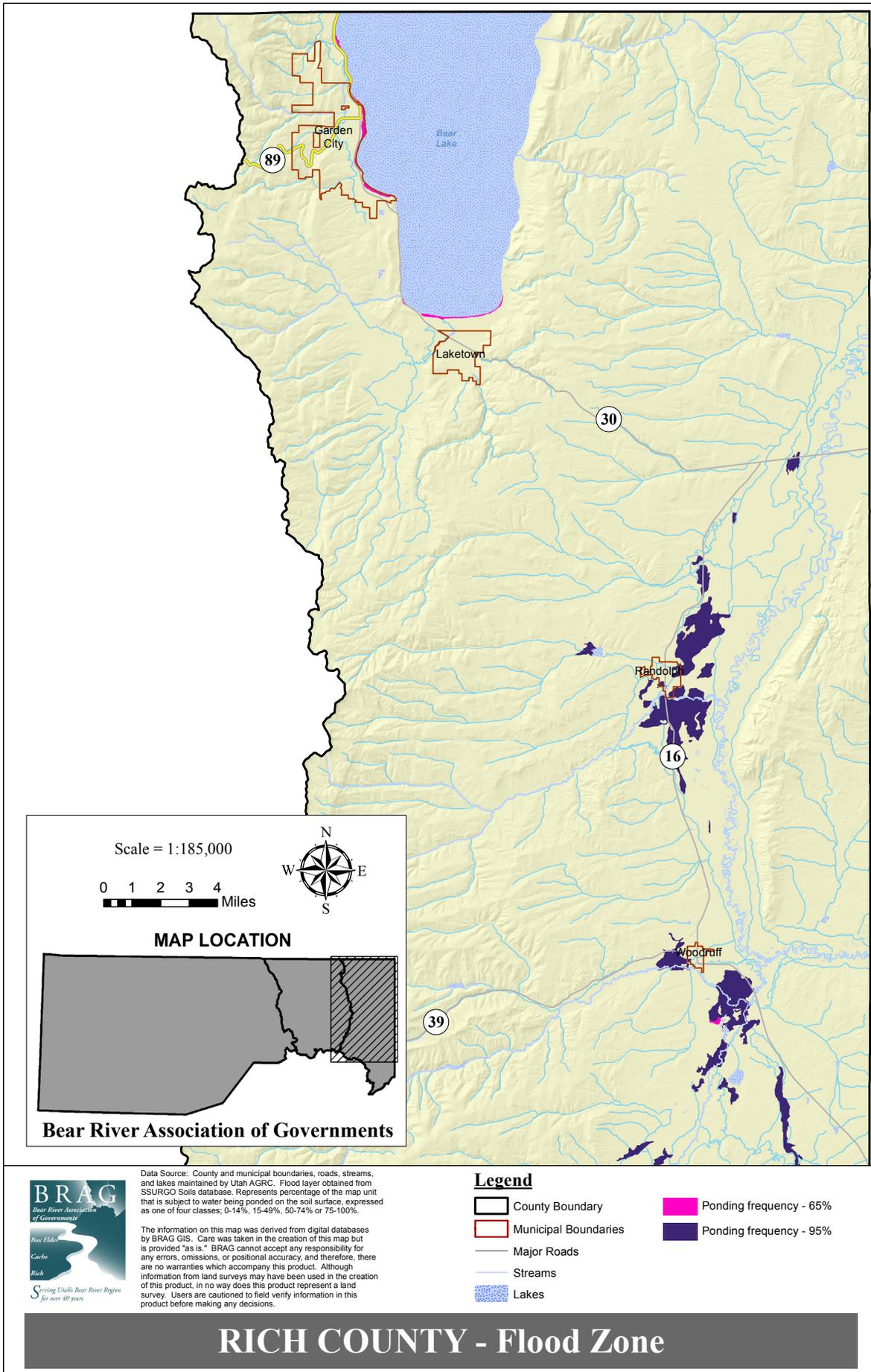
- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes

Population Density

*Persons per census block

- | | | | |
|--|---------|--|----------|
| | 0 - 2 | | 19 - 29 |
| | 2 - 6 | | 29 - 38 |
| | 6 - 11 | | 38 - 61 |
| | 11 - 19 | | 61 - 144 |

RICH COUNTY - Population Density

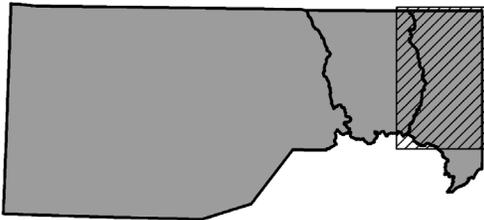


Scale = 1:185,000

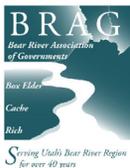
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MAP LOCATION



Bear River Association of Governments



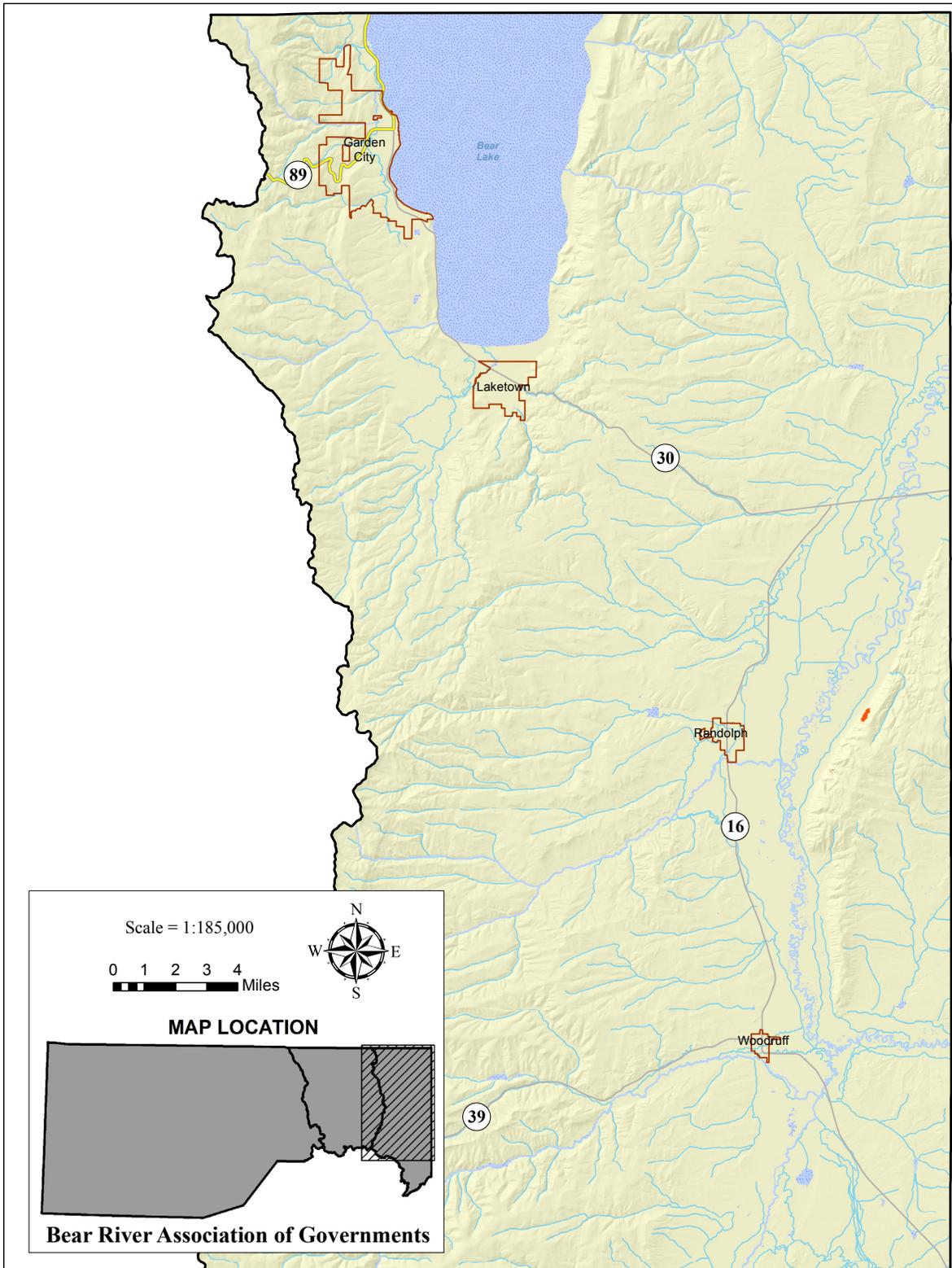
Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. Flood layer obtained from SSURGO Soils database. Represents percentage of the map unit that is subject to water being ponded on the soil surface, expressed as one of four classes; 0-14%, 15-49%, 50-74% or 75-100%.

