CHAPTER 14

Capabilities Assessment

Introduction

As one of the fastest growing states in the nation - with a population predicted to nearly double in the next 50 years - and a history relatively few large natural disasters that affect residential populations, Utah has many factors to consider in not only improving its current mitigation capabilities, but also in increasing its mitigation capacity to match the needs of future growth.

When embarking on the 2019 Utah State Hazard Mitigation Plan update the state's mitigation team members and members of the State Hazard Mitigation Plan Committee (SHMPC) wanted to not only improve the plans hazard mitigation data, reviews, goals, and strategies, but also to provide an objective and honest assessment of the state's mitigation capabilities. In working with other state agencies, partners, and local communities - both in the field through normal mitigation operations and through organized mitigation plan data collection surveys - the SHMPC was able to gather information about mitigation successes and have important conversations about the challenges and barriers to implementing mitigation plans and projects.

This important information about Utah's mitigation capabilities is organized into sections outlining the state's legal framework, funding, mitigation programs, and local mitigation programs, concluding with a section discussing the overall challenges and opportunities of mitigation in the state.

Legal Context

The legal authorities and legislative mandates that allow for hazard mitigation activities at the state level are as follows:

- The Governor's Emergency Operation Directive
- The Robert T. Stafford Disaster Relief and Emergency Assistance Act, amendments to Public Law 93-288, as amended.
- Title 44, CFR, Federal Emergency Management Agency Regulations, as amended.
- Emergency Management Act of 1981, Utah Code 53-2, 63-5.
- Disaster Response Recovery Act, 63-5A.
- Emergency Interim Succession Act, 63-5B.
- State Disaster Recovery Restricted Account 53-2-403

Utah's building code reflects the International Building Code (IBC) of 2015, with amendments and exceptions at the state and local level. The building codes that have been adopted for Utah are located at the State Construction Code Adoption Act and State Construction Code and approved codes that may also be adopted by local compliance agencies, and are located at Utah Uniform Building Standard Act Rules beginning in section R156-56-701. Building codes are required in hazard prone areas because they ensure that all new construction and improved existing construction are more resilient to local hazards, and improve life safety functions. The IBC requires building structures to be compliant with the National Flood Insurance Program (NFIP) minimum standards.

The Utah Municipal Code 10-9 Part 8, empowers cities with legislative authority to enact subdivision ordinances. The Utah Code Title 10, Chapter 9a, Municipal Land Use Development and Management Act, is Utah's local land use enabling authority for local government that "provides for the health, safety, and welfare" in areas subject to natural hazards.

In 2013 the Utah Legislature passed two significant bills to provide seismic safety to schools in Utah. House Bill (HB) 278S01 Public School Seismic Studies and HB 278SO1 Public School Seismic Studies. These bills will require a greater study of the current school buildings throughout the state to gain a better understanding of the problem. Since their passage the majority of the state's high schools and middle schools have been evaluated. Elementary school studies are still ongoing.

Table 1: Utah Disaster Assistance and Existing Legal Protections

Type of Existing Protection	Type of Disaster Assistance	Description
Civil Defense Act of 1950	Pre and Post Disaster	Authorizes the creation of the Utah Civil Defense Agency (the predecessor to DEM) and the development of a statewide civil defense program.
Emergency Management Act of 1981, Utah Code 53-2, 63-5.	Pre and Post Disaster	Establishes an emergency/disaster management system.
Disaster Response Recovery Act, Utah Code 63-5A	Post Disaster	Assist state and local governments to effectively provide emergency disaster response and recovery assistance.
Emergency Interim Succession Act, Utah Code 63-5B	Post Disaster	Establish and define interim successors for state, local, and judicial branch.
The Emergency Planning and Community Right-to-Know Act (EPCRA) to 1986 (Title 40 CFR, Part 350-372	Pre and Post Disaster	EPCRA establishes requirements for federal, state and local governments, Indian Tribes, and industry regarding emergency planning and "Community Right-to-Know reporting on hazardous and toxic chemicals. The "Community Right-to-Know" provisions help increase the public's knowledge and access to information on chemicals at individual facilities, their uses, and releases to the environment. State and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.
County Cooperative Agreements with State for Fire Protection, Amends Utah Code 65A-8-6	Pre and Post Disaster	Requires Counties, in order to be eligible to enter into a cooperative agreement with the Division of Forestry, Fire and State Lands relating to fire protection to: adopt a wildland fire ordinance; require the county fire department or private provider to meet cert minimum standards; and file an annual budget; and prevents counties that do not enter into a cooperative agreement with the division from being eligible for financial assistance from the division.
State Disaster Recovery Restricted Account, Utah Code 53-2-403	Post Disaster	Creates a restricted account in the General Fund that may be used by State Agencies to recovery from disasters other than wildfire.
Local government disaster funds, Utah Code 53-2-405	Post Disaster	Allows local governments to create and maintain by ordinance a special fund known as a local government disaster fund. The money in the fund must be used only to fund services and activities of the local government in response to a declared disaster within the boundaries of the local government. No more than 10% of fiscal year total estimated revenues of the local government may be set in the fund.
Emergency powers of State Engineer (State Water Resources) for Flood Mitigation Activities, Utah Code 73-2-23	Post Disaster	In addition to the emergency powers under Section 73-2-22, the state engineer shall assist counties in emergency flood mitigation on inter-county waterways when all the following conditions exist: (a) two or more counties are involved; (b) the flood mitigation activity has or may have an adverse effect on the county; (c) the county executive of that adversely impacted county requests the state engineer's involvement; (d) the requesting county is providing an ongoing flood control program with jurisdiction-wide funding equivalent to .0004 per dollar of taxable value of taxable property; and (e) the requesting county has established a flood control program through zoning. Multi-county flood mitigation activities by the state engineer shall include: (a) assisting the counties in emergency flood mitigation planning; (b) furnishing engineering or other technical services; (c) making recommendations in emergency situations, and, if requested, participating in making emergency flood control decisions; and (d) in the event a decision is not reached, the final decision-making authority. The assistance or involvement will cease when in the state engineer's judgment the flood conditions or potential for flooding subsides or when the county governing bodies of all affected counties request that the jurisdiction cease.

