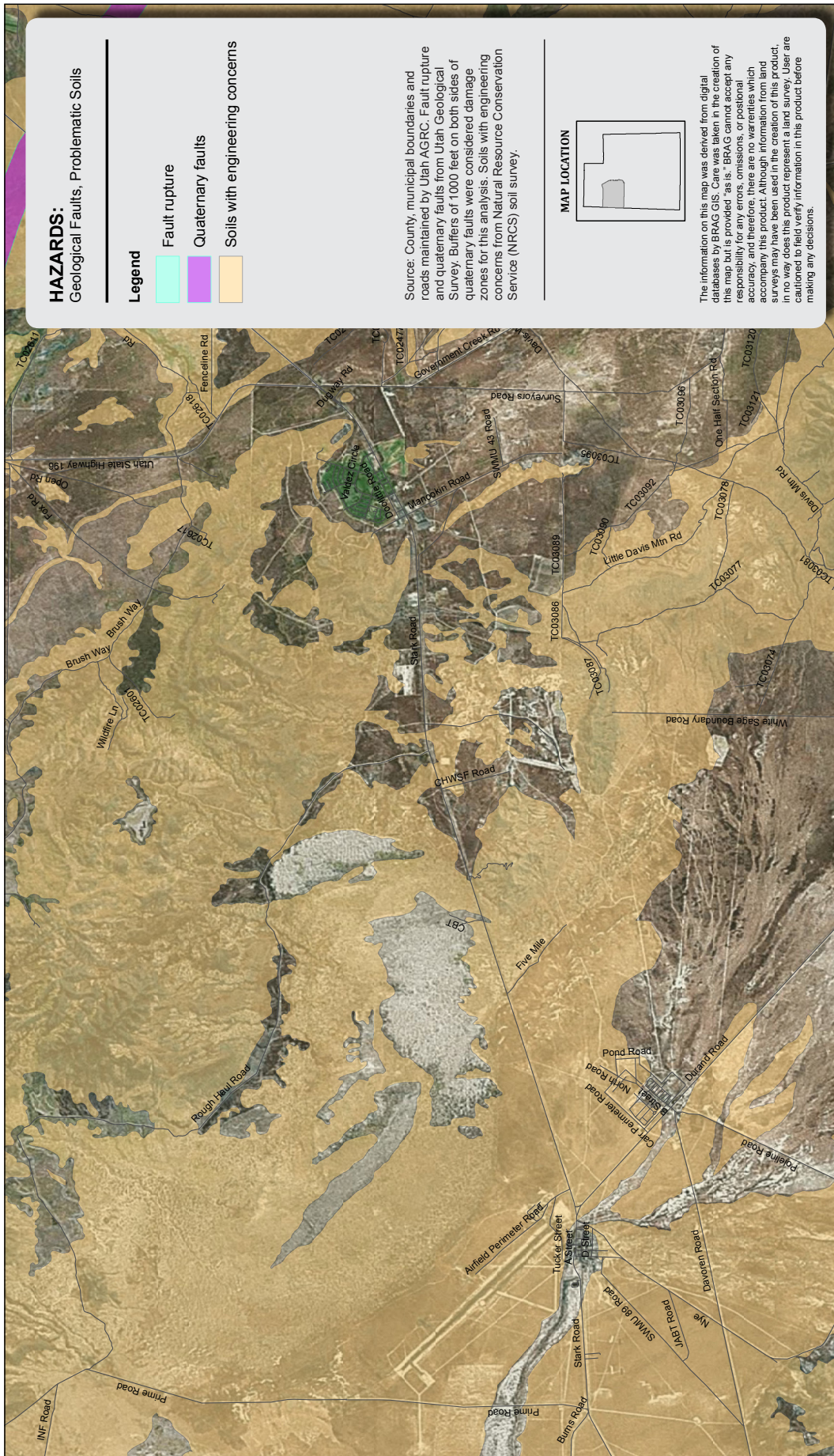


SECTION 5: DUGWAY COMMUNITY RISK ASSESSMENT



DUGWAY, UTAH



DUGWAY, UTAH

DUGWAY NATURAL HAZARDS, POTENTIAL LOSSES, AND MITIGATION STRATEGIES

DUGWAY

Analysis of hazard risk involving the community of Dugway revealed that there is potential risk resulting mostly from **wildfire** and **unsuitable soils**. Wildfire has varying potential to impact human life, infrastructure, agriculture, and environmental features within municipal boundaries. Currently, wildfire has 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 Dugway. See the following tables for more detailed descriptions of potential losses associated with each natural hazard associated with jurisdictional elements.