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Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes
- Ponding frequency - 65%
- Ponding frequency - 95%

RICH COUNTY - Flood Zone



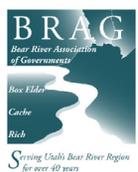
Scale = 1:185,000

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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. 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).

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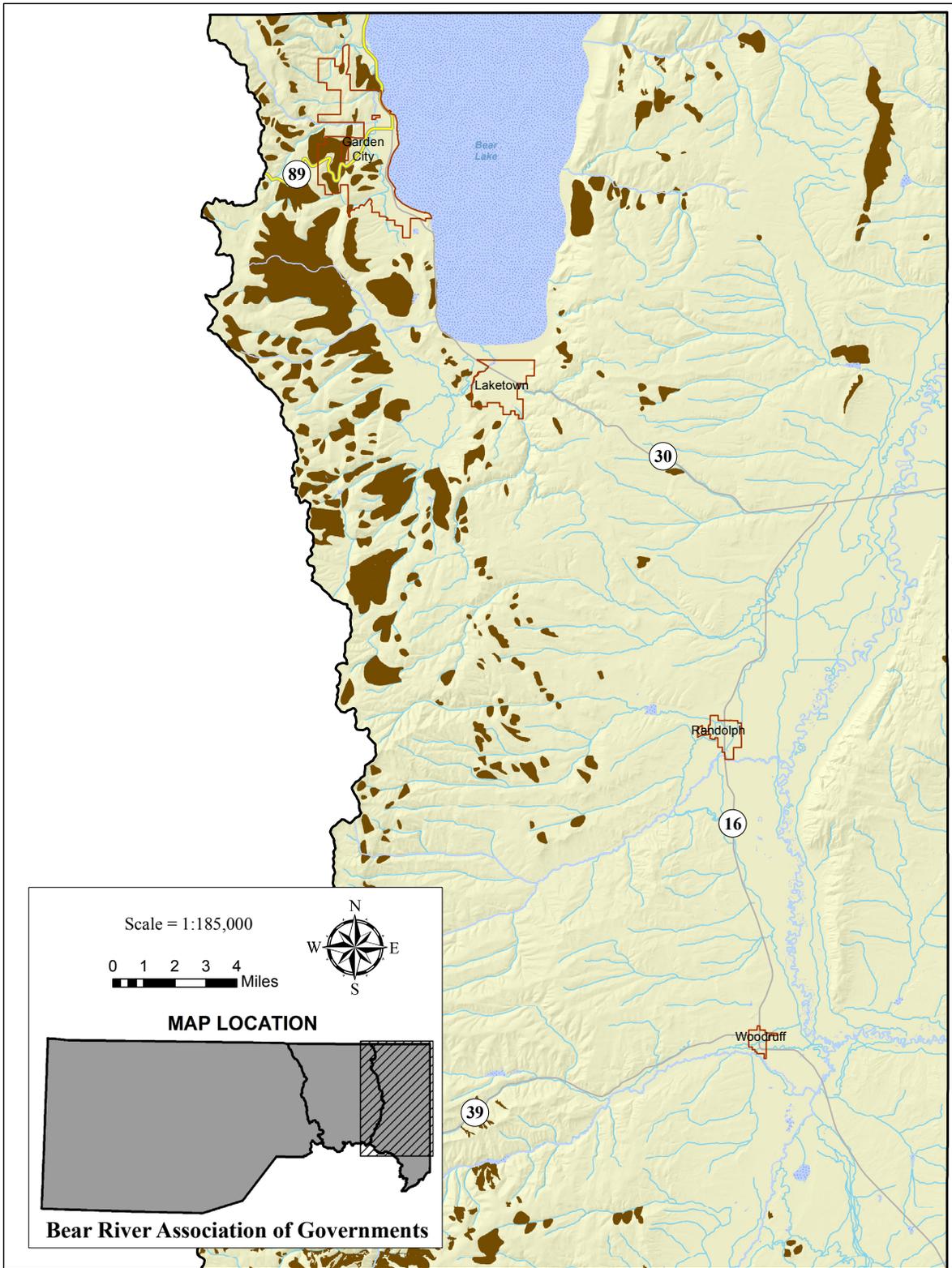
Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes

Fire Risk

- Moderate to High

RICH COUNTY - Wildfire Hazard



Scale = 1:185,000

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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. Data obtained from the Utah Geological Survey showing landslide deposits, landslide scarps, and debris-flow travel paths, 2010.

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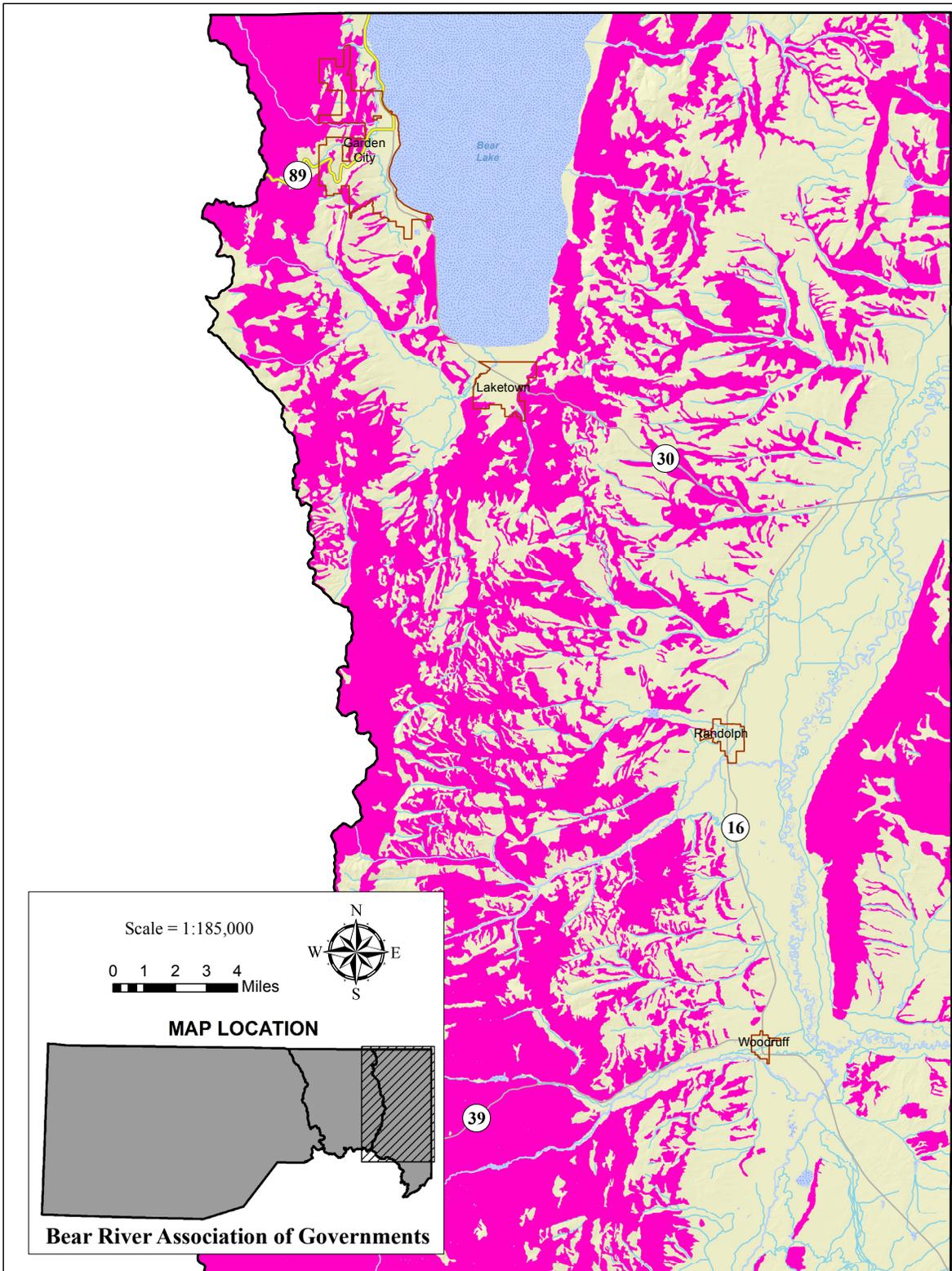
Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes

Landslides

- Deposits, scarps, and debris-flow travel paths

RICH COUNTY - Landslides



Scale = 1:185,000

0 1 2 3 4 Miles

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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRIC. Steep slopes derived from NRCS SSURGO Soils Database 2013 - 20% slope and higher.