Type of Existing Protection	Type of Disaster Assistance	Description
Utah State Building Code - Utah Uniform Building Standards Act, 58-56	Pre-Disaster	Building codes and amendments adopted by the State of Utah
National Dam Safety Act -(Public Law 104 - 303) was signed into law. Section 215 of Public Law 104 - 303	Pre-Disaster	Established a National Dam Safety Program and named the Director of the Federal Emergency Management Agency (FEMA) as its coordinator. The purpose of the National Dam Safety Program, as expressed in Section 215(a) of Public Law 104 - 303, is to "reduce the risks to life and property from dam failure in the United States through the establishment and maintenance of an effective national dam safety program to bring together the expertise and resources of the federal and non - federal communities in achieving national dam safety hazard reduction."
"Utah Fire Prevention and Safety Act." 1993	Pre-Disaster	The fire officers of any city or county shall enforce the rules of the state fire marshal in their respective areas. The state fire marshal may enforce the rules in: areas outside of corporate cities, fire protection districts, and special districts organized for fire protection purposes; and state owned property, school district owned property, and privately owned property used for schools located within corporate cities and county fire protection districts, asylums, mental hospitals, hospitals, sanitariums, homes for the aged, residential health care facilities, children's homes or institutions, or similar institutional type occupancy of any capacity. The state fire marshal may enforce the rules in corporate cities, counties, and fire protection districts, and special service districts organized for fire protection purposes upon receiving a request from the chief fire official or the local governing body.
Management of Forest Lands and Fire Control, Utah Code 65A-8-1	Pre and Post Disaster	Division of Forestry Fire and State Lands responsibilities for fire control and the preservation of forest, watershed, and other lands to include reciprocal agreements for fire protection to include federal agencies, to provide fire protection for land and improvements for which the organization normally provides fire protection.
State of Utah Federal Surplus Property Program	Pre and Post Disaster	The Federal Surplus Property Program is a Utah State governmental program that is tasked with the responsibility of locating, acquiring and distributing federal surplus personal property to what are commonly referred to as "donees" consisting of state and local governments and eligible non-profit organizations. Property is acquired from various federal agencies and military installations throughout the country. Property is "screened" directly for donees based upon their wants and needs, or it is brought into our warehouses on a speculative basis and is displayed for customer viewing. Items normally available includes office furniture, generators, vehicles, boats, power tools, food service equipment, construction materials, clothing, beds, medical equipment, paints and solvents, firefighting equipment, heavy equipment, etc. Eligibility is limited to all state and local governments and eligible nonprofit organizations.
Public Schools Seismic Studies HB 278S01	Pre-Disaster	Approved in 2013 and requires that school districts requesting bond monies perform FEMA 154 Rapid Visual Screening (RVS) or more detailed studies of all their pre-1975 buildings and give the results to the Utah Safety Seismic Commission.
School Building Earthquake Inspection program	Pre-Disaster	In 2013, the state approved a $150,000 one-time budget item that anticipates FEMA 154 RVS being conducted on all Utah schools.
Construction Code Revisions HB 305	Pre-Disaster	In 2012, HB 305 was passed which amends the parapet ordinance. It states that unless re-roofing involves removal of substantial roof sheathing or structural modifications, it will be no longer required to brace parapets or tie walls to the roof.

Funding

The State of Utah does not maintain a specified budget or fund dedicated to hazard mitigation programs and activities. The State's mitigation programs and activities are supported through the individual operating budgets of state departments and divisions.

The state does maintain a Disaster Recovery Restricted Account (Utah Code 53-2-403) which allows for state agencies - such as the Utah Dept of Transportation and the Utah Army National Guard - to request and receive reimbursement for immediate disaster response and recovery efforts. These funds are restricted to state level agencies and certain activities which must be requested through a set process to quality for reimbursement. Utah Division of Emergency Management (DEM) is currently working with legislative representatives to expand the scope of the Disaster Recovery Restricted Account. In future DEM plans to work toward the dedication of an annual fund to better assist both state agencies and local jurisdictions in their mitigation and recovery efforts.