Natural Hazards

Wildfire. Moderate to high wildfire risk is minimal in the developed areas in and around Dugway communities. However, there are areas with higher risk in the foothills and areas with more vegetation.

Future Development

No concerns involving potential future development within Dugway were reported by community representatives.

Table 18: Dugway Potential Loss Figures

Dugway, 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 (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

* 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.

Dugway, 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, 1 Law Enforcement Building	1 Library	0	0	0	1 Airport
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	1 Fire Station, 1 Army Airfield Bldg.	0	0	0	3 Water Tanks	1 Aviation Fuel Point

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

Dugway, 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	7.65	\$4,016,250	0.21	\$315,000
Flood (FIRM)	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Flood (Soils)	0	\$0	0	\$0	0	\$0	0.08	\$42,000	1.48	\$2,220,000
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	0.69	\$362,250	0	\$0
High Water Table	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Unsuitable Soils for Buildings	0	\$0	0	\$0	0	\$0	136.2	\$71,505,000	0	\$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).

Dugway, 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	10.30	0.00	0.00	0.00	0.00	0.00	0
Flood (FIRM)	0.00	0.00	0.00	0.00	0.00	0.00	0
Flood (Soils)	66.11	0.00	5.55	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	0.19	0.00	0.02	0.00	0.00	0.00	0
High Water Table	0.00	0.00		0.00	0.00	0.00	0
Unsuitable Soils for Buildings	0.00	0.00	0.00	0.00	0.00	0.00	0

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

Dugway, 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	108.26	592.80
Flood (FIRM)	0.00	0.00
Flood (Soils)	654.07	723.69
Liquefaction	0.00	0.00
Landslide	0.00	0.00
Slope	1.76	4.77
High Water Table	0.00	0.00
Unsuitable Soils for Buildings	0.00	0.00

* 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

Table 19: Dugway Mitigation Strategies

DUGWAY - 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
Dugway	Flood	Protect current residents and property	Improve road and trail.	N/A	Low	Ongoing	Local, County	State, Local	N/A	FEMA, Utah DEM
Dugway	Wildfire	Protect current residents and property	Installation wildfire firebreaks.	N/A	Medium	N/A	EM budgets	Local	N/A	Utah FFSL
Dugway	Flooding	Protect current residents and property	Re-seeding with natural grasses for soil retention.	N/A	Low	N/A	Local Property Tax	Local	N/A	FEMA, Utah DEM
Dugway	Earthquake	Protect current residents and property	Ready army program for workforce and residents awareness.	N/A	Medium	Ongoing	County, State	State, Local	N/A	UGS, USGS, Utah DEM
Dugway	Steep Slope	Protect current residents and property	Re-evaluate risk from steep slope to local amenities with local data.	N/A	Low	Ongoing	Local	Local	Minimal	UGS
Dugway	Unsuitable Soils	Protect current residents and property	Re-evaluate risk from unsuitable soils to local amenities with local data.	N/A	Low	Ongoing	Local	Local	Minimal	UGS, NRCS

DUGWAY - 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
Dugway	Flood	Protect future residents and property	Improve road and trail.	N/A	Low	Ongoing	Local, County	State, Local	N/A	FEMA, Utah DEM
Dugway	Wildfire	Protect future residents and property	Re-seeding with natural grasses and removal of non-native grasses.	N/A	Medium	N/A	Local	Local	N/A	Utah FFSL
Dugway	Flooding	Protect future residents and property	Trail maintenance to improve drainage.	N/A	Medium	N/A	Local Property Tax	Local, County	N/A	FEMA, Utah DEM
Dugway	Earthquake	Protect future residents and property	Ready army program for workforce and residents awareness.	N/A	Medium	Ongoing	County, State	State, Local	N/A	UGS, USGS, Utah DEM
Dugway	Steep Slope	Protect future residents and property	Evaluate areas of potential future development and update planning processes.	N/A	Low	Ongoing	Local	Local	Minimal	UGS
Dugway	Unsuitable Soils	Protect future residents and property	Evaluate areas of potential future development and update planning processes.	N/A	Low	Ongoing	Local	Local	Minimal	UGS, NRCS