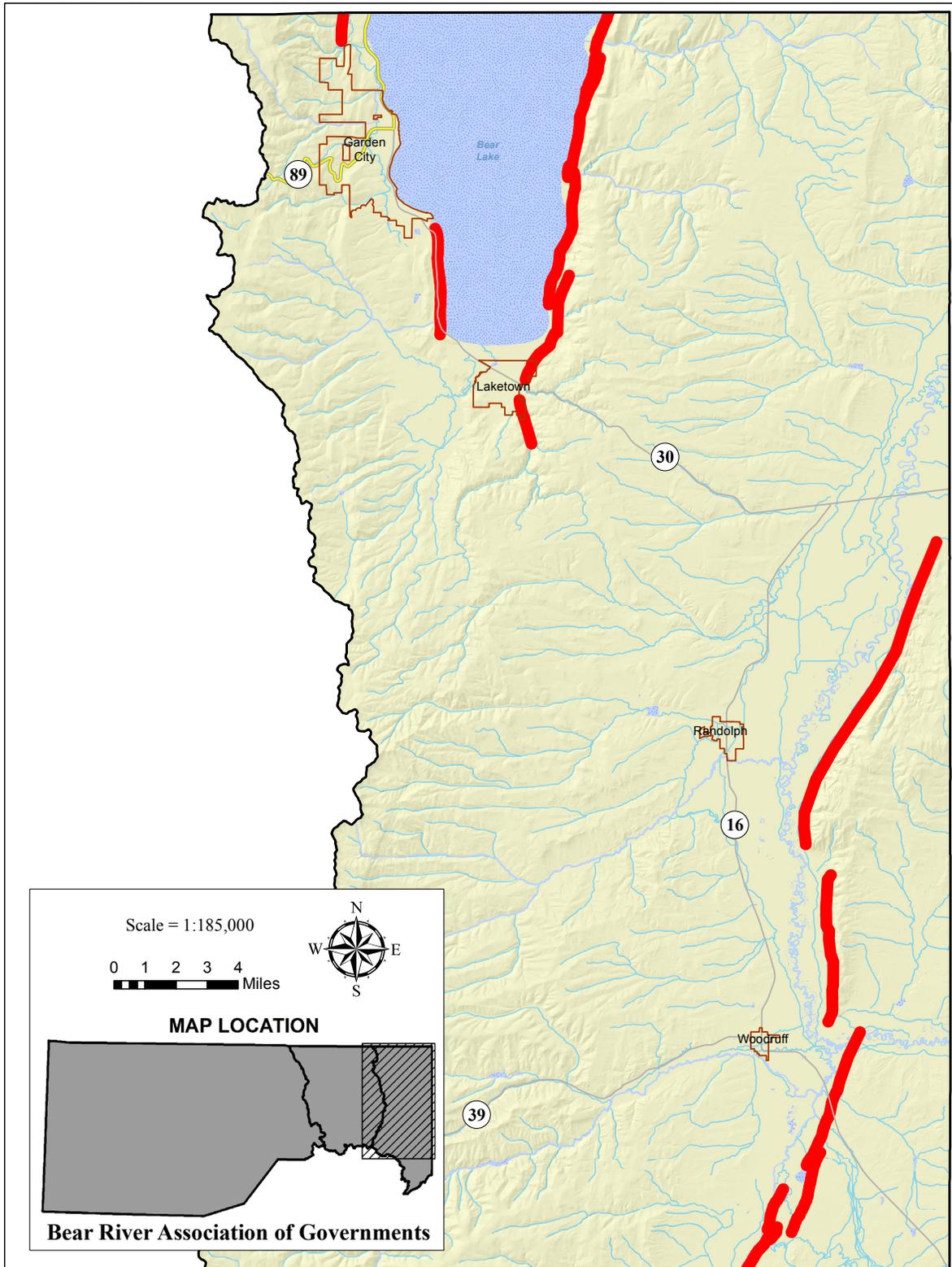
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- Legend**
- County Boundary
 - Municipal Boundaries
 - Major Roads
 - Streams
 - Lakes

Steep Slopes

- 20% slope and higher

RICH COUNTY - Steep Slopes



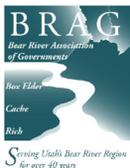
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MAP LOCATION

Bear River Association of Governments



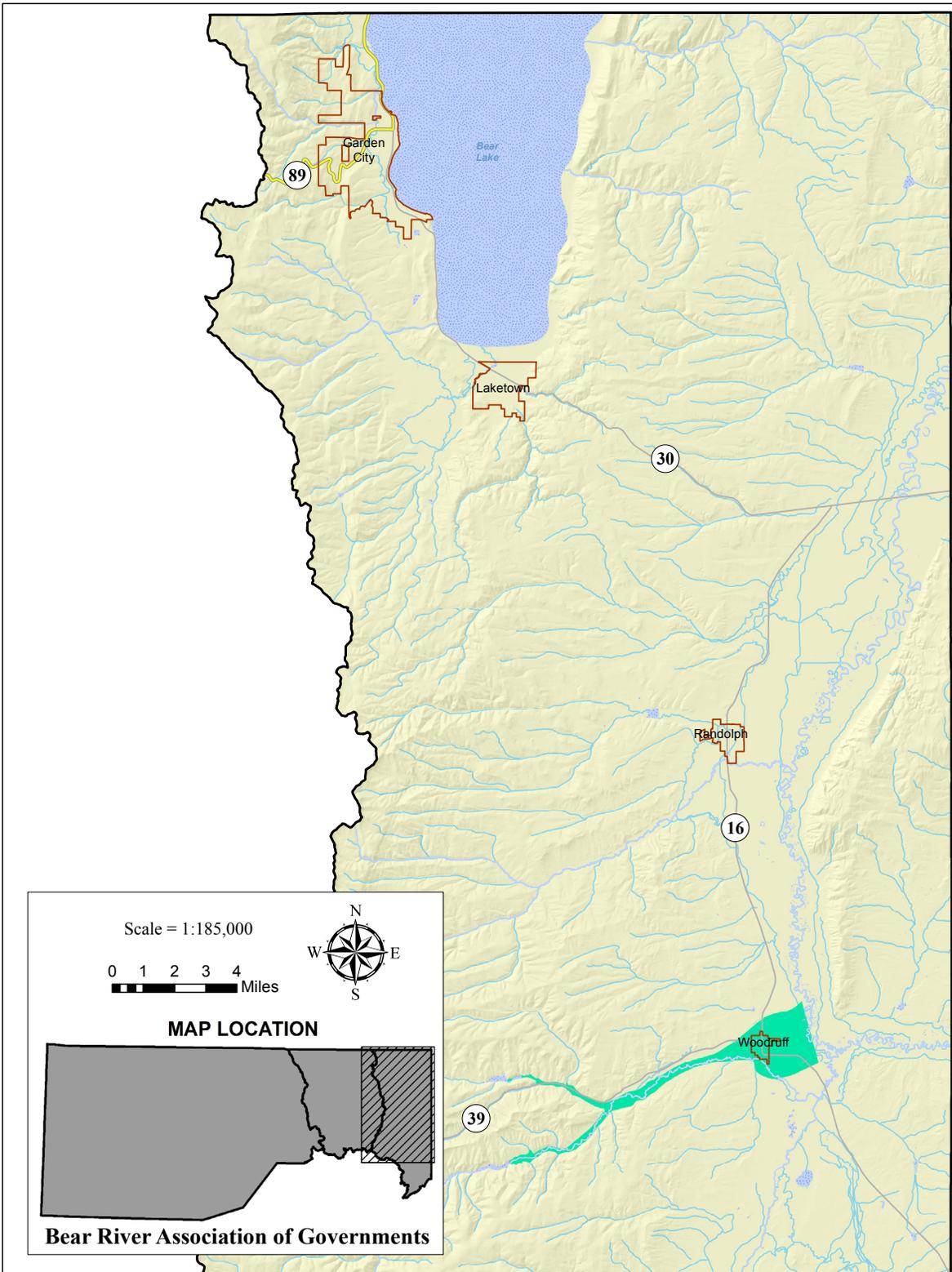
Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. Quaternary faults and folds were taken from the U.S. Geological Survey, 2004. Buffers of 1000 feet on both sides of faults/folds were considered damage zones for this analysis.