Historically, disaster recovery loans have been provided to communities after a major disaster event by the State Legislature, on a case-by-case basis. Some of these funds have been allowed for the use of mitigation activities in the affected areas. The Utah Division of Forestry, Fire, and State Lands (FFSL) utilizes state funds for reseeding projects after wildfires. These funds are annually appropriated and fluctuate depending on other state budget needs. While DEM does provide support to locals and other state agencies in their endeavors to obtain funding for mitigation plans and projects both pre and post-disaster, the Division does not provide any funding directly.

The State of Utah is dependent on Federal funding for the majority of its mitigation programs and activities. Local and state applicants provide their own match funding through cash, in house labor and materials, in-kind contributions, and public/private partnerships. The following grant sources provide assistance to local governments or other eligible applicants for mitigation projects or planning within the State of Utah. A discussion of these grants programs and how their supported projects are effectively used to meet mitigation goals are discussed in the individual hazard chapters. A detailed discussion of FEMA HMA, 404, and 406 funding are discussed in the state programs section.

HAZARD MITIGATION GRANT PROGRAM (HMGP)

Lead Agency:	DEM
Funding:	Varies by disaster
Funding Formula:	75% federal: 25% non-federal
Funding Source:	FEMA
Applicants:	Public Sector (same as for Public Assistance)
Project Type:	Natural Hazard Mitigation
Reference:	*www.fema.gov*

PRE-DISASTER MITIGATION COMPETITIVE (PDM-C) GRANT PROGRAM

Lead Agency:	DEM
Funding:	Annual
Funding Formula:	75% federal: 25% non-federal
Funding Source:	FEMA
Applicants:	Public Sector (same as for Public Assistance)
Project Type:	Natural Hazard Mitigation, Planning
Reference:	*www.fema.gov*

FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM

Lead Agency:	DEM
Funding:	Annual
Funding Formula:	75% federal: 25% non-federal
Funding Source:	FEMA
Applicants:	Public Sector (same as for Public Assistance)

Project Type: Flood Mitigation, Planning
Reference: www.fema.gov

SMALL BUSINESS ADMINISTRATION (SBA) DISASTER RECOVERY LOANS

Lead Agency: SBA
Funding: Varies by disaster
Funding Formula: Low interest loans (4% or less)
Funding Source: SBA
Applicants: Small Businesses
Project Type: General Disaster Recovery, Hazard Mitigation
Reference: http://www.sba.gov/

STATE FIRE ASSISTANCE – UTAH FIRE AND RESCUE ACADEMY (UFRA)

Lead Agency: FFSL
Funding: Annual
Funding Formula: 90% federal : 10% non-federal
Funding Source: Combined Federal Agencies
Applicants: Fire Departments
Project Type: Organization, training, prevention, equipment
Reference: http://www.ffsl.utah.gov/grants/grants.php#firegrants
Contact shanefreeman@utah.gov

RURAL FIRE ASSISTANCE (RFA)

Lead Agency: FFSL
Funding: Annual
Funding Formula: 90% federal : 10% non-federal
Funding Source: Department of the Interior
Applicants: Fire Departments
Project Type: Wildland fire education, training, equipment
Reference: http://www.ffsl.utah.gov/grants/grants.php#firegrants
Contact shanefreeman@utah.gov

VOLUNTEER FIRE ASSISTANCE (VFA)

Lead Agency: FFSL
Funding: Annual
Funding Formula: 50% federal : 50% non-federal
Funding Source: USFS
Applicants: Volunteer Fire Departments
Project Type: Organization, training, prevention, equipment
Reference: http://www.ffsl.utah.gov/grants/grants.php#firegrants
Contact shanefreeman@utah.gov

COMMUNITY FORESTRY PARTNERSHIP GRANTS

Lead Agency: FFSL
Funding: Annual
Funding Formula: 50% federal : 50% non-federal
Funding Source: USFS
Applicants: Public sector
Project Type: Develop and support urban and community forestry programs

Contact meridithperkins@utah.gov

ARBOR DAY GRANTS

Lead Agency: FFSL
Funding: Annual
Funding Formula: 50% federal : 50% non-federal
Funding Source: USFS
Applicants: Public sector
Project Type: Assistance for communities to meet one of four criteria of Tree City USA
Reference: *http://www.ffsl.utah.gov/grants/grants.php#urbangrants*

EMERGENCY WATERSHED PROTECTION PROGRAM (EWP)

Lead Agency: NRCS
Funding: Varies
Funding Formula: 75% federal: 25% non-federal
Funding Source: NRCS
Applicants: Public and private land owners
Project Type: Assistance on a case-by-case basis to repair or protect a site
Reference: *http://www.nrcs.usda.gov*

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

Lead Agency: U.S. Dept. of Housing and Urban Development
Funding: Annual
Funding Formula: 100% federal
Funding Source: U.S. Dept. of Housing and Urban Development
Applicants: States and Local jurisdictions
Project Type: Disaster recovery and community development
Reference: *http://www.hud.gov/cdbg*