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 positional accuracy, and therefore, there are no warranties 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. Users are cautioned to field verify information in this product before making any decisions.

Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes
- Quaternary Fault Damage Zones

RICH COUNTY - Geological Faults



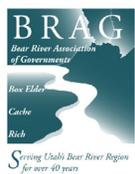
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MAP LOCATION

Bear River Association of Governments



Data Source: County and municipal boundaries, roads, streams, and lakes maintained by Utah AGRC. Dam inundation areas provided by Utah Division of Water Rights, 2008.

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 positional accuracy, and therefore, there are no warranties 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. Users are cautioned to field verify information in this product before making any decisions.

Legend

- County Boundary
- Municipal Boundaries
- Major Roads
- Streams
- Lakes

Dam Inundation Areas

- Probable Maximum Flood area resulting from complete dam failure.

RICH COUNTY - Dam Failure

COMMUNITY SECTIONS: NATURAL HAZARDS, POTENTIAL LOSSES, AND MITIGATION STRATEGIES

Natural Hazards

Current Development

RICH COUNTY

Analysis of hazard risk involving Rich County revealed that there is potential risk resulting from **dam failure, faults, landslide, poor soils, and steep slopes**. These hazards have varying potential to impact life, property, infrastructure, agriculture, and recreational features within municipal boundaries. Currently, liquefaction and wildfire hazards have the greatest potential to impact the community based on potential loss values. Other natural hazard types not mentioned were found to have no potential impacts to Rich County. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Dam failure. Rich County’s risk of dam failure involves Birch Creek Reservoir west of the town Woodruff, as well as Woodruff Creek Dam located in Wyoming nine miles East of Woodruff. Every structure located in Woodruff would be at risk if either one of these dams were to fail. Infrastructure, residents, environment, agriculture, and amenities in this area could experience significant damage.

Faults. Rich County has a great potential for earthquakes. The predominant and most active faulting probability is on the East Bear Lake Fault east of the lake. Woodruff, Randolph, and Laketown are some of the jurisdictions that could experience significant damage in the occurrence of an earthquake. Human life, structures, agriculture, and other amenities in the fault zone are all at risk for this natural hazard.

Landslide. The jurisdictions having the

Table 98: Rich County Potential Loss Figures

| Rich County, 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 | 215 | 66 | 7,684,738 | 6 | 452,739 | 824,628 |
| Faults | 352 | 108 | 13,623,992 | 1 | 271,923 | 137,438 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 486 | 149 | 29,889,215 | 0 | 0 | 0 |
| Slope | 1,167 | 358 | 48,190,591 | 5 | 2,725,092 | 687,190 |
| Poorly Drained Soils | 427 | 131 | 31,315,380 | 5 | 3,640,837 | 687,190 |

* Based on average persons per owner household for Rich County from 2013 American Community Survey, which is 3.26.
 ** Current Market Value per parcel. Numbers were derived from Rich County parcels data provided by the Rich County Assessor.
 *** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm (\$137,438 per firm). Derived from 2002 Survey of Business Owners for Rich County, US Census Bureau.

| Rich County, UT, Agricultural Features at Risk | | | | | |
|---|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 3375.22 | 3773.31 | 637.19 | 0 | 0 |
| Faults | 4151.27 | 3867.24 | 3150.94 | 1 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 750.56 | 2015.4 | 21026.03 | 0 | 0 |
| Slope | 2790.99 | 0 | 181002.89 | 0 | 0 |
| Poorly Drained Soils | 7903.8 | 8155.32 | 33.74 | 2 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Rich County , UT, Critical Facilities at Risk | | | | | |
|--|---|--|---|--------------------------------------|-----------------------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement¹ | Schools/Public Facilities² | Health Care Facilities³ | Places of Worship⁴ | Infrastructure⁵ |
| Dam Failure | | Rendezvous Beach State Park, Camp Hunt | | | 5 Bridges, 6 Dams |
| Faults | | Bear Lake Aquatics Base, 1 RV Park | | | 1 Bridge, 8 Dams |
| Wildfire | | | | | |
| Flood | | | | | |
| Liquefaction | | | | | |
| Landslide | | 2 Campgrounds, Cook Reservoir | | | 27 Dams , Cisco's Landing LLC |
| Slope | | 1 Campground, 1 Hwy 89 Overlook | | | 225 Dams |
| Poorly Drained Soils | | | | | |

Note: Critical facilities were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Resources, and public and community leader input.

| Rich County, UT, Agricultural Features at Risk | | | | | |
|---|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 3375.22 | 3773.31 | 637.19 | 0 | 0 |
| Faults | 4151.27 | 3867.24 | 3150.94 | 1 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 750.56 | 2015.4 | 21026.03 | 0 | 0 |
| Slope | 2790.99 | 0 | 181002.89 | 0 | 0 |
| Poorly Drained Soils | 7903.8 | 8155.32 | 33.74 | 2 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Rich County, UT, Environmental & Recreational Features at Risk | | | | | | |
|---|---------------------------------------|--------------------------|----------------------------|--------------------------------------|---------------------------|------------------------------|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | |
| | Wetland/ Riparian^o | Lakes¹ | Streams² | Parks³ | Trails⁴ | Amenities⁵ |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Amenities |
| Dam Failure | 664.06 | 21.64 | 47.04 | 0.00 | 3.18 | 2.00 |
| Faults | 2,385.36 | 1,236.83 | 80.90 | 0.00 | 1.97 | 0.00 |
| Wildfire | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Flood | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Liquefaction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Landslide | 196.48 | 50.96 | 134.78 | 0.00 | 53.20 | 2.00 |
| Slope | 788.76 | 111.27 | 844.19 | 0.00 | 296.17 | 6.00 |
| Poorly Drained Soils | 1,564.28 | 50.79 | 55.83 | 1.16 | 0.11 | 0.00 |

Note: Total acres of land and miles of streams and trails were identified using multiple datas 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.

greatest tendencies for landslides are Garden City and Laketown, located in the northern most region of Rich County. Having steeper slopes and a large amount of development, it poses great risks to human life, structures, and infrastructure. Although there are no accounts of landslide activity, the Rich County data set includes high landslide risk areas in much of the northern parts of the Rich County Region.

Steep Slopes. Rich County has risks associated with steep slopes within its unincorporated areas. Steep slopes have the potential to impact life, property, infrastructure, and environmental, recreational and agricultural features in the jurisdiction.

Poorly Drained Soils. The towns Randolph and Woodruff have the largest threat for poorly drained soils. Both located adjacent to reservoirs and having high ponding frequencies. This hazard has a potential to effect human life, structures, infrastructure, environmental and recreational features, and agriculture.

Future Development

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

Hazard Mitigation Strategies

Table 99: Rich County Mitigation Strategies

| RICH COUNTY- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
|--|----------------|--|---|---|------------------------------|-------------------|---------------------------|------------------------------|----------------|---|
| Protecting Current Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For N/FIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Rich County | Dam Failure | Protect current residents and property | Update existing plans for dam failure | N/A | N/A | N/A | N/A | Rich County, Utah Dam Safety | N/A | Div. water rights |
| Rich County | Landslide | Protect current residents and property | Map past and potential landslide locations with an overlay of existing ownership and development | N/A | Low | N/A | N/A | Rich County, UGS | N/A | UGS, AGRC |
| Rich County | Flood | Protect current residents and property | Map floodplain as specifically as possible based on existing geographic data. | Work with state floodplain manager to assure compliance with N/FIP. | Medium | 2017 | Local | Rich County, Utah DEM | Minimal | BRAG, FEMA, UGS |
| Rich County | Fault | Protect current residents and property | Obtain better fault mapping | N/A | Medium | 2018 | UGS, USGS | Rich County, UGS | TBD | BRAG, UGS |
| Rich County | Problem Soils | Protect current residents and property | Map problem soils and determine local risk. | N/A | Medium | 2017 | Local | Rich County, BRAG, NRCS | Minimal | BRAG |
| Rich County | Wildfire | Protect current residents and property | Continue urban wildfire interface education. Continue to build firebreaks around homes in existing wildfire areas (Firebreak, USFS above Sweetwater). | N/A | Medium | N/A | N/A | Rich County, Utah FFSL | N/A | FFSL |
| Rich County | Steep Slopes | Protect current residents and property | Determine slopes that may slip in an earthquake or severe weather event. | N/A | N/A | N/A | N/A | Rich County, UGS, BRAG | N/A | Rich county public works, Private contractors |
| Rich County | Severe Weather | Protect current residents and property | Coordinate with the National Weather Service to provide alerts concerning possible approaching cells in populated areas. | N/A | Medium | 2016 | DEM, FEMA | Rich County, NOAA | N/A | N/A |
| RICH COUNTY- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
| Protecting Future Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For N/FIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Rich County | Landslide | Protect future residents and property | Consider earth movement in any future development. | N/A | N/A | N/A | N/A | Rich County, UGS | N/A | N/A |
| Rich County | Flood | Protect future residents and property | Review current floodplain ordinance and explore possibility of updating. | Work with state floodplain manager to assure compliance with N/FIP. | Medium | 2017 | Local | Rich County, Utah DEM | Minimal | BRAG, FEMA, UGS |
| Rich County | Fault | Protect future residents and property | Obtain better fault mapping | N/A | Medium | 2018 | UGS, USGS | Rich County, UGS | TBD | BRAG, UGS |
| Rich County | Problem Soils | Protect future residents and property | Map problem soils and determine local risk. | N/A | Medium | 2017 | Local | Rich County, BRAG, NRCS | Minimal | BRAG |
| Rich County | Wildfire | Protect future residents and property | Consider natural vegetation types and property protection when reviewing new development | N/A | Medium | N/A | N/A | Rich County, Utah FFSL | N/A | FFSL, County, Cities |
| Rich County | Steep Slopes | Protect future residents and property | Minimize or prohibit any development | N/A | N/A | N/A | N/A | Rich County, UGS, BRAG | N/A | N/A |
| Rich County | Severe Weather | Protect future residents and property | Utilize warning systems | N/A | N/A | N/A | N | Rich County, NOAA | N/A | N/A |
| Rich County | Dam Failure | Protect future residents and property | Minimize or prohibit development below dams. | N/A | N/A | N/A | N/A | Rich County, Utah Dam Safety | N/A | N/A |

GARDEN CITY

Analysis of hazard risk involving the community of Garden City revealed that there is potential risk resulting from **wildfire, landslides, steep slopes, and poorly drained soils**. These hazards have varying potential to impact life, property, infrastructure, agriculture, and recreational features within municipal boundaries. Currently, landslide, slope, and poorly drained soil hazards have the greatest potential to impact human life, property, and various community amenities based on potential loss values. Other natural hazard types not mentioned were found to have no potential impacts to the unincorporated portions of Garden City. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Table 100: Garden City Potential Loss Figures

Natural Hazards

Current Development

Landslides. Although there have been no large accounts of landslide activity in Garden City, the Utah Geological Survey completed statewide mapping of landslide potential in this jurisdiction. Landslides have the potential to impact life, property, critical facilities, infrastructure, and environmental, recreational and agricultural features in the jurisdiction. Areas for this risk are predominantly located on the western slopes and unincorporated parts near Garden City..

Steep Slopes. Garden City has risks associated with steep slopes within its incorporated and unincorporated areas. Steep slopes have the potential to impact life, property, infrastructure, and environmental, recreational and agricultural features in the jurisdiction.

| Garden City, 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 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 528 | 162 | 31,368,728 | 0 | 0 | 0 |
| Slope | 238 | 73 | 18,478,240 | 2 | 2,332,683 | 274,876 |
| Poorly Drained Soils | 544 | 167 | 34,341,783 | 3 | 3,152,825 | 412,314 |

* Based on average persons per owner household for Rich County from 2013 American Community Survey, which is 3.26.

** Current Market Value per parcel. Numbers were derived from Rich County parcels data provided by the Rich County Assessor.

*** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm (\$137,438 per firm). Derived from 2002 Survey of Business Owners for Rich County, US Census Bureau.

| Garden City, UT, Infrastructure at Risk | | | | | | | | | | |
|--|-------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| Hazard Type | Infrastructure at Risk | | | | | | | | | |
| | Railroad Lines | | Natural Gas Lines | | Electrical Power lines | | Roads | | Canals | |
| | # of Miles | \$ Value¹ | # of Miles | \$ Value² | # of Miles | \$ Value³ | # of Miles | \$ Value⁴ | # of Miles | \$ Value⁵ |
| 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 | 0.03 | 15,750 | 0 | 0 |
| Flood | 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 | 12.15 | 6,378,750 | 0.22 | 330,000 |
| Slope | 0 | 0 | 0 | 0 | 0 | 0 | 8.91 | 4,677,750 | 0.51 | 765,000 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

¹ Based on figures from 2009 Pre-Disaster Mitigation Plan for Bear River Region, Utah.
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, May 2015).
³ Based on estimates from Logan Light and Power, 2015.
⁴ Based on estimates derived from an average 28' wide, 4" thick asphalt county road with gravel subgrade replacement. Cache County, 2015.
⁵ Based recent Cache County and regional project cost estimates, 2015.

| Garden City , UT, Critical Facilities at Risk | | | | | |
|--|---|---|-------------------------------|--------------------------|-----------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure |
| Dam Failure | | Garden City Park, Ideal Beach, Blue Water Beach | | | |
| Faults | | | | | |
| Wildfire | | | | | |
| Flood | | | | | |
| Liquefaction | | | | | |
| Landslide | | | | | |
| Slope | | | | | 2 dams |
| Poorly Drained Soils | | | | | |

Note: Critical facilities were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Resources, and public and community leader input.

| Garden City, UT, Agricultural Features at Risk | | | | | |
|---|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 69.72 | 167.3 | 0.8 | 0 | 0 |
| Slope | 21.54 | 0 | 5.72 | 0 | 0 |
| Poorly Drained Soils | 16.39 | 0 | 0 | 0 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Table -- : Garden City, UT, Environmental & Recreational Features at Risk | | | | | | |
|--|---------------------------------------|--------------|-------------------|--------------------------------------|-------------------|-----------------------|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | |
| | Wetland/ Riparian | Lakes | Streams | Parks | Trails | Amenities |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Amenities |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 11.43 | 0.12 | 4.86 | 0 | 0.98 | 0 |
| Slope | 11.6 | 0 | 4.64 | 0 | 3.44 | 0 |
| Poorly Drained Soils | 24.53 | 0.35 | 0.02 | 15.82 | 0 | 0 |

Note: Total acres of land and miles of streams and trails were identified using multiple datas 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.

Wildfire. Garden City is susceptible to the risk of wildfires, there is a potential for some infrastructure to receive damage in the occurrence of a wildfire.

Poorly Drained Soils. Garden City situated adjacent to Bear Lake tends to have problem soils. Residential and Commercial units near the shoreline experience the greatest risks. Most if not all infrastructure located near the lakes shoreline will have some type of risk for poor soils.