Table 2: Federal Mitigation Programs, Activities and Initiatives

Program / Activity	Type of Assistance	Agency & Contact
Basic & Applied Research/ Development		
Hazard Reduction Program	Funding for research and related educational activities on hazards.	National Science Foundation (NSF), Directorate for Engineering, Division of Civil and Mechanical Systems, Hazard Reduction Program: (703) 306-1360
Decision, Risk, and Management Science Program	Funding for research and related educational activities on risk, perception, communication, and management (primarily technological hazards)	NSF – Directorate for Social, Behavioral and Economic Science, Division of Social Behavioral and Economic Research, Decision, Risk, and Management Science Program (DRMS): (703) 306-1757 www.nsf.gov/sbe/drms/start.htm
Societal Dimensions of Engineering, Science, and Technology Program	Funding for research and related educational activities on topics such as ethics, values, and the assessment, communication, management and perception of risk	NSF – Directorate for Social, Behavioral and Economic Science, Division of Social, Behavioral and Economic Research, Societal Dimensions of Engineering, Science and Technology Program: (703) 306-1743
National Earthquake Hazard Reduction Program (NEHRP) in Earth Sciences	Research into basic and applied earth and building sciences.	NSF – Directorate for Geosciences, Division of Earth Sciences: (703) 306-1550
Technical and Planning Assistance		
Planning Assistance to States	Technical and planning assistance for the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources.	Department of Defense (DOD) US Army Corps of Engineers (USACE) Contact the Floodplain Management Staff in the Appropriate USACE Regional Office Southwestern: (479) 968-5008
Disaster Mitigation Planning and Technical Assistance	Technical and planning assistance grants for capacity building and mitigation project activities focusing on creating disaster resistant jobs and workplaces.	Department of Commerce (DOC), Economic Development Administration (EDA): (202) 482-4085 EDA's Disaster Recovery Coordinator: www.eda.gov
Watershed Surveys and Planning	Surveys and planning studies for appraising water and related resources, and formulating alternative plans for conservation use and development. Grants and advisory/counseling services to assist w/ planning and implementation improvement.	US Department of Agriculture (USDA) – National Resources Conservation Service (NRCS) Water Management: (202) 720-0637 Program Manager : (406) 587-6919 www.nrcs.usda.gov
National Flood Insurance Program	Formula grants to States to assist communities, and to comply with NFIP floodplain management requirements (Community Assistance Program).	FEMA Utah Division of Emergency Management
Emergency Management / Mitigation Training	Training in disaster mitigation, preparedness, planning.	FEMA
National Dam Safety Program	Technical assistance, training, and grants to help improve State dam safety programs.	FEMA
National Earthquake Hazards Reduction Program	Training, planning and technical assistance under grants to States or local jurisdictions.	FEMA; DOI-USGS USGS Earthquake Program Coordinator: (703) 648-6785

Volcano Hazards Program	Technical assistance: Volcano hazard warnings and operation of four volcano observatories to monitor and assess volcano hazard risk.	DOI-USGS Volcanic Hazards Program Coordinator: (703) 648-6711 (650) 329-5247
Floodplain Management Services	Technical and planning assistance at the local, regional, or national level needed to support effective floodplain management.	DOD-USACE Southwestern: (479) 968-5008
Watershed Protection and Flood Prevention Program	Technical and financial assistance for installing works of improvement to protect, develop, and utilize land or water resources in small watersheds under 250,000 acres.	USDA-NRCS Program Manager: (406) 587-6919 (202) 720-0637 www.nrcs.usda.gov
Environmental Quality Incentives Program (EQIP)	Technical, educational, and limited financial assistance to encourage environmental enhancement.	USDA-NRCS NRCS County Offices Or - NRCS EQUIP Program Manager: (202) 690-2621 www.nrcs.usda.gov
National Earthquake Hazard Reduction Program	Technical and planning assistance for activities associated with earthquake hazards mitigation.	FEMA, DOI-USGS Earthquake Program Coordinator: (703) 648-6714
Hazard ID & Mapping		
Utah RiskMAP Program In coordination with: National Flood Insurance Program: Flood Mapping	Flood insurance rate maps and flood plain management maps for all NFIP communities.	FEMA Utah Division of Emergency Management
National Flood Insurance Program: Technical Mapping Advisory Council	Technical guidance and advice to coordinate FEMA's map modernization efforts for the NFIP.	FEMA DOI-USGS USGS – National Mapping Division: (573) 308-3802
National Digital Ortho-photo Program	Develops topographic quadrangles for use in mapping of flood and other hazards.	DOI-USGS USGS – National Mapping Division: (573) 308-3802
Stream gauging and Flood Monitoring Network	Operation of a network of over 7,000 stream gauging stations that provide data on the flood characteristics of rivers.	DOE-USGS Chief, Office of Surface Water, USGS: (703) 648-5301
Mapping Standards Support	Expertise in mapping and digital data standards to support the NFIP.	DOI-USGS USGS – National Mapping Division: (573) 308-3802
Soil Survey	Maintains soil surveys of counties or other areas to assist with farming, conservation, mitigation or related purposes.	USDA-NRCS NRCS – Deputy Chief for Soil Science and Resource Assessment: (202) 720-3783
National Earthquake Hazards Reduction Program	Seismic mapping for U.S.	DOI-USGS USGS Earthquake Program Coordinator: (703) 648-6696