Future Development

There is a newer development being constructed with subdivisions in the Shundahai development area.

Hazard Mitigation Strategies

Table 101: Garden City Mitigation Strategies

| GARDEN CITY- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
|--|----------------|--|--|---|------------------------------|-------------------|----------------------------------|-------------------------------|----------------|---------------------------------|
| Protecting Current Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Garden City | Earthquake | Protect current residents and property | Creating community emergency response plans | N/A | Medium | 2016 | County, City, State, and Federal | Garden City, UGS, Rich County | N/A | City, County State, and Federal |
| Garden City | Wildfire | Protect current residents and property | Identify emergency evacuation routes in the various communities and publish on city and local fire department websites. Provide info to property owners on how to create defensible space around their homes | N/A | High | 2015 | Local Fire Department Budget | Garden City, Utah FFSL | \$500 | Fire District, County, FFSL |
| Garden City | Severe Weather | Protect current residents and property | Create local emergency community response groups. | N/A | Medium | 2016 | Local churches, City, County | Garden City, Rich County | N/A | Local churches, City, County |
| Garden City | Flooding | Protect current residents and property | Providing information to public concerning hazard zones and preventative preparation. | N/A | Medium | 2016-2018 | City and County | Garden City, Utah DEM | N/A | City and County |
| Garden City | Landslide | Protect current residents and property | Identify high risk areas and enact restrictive zoning laws for those hazard areas. | N/A | Medium | 2016-2020 | City and County | Garden City, UGS | N/A | City and County |
| GARDEN CITY- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
| Protecting Future Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Garden City | Earthquake | Protect future residents and property | Review all future developments and business applications for adequate ingress and egress in relation to the expected traffic potential in the event of local evacuation emergency. | N/A | Medium | 2016 | City, County, State, and Federal | Garden City, UGS, Rich County | N/A | City, County, State, Federal |
| Garden City | Wildfire | Protect future residents and property | Require mandatory defensible setbacks in identified high risk wildfire zones before homeowners can receive occupancy permits. | N/A | High | 2016 | City, and County | Garden City, Utah FFSL | \$500 | City, County, FFSL |
| Garden City | Landslides | Protect future residents and property | Identify potential risk zones and place restrictive zoning on them. | N/A | Medium | 2016-2020 | City, County | Garden City, UGS | N/A | City, County |
| Garden City | Flooding | Protect future residents and property | Identify additional flood zones and ensure proper zoning laws in place. | N/A | Low | 2016-2020 | City and County | Garden City, Utah DEM | N/A | City and County |
| Garden City | Landslide | Protect future residents and property | Identify potential risk zones and place restrictive zoning on them. | N/A | Medium | 2016-2020 | City and County | Garden City, UGS | N/A | City and County |

LAKETOWN

Analysis of hazard risk involving the community of Laketown revealed that there is potential risk resulting from **faults, landslide, and slope**. These hazards have varying potential to impact human life, property, infrastructure, agriculture, and recreational features within municipal boundaries. Currently, all three of the risks most likely to be found in Laketown have the greatest potential to impact human life, property, and infrastructure based on potential loss values. Other natural hazard types not mentioned were found to have no potential impacts to Laketown. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Table 102: Laketown Potential Loss Figures

Natural Hazards

Current Development

Faults. Laketown has potentially the greatest risk of fault damage in Rich County due to the faults location, situated closest to any of the jurisdictions infrastructure. The eastern portions of the town bench lie on top of the East Bear Lake Fault. Human life, structures, and other amenities in the fault zone could suffer catastrophic damage in the event of a large earthquake.

Landslides. Laketown has the potential risk of landslides in areas found on the lower bench areas surrounding the town boundary. Landslides have the potential to impact life, property, infrastructure, and environmental, recreational and agricultural features in the jurisdiction.

| Laketown, 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 | 72 | 22 | 3,348,696 | 3 | 445,248 | 412,314 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 10 | 3 | 922,641 | 0 | 0 | 0 |
| Slope | 78 | 24 | 4,309,474 | 3 | 390,144 | 412,314 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 | 0 |

* Based on average persons per owner household for Rich County from 2013 American Community Survey, which is 3.26.
 ** Current Market Value per parcel. Numbers were derived from Rich County parcels data provided by the Rich County Assessor.
 *** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm (\$137,438 per firm). Derived from 2002 Survey of Business Owners for Rich County, US Census Bureau.

| Laketown, UT, Infrastructure at Risk | | | | | | | | | | |
|---|-------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| Hazard Type | Infrastructure at Risk | | | | | | | | | |
| | Railroad Lines | | Natural Gas Lines | | Electrical Power lines | | Roads | | Canals | |
| | # of Miles | \$ Value¹ | # of Miles | \$ Value² | # of Miles | \$ Value³ | # of Miles | \$ Value⁴ | # of Miles | \$ Value⁵ |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 | 2.03 | 1,065,750 | 0.04 | 60,000 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 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 | 0.08 | 42,000 | 0 | 0 |
| Slope | 0 | 0 | 0 | 0 | 0 | 0 | 0.84 | 441,000 | 0 | 0 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

¹ Based on figures from 2009 Pre-Disaster Mitigation Plan for Bear River Region, Utah.
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, May 2015).
³ Based on estimates from Logan Light and Power, 2015.
⁴ Based on estimates derived from an average 28' wide, 4" thick asphalt county road with gravel subgrade replacement. Cache County, 2015.
⁵ Based recent Cache County and regional project cost estimates, 2015.

| Laketown , UT, Critical Facilities at Risk | | | | | |
|---|---|----------------------------------|-------------------------------|--------------------------|-----------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure |
| Dam Failure | | | | | |
| Faults | | | | | |
| Wildfire | | | | | |
| Flood | | | NONE | | |
| Liquefaction | | | | | |
| Landslide | | | | | |
| Slope | | | | | |
| Poorly Drained Soils | | | | | |

Note: Critical facilities were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Resources, and public and community leader input.

| Laketown, UT, Agricultural Features at Risk | | | | | |
|--|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 0 | 0 | 0 | 0 | 0 |
| Faults | 96.32 | 73.06 | 176.08 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 36.74 | 0 | 0 |
| Slope | 12.84 | 0 | 207.63 | 0 | 0 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.

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

**** Based on data compiled by the Bear River Association of Governments.

| Laketown, UT, Environmental & Recreational Features at Risk | | | | | | |
|--|---------------------------------------|--------------|-------------------|--------------------------------------|-------------------|-----------------------|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | |
| | Wetland/ Riparian | Lakes | Streams | Parks | Trails | Amenities |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Amenities |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0.05 | 0 | 0 | 0 | 0.63 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0.03 | 0 |
| Slope | 0 | 0 | 0 | 0 | 0.55 | 0 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 | 0 |

Note: Total acres of land and miles of streams and trails were identified using multiple datas 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.

Steep Slopes. Laketown has risk associated with steep slopes within its jurisdictional boundaries. Steep slopes have the potential to impact life, property, infrastructure, and environmental, recreational and agricultural features in the jurisdiction.

Future Development

There is currently one residential home being built on the hill.