Program / Activity	Type of Assistance	Agency & Contact
Project Support		
Aquatic Ecosystem Restoration	Direct support for carrying out aquatic ecosystem restoration projects that will improve the quality of the environment.	DOD-USACE Chief of Planning Regional Office Southwestern: (479) 968-5008
Beneficial Uses of Dredged Materials	Direct assistance for projects that protect, restores, and create aquatic and ecologically related habitats, including wetlands, in connection with dredging an authorized Federal navigation project.	DOD-USACE Same as above
Wetlands Protection – Development Grants	Grants to support the development and enhancement of State and tribal wetlands protection programs.	US Environmental Protection Agency (EPA) EPA Wetlands Hotline: (800) 832-7828 Or - EPA Headquarters, Office of Water Chief, Wetlands Strategies and State Programs: (202) 260-6045
Clean Water Act Section 319 Grants	Grants to States to implement non-point source programs, including support for non-structural watershed resource restoration activities.	EPA Office of Water Chief, Non-Point Source Control Branch: (202) 260-7088, 7100
Coastal Zone Management Program	Grants for planning and implementation of non-structural coastal flood and hurricane hazard mitigation projects and coastal wetlands restoration.	Department of Commerce (DOC) National Oceanic and Atmospheric Administration (NOAA) National Ocean Service Office of Ocean and Coastal Resource Management Chief, Coastal Programs Division: (301) 713-3102
Community Development Block Grant (CDBG) State Administered Program	Grants to States to develop viable communities (e.g., housing, a suitable living environment, expanded economic opportunities) in non-entitled areas, for low- and moderate-income persons.	US Department of Housing and Urban Development (HUD) State CDBG Program Manager Or - State and Small Cities Division, Office of Block Grant Assistance, HUD Headquarters: (202) 708-3587
Community Development Block Grant Entitlement Communities Program	Grants to entitled cities and urban counties to develop viable communities (e.g., decent housing, a suitable living environment, expanded economic opportunities), principally for low- and moderate-income persons.	HUD City and county applicants should call the Community Planning and Development staff of their appropriate HUD field office. As an alternative, they may call the Entitlement Communities Division, Office of Block Grant Assistance, HUD Headquarters: (202) 708-1577, 3587
Emergency Watershed Protection Program	Provides technical and financial assistance for relief from imminent hazards in small watersheds, and to reduce vulnerability of life and property in small watershed areas damaged by severe natural hazard events.	USDA – NRCS National Office – (202) 690-0848 Watersheds and Wetlands Division: (202) 720-3042
Rural Development Assistance – Utilities	Direct and guaranteed rural economic loans and business enterprise grants to address utility issues and development needs.	USDA-Rural Utilities Service (RUS) Program Support: (202) 720-1382 Northern Regional Division: (202) 720-1402 Electric Staff Division: (202) 720-1900 Power Supply Division: (202) 720-6436
Rural Development Assistance – Housing	Grants, loans, and technical assistance in addressing rehabilitation, health and safety needs in primarily low-income rural areas. Declaration of major disaster necessary.	USDA-Rural Housing Service (RHS) Community Programs: (202) 720-1502 Single Family Housing: (202) 720-3773 Multi Family Housing: (202) 720-5177

Project Impact: Building Disaster Resistant Communities	Funding and technical assistance to communities and States to implement a sustained pre-disaster mitigation program.	FEMA
Flood Mitigation Assistance	Grants to States and communities for pre-disaster mitigation to help reduce or eliminate the long-term risk of flood damage to structures insurable under the NFIP.	FEMA
Hazard Mitigation Grant Program	Grants to States and communities for implementing long-term hazard mitigation measures following a major disaster declaration.	FEMA
Public Assistance Program (Infrastructure)	Grants to States and communities to repair damaged infrastructure and public facilities, and help restore government or government-related services. Mitigation funding is available for work related to damaged components of the eligible building or structure.	FEMA
National Flood Insurance Program	Makes available flood insurance to residents/business of communities that adopt and enforce minimum floodplain management requirements.	FEMA
HOME Investments Partnerships Program	Grants to States, local government and consortia for permanent and transitional housing (including support for property acquisition and rehabilitation) for low-income persons.	HUD Community Planning and Development, Grant Programs, Office of Affordable Housing, HOME Investment Partnership Programs: (202) 708-2684 (202) 708 0614 extension 4594 1-800-998-9999
Disaster Recovery Initiative	Grants to fund gaps in available recovery assistance after disasters (including mitigation).	HUD Community Planning and Development Divisions in their respective HUD field offices or HUD Community Planning and Development: (202) 708-2605
Non-Structural Alternatives to Structural Rehabilitation of Damaged Flood Control Works	Direct planning and construction grants for non-structural alternatives to the structural rehabilitation of flood control works damaged in floods or coastal storms. $9 million FY99	DOD-USACE Emergency Management contact in respective USACE field office: Southwestern: (479) 968-5008
Partners for Fish and Wildlife	Financial and technical assistance to private landowners interested in pursuing restoration projects affecting wetlands and riparian habitats.	Department of Interior (DOI) – Fish and Wildlife Service (FWS) National Coordinator, Ecological Services: (703) 358-2201 A list of State and Regional contacts is available from the National Coordinator upon request.
Project Modifications for Improvement of the Environment	Provides for ecosystem restoration by modifying structures and/or operations or water resources projects constructed by the USACE, or restoring areas where a USACE project contributed to the degradation of an area.	DOD-USACE Chief of Planning @ appropriate USACE Regional Office Southwestern: (479) 968-5008