Hazard Mitigation Strategies

Table 103: Laketown Mitigation Strategies

| LAKETOWN- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
|---|--------------------|--|---|---|------------------------------|-------------------|---------------------------|---------------------|----------------|--------------------------|
| Protecting Current Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Laketown | Wildfire | Protect current residents and property | Create fire break on east side of town | N/A | Medium | 2018 | PDMG, USFS, FFSL | Laketown, Utah FFSL | TBD | Local, Utah FFSL, County |
| Laketown | Flood | Protect current residents and property | Determine flood risk based on historical data and available mapping to avoid loss. | Work with state floodplain manager to assure compliance with NFIP | Medium | 2017 | Local | Laketown, Utah DEM | Minimal | Utah DEM, FEMA, BRAG |
| Laketown | Landslide | Protect current residents and property | Determine landslide risk based on historical data and available mapping to avoid loss. | N/A | Medium | 2017 | Local | Laketown, UGS | Minimal | UGS, USGS, BRAG |
| Laketown | Earthquake/ Faults | Protect current residents and property | Update Geological Mapping | N/A | Medium | 2020 | UGS, FEMA, BRAG | Laketown, UGS | Minimal | BRAG, USU, UGS, USGS |
| Laketown | Steep Slopes | Protect current residents and property | Update Geological Mapping | N/A | Medium | 2020 | UGS, FEMA, BRAG | Laketown, UGS | Minimal | BRAG, USU, UGS, USGS |
| LAKETOWN- COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
| Protecting Future Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Laketown | Wildfire | Protect future residents and property | Create fire break on east side of town | N/A | Medium | 2018 | PDMG, USFS, FFSL | Laketown, Utah FFSL | TBD | Local, Utah FFSL, County |
| Laketown | Flood | Protect future residents and property | Review current ordinances to determine if improvements need to be made to protect future residents. | Work with state floodplain manager to assure compliance with NFIP | Medium | 2017 | Local | Laketown, Utah DEM | Minimal | Utah DEM, FEMA, BRAG |
| Laketown | Landslide | Protect future residents and property | Review current ordinances to determine if improvements need to be made to protect future residents. | N/A | Medium | 2017 | Local | Laketown, UGS | Minimal | UGS, USGS, BRAG |
| Laketown | Earthquake/ Faults | Protect future residents and property | Update Geological Mapping | N/A | Medium | 2020 | UGS, FEMA, BRAG | Laketown, UGS | Minimal | BRAG, USU, UGS, USGS |
| Laketown | Steep Slopes | Protect future residents and property | Update Geological Mapping | N/A | Medium | 2020 | UGS, FEMA, BRAG | Laketown, UGS | Minimal | BRAG, USU, UGS, USGS |

RANDOLPH

Analysis of hazard risk involving the community of Randolph revealed that there is potential risk resulting from **slope, and poorly drained soils**. These hazards have varying potential to impact human life, property, infrastructure, agriculture, and some environmental features. Other natural hazard types not mentioned were found to have no potential impacts to Randolph. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Table 104: Randolph Potential Loss Figures

Natural Hazards

Current Development

Steep Slopes. Randolph has a potential risk due to steep slopes on the eastern foothills in the towns boundary as well as it’s unincorporated region. There are a few residential units at risk as well as several acres of agricultural land.

Poorly Drained Soils. Randolph has a high potential for poorly drained soils. These soils have varying potential to impact human life, property, infrastructure, and some environmental and agricultural lands and features. Parts of the town as well as land outside of Randolph’s town boundary have very

| Randolph, 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 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0 | 0 |
| Slope | 13 | 4 | 306,679 | 0 | 0 | 0 |
| Poorly Drained Soils | 104 | 32 | 2,827,709 | 2 | 318,453 | 274,876 |

* Based on average persons per owner household for Rich County from 2013 American Community Survey, which is 3.26.
 ** Current Market Value per parcel. Numbers were derived from Rich County parcels data provided by the Rich County Assessor.
 *** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm (\$137,438 per firm). Derived from 2002 Survey of Business Owners for Rich County, US Census Bureau.

| Randolph, UT, Infrastructure at Risk | | | | | | | | | | |
|---|-------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| Hazard Type | Infrastructure at Risk | | | | | | | | | |
| | Railroad Lines | | Natural Gas Lines | | Electrical Power Lines | | Roads | | Canals | |
| | # of Miles | \$ Value¹ | # of Miles | \$ Value² | # of Miles | \$ Value³ | # of Miles | \$ Value⁴ | # of Miles | \$ Value⁵ |
| 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 | 0 | 0 | 0 | 0 |
| Flood | 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 | 0 | 0 | 0 |
| Poorly Drained Soils | 0 | 0 | 0.28 | 392,000 | 0 | 0 | 1.17 | 614,250 | 0.41 | 615,000 |

¹ Based on figures from 2009 Pre-Disaster Mitigation Plan for Bear River Region, Utah.
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, May 2015).
³ Based on estimates from Logan Light and Power, 2015.
⁴ Based on estimates derived from an average 28' wide, 4" thick asphalt county road with gravel subgrade replacement. Cache County, 2015.
⁵ Based recent Cache County and regional project cost estimates, 2015.

| Randolph , UT, Critical Facilities at Risk | | | | | |
|---|---|----------------------------------|-------------------------------|--------------------------|-----------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure |
| Dam Failure | Randolph Jail | Rich County Extension Office | | | |
| Faults | | | | | |
| Wildfire | | | | | |
| Flood | | | | | |
| Liquefaction | | | | | |
| Landslide | | | | | |
| Slope | | | | | |
| Poorly Drained Soils | | | | | |

Note: Critical facilities were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Water Resources, and public and community leader input.

| Randolph, UT, Agricultural Features at Risk | | | | | |
|--|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0 |
| Slope | 3.87 | 0 | 0.62 | 0 | 0 |
| Poorly Drained Soils | 80.3 | 107.36 | 0 | 0 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Randolph , UT, Critical Facilites at Risk | | | | | |
|--|---|----------------------------------|-------------------------------|--------------------------|-----------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure |
| Dam Failure | Randolph Jail | Rich County Extension Office | | | |
| Faults | | | | | |
| Wildfire | | | | | |
| Flood | | | | | |
| Liquefaction | | | | | |
| Landslide | | | | | |
| Slope | | | | | |
| Poorly Drained Soils | | | | | |

Note: Critical facilites were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Water Resources, and public and community leader input.

| Randolph, UT, Agricultural Features at Risk | | | | | |
|--|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0 |
| Slope | 3.87 | 0 | 0.62 | 0 | 0 |
| Poorly Drained Soils | 80.3 | 107.36 | 0 | 0 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Randolph, UT, Environmental & Recreational Features at Risk | | | | | | |
|--|---------------------------------------|--------------|-------------------|--------------------------------------|-------------------|-----------------------|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | |
| | Wetland/ Riparian | Lakes | Streams | Parks | Trails | Amenities |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Amenities |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 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 |
| Poorly Drained Soils | 0 | 0 | 7,368.18 | 0 | 0 | 0 |

Note: Total acres of land and miles of streams and trails were identified using multiple datas 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.

saturated soils with a high ponding frequency.

Future Development

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

Hazard Mitigation Strategies

Table 105: Randolph Town Mitigation Strategies

| RANDOLPH - COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
|--|---------------|--|---|---|------------------------------|-------------------|---------------------------|-----------------------------------|----------------|---------------------------------|
| Protecting Current Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NEIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Randolph | Wildfire | Protect current residents and property | Coordinate with agencies on response and prevention. | N/A | High | 2016 | N/A | Randolph, Utah FTSL | Minimal | FFSL, County |
| Randolph | Earthquake | Protect current residents and property | Educate residents on Effects | N/A | Medium | 2017 | N/A | Randolph, UGS | Minimal | State, UGS |
| Randolph | Dam Failure | Protect current residents and property | Work with Wyoming on finding dam affects. | N/A | High | 2017 | N/A | Randolph, Wyoming Utah Dam Safety | N/A | Utah Water, Woodruff Leadership |
| Randolph | Problem Soils | Protect current residents and property | Review current ordinances and general plan for soils data. | N/A | N/A | N/A | N | Randolph, NRCS | N/A | N/A |
| RANDOLPH - COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
| Protecting Future Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NEIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Randolph | Wildfire | Protect future residents and property | Review current ordinances to see if they need any improvements. | N/A | Medium | 2016 | N/A | Randolph, Utah FTSL | Minimal | Utah FSSL, Local, BLRC |
| Randolph | Earthquake | Protect future residents and property | Educate residents on Effects | N/A | Medium | 2017 | N/A | Randolph, UGS | Minimal | State, UGS |
| Randolph | Dam Failure | Protect future residents and property | Work with Wyoming on finding dam affects. | N/A | High | 2017 | N/A | Randolph, Wyoming Utah Dam Safety | N/A | Utah Water, Woodruff Leadership |
| Randolph | Problem Soils | Protect future residents and property | Review current ordinances and general plan for soils data. | N/A | N/A | N/A | N | Randolph, NRCS | N/A | N/A |

WOODRUFF

Analysis of hazard risk involving the community of Woodruff revealed that there is potential risk resulting from **dam failure, and poorly drained soils**. These hazards have varying potential to impact human life, property, infrastructure, agriculture, environmental, and recreational features within municipal boundaries. Currently, dam failure has the greatest potential to impact human life, property, and various community amenities based on potential loss values. Potential impacts from poorly drained soils 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 Woodruff. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Table 106: Woodruff Town Potential Loss Figures

Natural Hazards

Current Development

Dam failure. Woodruff has a very significant risk of dam failure. Two dam structures have the impact to completely flood the town of Woodruff. Birch Creek Reservoir west of the town Woodruff, as well as Woodruff Creek Dam located in Wyoming nine miles East of Woodruff. Every structure located in Woodruff would be at risk if either one of these dams were to fail. Human life, Infrastructure, structures, environmental features, agriculture, and amenities in this area could experience significant damage.