Program / Activity	Type of Assistance	Agency & Contact
Post-Disaster Economic Recovery Grants and Assistance	Grant funding to assist with the long-term economic recovery of communities, industries, and firms adversely impacted by disasters.	Department of Commerce (DOC) – Economic Development Administration (EDA) EDA Headquarters Disaster Recovery Coordinator: (202) 482-4085
Public Housing Modernization Reserve for Disasters and Emergencies	Funding to public housing agencies for modernization needs resulting from natural disasters (including elevation, flood proofing, and retrofit).	HUD Director, Office of Capital Improvements: (202) 708-1640
Indian Housing Assistance (Housing Improvement Program)	Project grants and technical assistance to substantially eliminate sub-standard Indian housing.	Department of Interior (DOI)-Bureau of Indian Affairs (BIA) Division of Housing Assistance, Office of Tribal Services: (202) 208-5427
Land Protection	Technical assistance for run-off retardation and soil erosion prevention to reduce hazards to life and property.	USDA-NRCS Applicants should contact the National NRCS office: (202) 720-4527
North American Wetland Conservation Fund	Cost-share grants to stimulate public/ private partnerships for the protection, restoration and management of wetland habitats.	DOI-FWS North American Waterfowl and Wetlands Office: (703) 358-1784
Land Acquisition	Acquires or purchases easements on high-quality lands and waters for inclusion into the National Wildlife Refuge System.	DOI-FWS Division of Realty, National Coordinator: (703) 358-1713
Federal Land Transfer / Federal Land to Parks Program	Identifies, assesses, and transfers available Federal real property for acquisition for State and local parks and recreation, such as open space.	DOI-NPS General Services Administration Offices Federal Lands to Parks Leader NPS National Office: (202) 565-1184
Wetlands Reserve Program	Financial and technical assistance to protect and restore wetlands through easements and restoration agreements.	USDA-NRCS National Policy Coordinator NRCS Watersheds and Wetlands Division: (202) 720-3042
Transfers of Inventory Farm Properties to Federal and State Agencies for Conservation Purposes	Transfers title of certain inventory farm properties owned by FSA to Federal and State agencies for conservation purposes (including the restoration of wetlands and floodplain areas to reduce future flood potential)	US Department of Agriculture (USDA)- Farm Service Agency (FSA) Farm Loan Programs National Office: (202) 720-3467, 1632
Financing and Loan Guarantees		
Physical Disaster Loans and Economic Injury Disaster Loans	Disaster loans to non-farm, private sector owners of disaster damaged property for uninsured losses. Loans can be increased by up to 20 percent for mitigation purposes.	Small Business Administration (SBA) National Headquarters Associate Administrator for Disaster Assistance: (202) 205-6734
Conservation Contracts	Debt reduction for delinquent and non-delinquent borrowers in exchange for conservation contracts placed on environmentally sensitive real property that secures FSA loans.	USDA-FSA Farm Loan Programs FSA National Office: (202) 720-3467, 1632 or local FSA office

Clean Water State Revolving Funds	Loans at actual or below-market interest rates to help build, repair, relocate, or replace wastewater treatment plants.	EPA EPA Office of Water State Revolving Fund Branch Branch Chief: (202) 260-7359 A list of Regional Offices is available upon request
Section 108 Loan Guarantee Program	Loan guarantees to public entities for community and economic development (including mitigation measures).	HUD Community Planning and Development staff at appropriate HUD field office, or the Section 108 Office in HUD Headquarters: (202) 708-1871
Section 504 Loans for Housing	Repair loans, grants and technical assistance to very low-income senior homeowners living in rural areas to repair their homes and remove health and safety hazards.	US Department of Agriculture (USDA) – Rural Housing Service (RHS) Contact local RHS Field Office, or RHS Headquarters, Director, Single Family Housing Direct Loan Division: (202) 720-1474
Section 502 Loan and Guaranteed Loan Program	Provides loans, loan guarantees, and technical assistance to very low and low-income applicants to purchase, build, or rehabilitate a home in a rural area.	USDA-RHS Contact the Local RHS Field Office, or the Director, Single Family Housing Guaranteed Loan Division, RHS: (202) 720-1452
Rural Development Assistance -- Utilities	Direct and guaranteed rural economic loans and business enterprise grants to address utility issues and development needs.	USDA-Rural Utility Service (RUS) Contact Rural Development Field Offices, or RHS, Deputy Administrator, Community Programs Division: (202) 720-1490
Farm Ownership Loans	Direct loans, guaranteed / insured loans, and technical assistance to farmers so that they may develop, construct, improve, or repair farm homes, farms, and service buildings, and to make other necessary improvements.	USDA-FSA Director, Farm Programs Loan Making Division, FSA: (202) 720-1632

State Mitigation Programs

UTAH DIVISION EMERGENCY MANAGEMENT (DEM)

Hazard Mitigation Assistance Program (HMA)

The Utah DEM has been designated by the Governor to administer and implement FEMA funding, including HMA, Emergency Management Program Grant (EMPG), Public Assistance (PA) program, Earthquake, Homeland Security, etc. The Dam Safety Program is one of the only FEMA programs administered by another state agency and is overseen by the Utah Department of Natural Resources, Division of Water Rights. To administer these federal grant programs, DEM has established an extensive infrastructure for the support of grant administration.

The infrastructure to administer HMA grants includes the Department of Public Safety (DPS) as well as DEM. The staff includes the mitigation staff and financial managers at both DPS and DEM. The mitigation staff consists of the State Hazard Mitigation Officer (SHMO), who also serves as the Mitigation and Recovery Section Manager, and three full time staff who also work on the PA and recovery programs. The mitigation staff is dedicated to the review, approval, processing, oversight, monitoring, and payment of HMA grants. The DEM mitigation staff has administered more than 80 HMA grants totaling nearly $65 million in projects, plans, and technical assistance with over $45 million in FEMA funding.

The DEM mitigation staff works in close partnership with FEMA Region VIII staff. DEM and Region mitigation staff meet on a quarterly basis with regular phone calls and conference calls as the HMA grants are being administered. DEM greatly appreciates the Region for all of their assistance and guidance.

The capabilities of DEM HMA Program include:

- Prepare, implement, and maintain programs and plans that provide disaster prevention, disaster minimization, injury prevention, and other disaster minimization strategies
- Identify areas particularly vulnerable to disasters
- Coordinate hazard mitigation, preventive strategies, and preparedness measures that are designed to eliminate or reduce disasters
- Assist local officials in designing local emergency action plans
- Coordinate federal, state, and local emergency activities
- Coordinate state and local emergency operations plans with federal government emergency plans

The State Hazard Mitigation and Recovery Section:

- Provides a state coordinator for hazard mitigation—State Hazard Mitigation Officer
- Provides a central location for the coordination of state hazard mitigation activities
- Provides coordination for the Federal Hazard Mitigation Assistance Program
- Floodplain Management Program
- State Earthquake Program
- RiskMAP Program
- Provides coordination for Comprehensive Multi-hazard Mitigation Plan development, implementation, and plan monitoring
- Provides for interagency plan coordination
- Provides development of procedures for grant administration and project evaluation
- Provides State Hazard Mitigation Team assistance to local governments
- Provides for development of specific hazard mitigation plans, such as drought and wildfire
- Provides for local hazard and risk analysis
- Provides for development of State Hazard Mitigation Team (SHMT) mitigation recommendations following disasters

DEM HMA Process

DEM manages the HMA grant program in accordance with Title 44 Code of Federal Regulations (CFR) Part 201. DEM assures that it will comply with federal statutes and regulations that pertain to grant funding and management, including reporting requirements. The following outlines the process in which DEM manages the FEMA HMA programs.

When Hazard Mitigation Grant Program (HMGP) Funding Becomes Available

Utah receives the six-month estimate of available HMGP funding letter from FEMA six months after the date of declaration of the disaster and the lock-in amount at one year. Annually Utah has a good estimate of total HMGP funding, but the variability in the PA program makes it difficult to estimate exact amounts from year to year. Due to this variability, while DEM would like to quickly distribute HMGP funding, caution is exercised and funding recommendations are withheld until after the one year lock-in letter is received from FEMA.

DEM notifies communities, states agencies and other interested parties of HMGP funding availability through email distribution lists of emergency managers and members of the Utah American Planning Association. The information distributed includes guidance for HMGP, important dates and deadlines and instructions on how to submit a Notice of Interest (NOI). Depending on the availability of funding, DEM will also present HMGP information at briefings in declared disaster areas of the state.

When HMGP Post Fire Funding Becomes Available

Mitigation after wildfires is time-sensitive. Utah DEM advocates to get funding to the sub-applicants as quickly as possible. A set dollar amount of $425,008 is available after each Fire Management Assistance Grant (FMAG), so the state can plan accordingly and is able to fund projects prior to receiving any letters from FEMA. Once an FMAG has been awarded, DEM will reach out to the county and communities affected by the fire and set up a meeting to talk about HMGP funding and possible mitigation projects. HMGP Post Fire funding is made available first to those areas affected by the fire. If they do not have projects, DEM will work with other communities affected by wildfires and if they do not have projects, the HMGP Post Fire funding will be made available statewide. This is all laid out in the PA/FMAG Administration Plan that is updated by DEM and approved by FEMA on an annual basis.

In 2017 the state had three FMAGs and received two more in 2018. Funding has been slower than anticipated in getting to the sub-applicants because the FMAGs are relatively new. DEM is committed to distributing FMAG funding faster in the coming years with a goal to have funding awarded within months of the FMAG so communities can protect themselves from debris flows, flooding and future fires.