Poorly Drained Soils. On the western boundary of Woodruff there tends to be a higher risk for poorly drained soils. This hazard has the varying potential to impact human life, structures, agriculture, and environmental and recreational features. Poorly drained soils have a higher impact on resi-

| Woodruff, 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 | 287 | 88 | 7,050,416 | 8 | 745,412 | 1,099,504 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 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 |
| Poorly Drained Soils | 16 | 5 | 229,651 | 0 | 0 | 0 |

* Based on average persons per owner household for Rich County from 2013 American Community Survey, which is 3.26.
 ** Current Market Value per parcel. Numbers were derived from Rich County parcels data provided by the Rich County Assessor.
 *** Based on average sales, receipts, or value of shipments of firms with or without paid employees, per firm (\$137,438 per firm). Derived from 2002 Survey of Business Owners for Rich County, US Census Bureau.

| Woodruff, UT, Infrastructure at Risk | | | | | | | | | | |
|---|-------------------------------|-----------------------------|--------------------------|-----------------------------|-------------------------------|-----------------------------|-------------------|-----------------------------|-------------------|-----------------------------|
| Hazard Type | Infrastructure at Risk | | | | | | | | | |
| | Railroad Lines | | Natural Gas Lines | | Electrical Power lines | | Roads | | Canals | |
| | # of Miles | \$ Value¹ | # of Miles | \$ Value² | # of Miles | \$ Value³ | # of Miles | \$ Value⁴ | # of Miles | \$ Value⁵ |
| Dam Failure | 0 | 0 | 0.92 | 1,288,000 | 0.14 | 17,780 | 4.42 | 2,320,500 | 0.85 | 1,275,000 |
| Earthquakes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 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 | 0 | 0 | 0 |
| Poorly Drained Soils | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

¹ Based on figures from 2009 Pre-Disaster Mitigation Plan for Bear River Region, Utah.
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, May 2015).
³ Based on estimates from Logan Light and Power, 2015.
⁴ Based on estimates derived from an average 28' wide, 4" thick asphalt county road with gravel subgrade replacement. Cache County, 2015.
⁵ Based recent Cache County and regional project cost estimates, 2015.

| Woodruff, UT, Critical Facilities at Risk | | | | | |
|--|---|----------------------------------|-------------------------------|--------------------------|-------------------------------|
| Hazard Type | Critical Facilities Types | | | | |
| | Emergency Services/Law Enforcement | Schools/Public Facilities | Health Care Facilities | Places of Worship | Infrastructure |
| Dam Failure | 2 Fire Stations | | | 1 Place of Worship | 1 Bridge, 2 Broadband Anchors |
| Faults | | | | | |
| Wildfire | | | | | |
| Flood | | | | | |
| Liquefaction | | | | | |
| Landslide | | | | | |
| Slope | | | | | |
| Poorly Drained Soils | | | | | |

Note: Critical facilities were identified using multiple data sources including: Utah AGRC, UDOT, Utah Division of Water Resources, and public and community leader input.

| Woodruff, UT, Agricultural Features at Risk | | | | | |
|--|--------------------------------|--------------------|-------------------|------------------------------|-----------------------|
| Hazard Type | Lands at Risk | | | Farms & Barns**** | |
| | Agriculture Production* | Farm Land** | Grazing*** | Century Farms | Historic Barns |
| | # of Acres | | | # of Farms | # of Barns |
| Dam Failure | 158.27 | 288.39 | 0 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 |
| Flood | 0 | 0 | 0 | 0 | 0 |
| Liquefaction | 0 | 0 | 0 | 0 | 0 |
| Landslide | 0 | 0 | 0 | 0 | 0 |
| Slope | 0 | 0 | 0 | 0 | 0 |
| Poorly Drained Soils | 6.73 | 6.73 | 0 | 0 | 0 |

* 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 that are suitable for farming purposes based on soil type and composition, as describe in the 2013 Natural Resource Conservation Service, SSURGO datasets.
 *** Lands currently associated with grazing allotments identified as part of the Grazing Improvement Program (Utah AGRC, 2012)
 **** Based on data compiled by the Bear River Association of Governments.

| Woodruff, UT, Environmental & Recreational Features at Risk | | | | | | |
|--|---------------------------------------|--------------|-------------------|--------------------------------------|-------------------|-----------------------|
| Hazard Type | Environmental Features at Risk | | | Recreational Features at Risk | | |
| | Wetland/ Riparian | Lakes | Streams | Parks | Trails | Amenities |
| | # of Acres | | # of Miles | # of Acres | # of Miles | # of Amenities |
| Dam Failure | 0 | 0 | 2.38 | 6.01 | 0 | 0 |
| Faults | 0 | 0 | 0 | 0 | 0 | 0 |
| Wildfire | 0 | 0 | 0 | 0 | 0 | 0 |
| Flood | 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 |
| Poorly Drained Soils | 0 | 0 | 0.14 | 0 | 0 | 0 |

Note: Total acres of land and miles of streams and trails were identified using multiple datas 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.

dential structures more than anything else.

Future Development

We have not yet attained this information from city representatives.

Hazard Mitigation Strategies

Table 107: Woodruff Town Mitigation Strategies

| WOODRUFF - COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
|--|---------------|--|--|--|------------------------------|-------------------|--------------------------------------|---------------------------|----------------|--------------------------------------|
| Protecting Current Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Woodruff | Dam Failure | Protect current residents and property | Work with the Utah Division of Water Rights and other groups to implement Emergency Action Plans on a local level. | N/A | High | Ongoing | Utah Division of Water Rights, Local | Woodruff, Utah Dam Safety | Minimal | Utah Division of Water Rights, Local |
| Woodruff | Flood | Protect current residents and property | Work with Utah DEM, FEMA, and BRAG to determine local flood risk and potential projects. | Work with state floodplain manager to assure compliance with NFIP. | Medium | 2017 | Utah DEM, FEMA | Woodruff, Utah DEM | Minimal | Utah DEM, FEMA |
| Woodruff | Problem Soils | Protect current residents and property | Review current ordinances and general plan for soils data. | N/A | Medium | 2017 | Local | Woodruff, NRCS | Minimal | City |
| WOODRUFF - COMMUNITY MITIGATION STRATEGIES | | | | | | | | | | |
| Protecting Future Residents and Property | | | | | | | | | | |
| Jurisdiction | Hazard | Goal | Action | Action (For NFIP Compliance, if Applicable) | Priority (High, Medium, Low) | Time-frame (Year) | Potential Funding Sources | Responsible Entity | Estimated Cost | Resources |
| Woodruff | Dam Failure | Protect future residents and property | Work with the Utah Division of Water Rights and other groups to implement Emergency Action Plans on a local level. | N/A | High | Ongoing | Utah Division of Water Rights, Local | Woodruff, Utah Dam Safety | Minimal | Utah Division of Water Rights, Local |
| Woodruff | Flood | Protect future residents and property | Review current ordinances and general plan to see if flood ordinances need to be updated. | Work with state floodplain manager to assure compliance with NFIP. | Medium | 2017 | Utah DEM, FEMA | Woodruff, Utah DEM | Minimal | Utah DEM, FEMA |
| Woodruff | Problem Soils | Protect future residents and property | Review current ordinances and general plan for soils data. | N/A | Medium | 2017 | Local | Woodruff, NRCS | Minimal | City |