Section 406 Funding

With only a small number of federally declared disasters occurring in the state – often several years apart – 406 mitigation funding is limited. When it is provided through the Public Assistance (PA) program it is administered according HMA guidance. Approved 406 mitigation funds are paid to subgrantees with the overall PW federal share. DEM mitigation staff monitors the progress of approved mitigation activities within the associated project and verifies that work is being completed according to the Project Worksheets. DEM mitigation staff assists sub-applicants with PW application and closeout, as well as any Scope of Work, funding, mitigation, or other project change requests.

When Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) Funding Becomes Available

In December 2018 Congress and the President fund PDM/FMA with yearly appropriations. The DRRA has been passed, but has not taken effect nor guidance released, so this plan refers to the current allocations. DEM is open to take Notice of Interests (NOI) at anytime for PDM/FMA projects. When FEMA releases the NOFA, DEM prepares an announcement to release via email to state agencies, Tribes, local communities and other interested parties. The announcement includes timelines for the NOI, grant submission dates, training dates and Benefit Cost Analysis (BCA) information. The timing of this announcement depends on when the NOFA is released and the dates FEMA has set.

Notice of Interest (NOI) Review
NOIs are saved in a network folder as they are received so all of the mitigation staff can review them to check for eligibility, effectiveness and to verify the proposed project will meet a goal identified within the State Hazard Mitigation Plan (SHMP) and the local mitigation plan. If these requirements are met, DEM notifies applicants so they can proceed entering their full grant application into FEMA's system. This is the same for all HMA grants.

Sub-application Review
DEM mitigation staff will review submitted HMA grants using the same metrics for HMGP, HMPG Post Fire, PDM and FMA. DEM staff reviews each grant to ensure they are complete and eligible, with the following required elements included:

- Budget with a budget narrative
- Scope of work (SOW)
- Project schedule
- A FEMA BCA of greater than 1
- Match letter
- Commitment letter for planning grants
- Supporting Environmental and Historic Preservation (EHP) documentation

HMA Sub-application Development and Support
DEM staff provides each sub-applicant with revision requests and suggestions to ensure a complete grant application.

Cost Benefit Analysis
Grant applications will utilize one of the FEMA approved BCAs to derive a benefit to cost ratio. The BCA will be checked for accuracy before grant applications are prioritized.

Utah DEM HMA Program Priorities for HMA Grant Funding
The overall priority for the Utah DEM is to save lives. All proposed types of projects may change due to the differing nature of disasters. Pre and post-disaster priorities will differ due to the known and unknown hazards these disasters reveal.

While each HMGP Administrative Plan requires a list of priorities for mitigation after a specific disaster, all mitigation projects under HMA are in line with Utah's SHMP. Projects must be effective, adequate, cost-effective, and address a hazard outlined in either the SHMP or the local plan.

The following summarizes the core priorities established for the distribution of HMA grant funding by DEM:

- Support the goals and objectives of the state's and community's adopted/approved hazard mitigation plans
- Protect lives and property at risk from hazards (this includes repetitive loss and severe repetitive loss properties)
- Protect critical facilities and infrastructure
- Ensure communities are eligible for federal funding
- Protect vulnerable populations
- Verify the project is cost beneficial
- Create resilient communities
- Address climate impacts

HMA Scoring and Ranking
DEM will establish a Mitigation Grant Review Committee to review, evaluate, and rank the applications. The Mitigation Grant Review Committee will consist of the Mitigation and Recovery Section, other DEM staff, members from the SHMT, and local emergency managers who have not submitted a competing grant during that grant cycle. The committee will review and rank those grant applications that passed the initial eligibility screening of the NOI, and make recommendations based on published criteria mentioned earlier in this document.

Ranking for recommendation of funding will include consideration of the following:

- Combined ordinal application score(s)
- Available funding
- Goals and objectives in Utah Standard Hazard Mitigation Plan
- Federal and state criteria as outlined earlier in this document
- 44 CFR § 206.435 (b)
- Geographical mix
- Previous mitigation program participation and results
- Current mitigation program participation (at its discretion, the Division may limit applicants to three active projects at any one time)

For HMGP, a ranked list of the projects will be provided to the Director, as recommended for FEMA approval by the committee. For PDA, a prioritized list of the projects is entered into FEMA eGrants. DEM will forward state recommended applications to FEMA for funding approval and will formally notify applicants of the results of the ranking and review process and of their recommended or non-recommended status.

HMA Technical Assistance and Training

DEM has created a one day HMA workshop. This workshop provides potential applicants with the latest information from the NOFO and guidance. The workshop is scheduled annually and changes based on when the PDM/FMA NOFO is expected to be released. Depending on funding availability and time, the workshop has been held multiple times in one year to allow greater participation from potential applicants throughout the state. The training was recorded in 2018 and videos of each segment were made available to grant applicants unable to attend the training. The workshop reviews the guidance and includes tips and hints for developing better grant applications. It also goes through eGrants, providing step by step direction on how to submit an application through FEMA's system. DEM reserves time at the end of this training to work with potential applicants one on one and answer specific questions about their individual projects.

FEMA Region VIII delivers a BCA class in the state every other year. This class has been very beneficial to DEM and sub-applicants. This three day class is relevant for new grant applicants and veterans familiar with FEMA's BCA, walking them step by step through the BCA model. Participants are encouraged to work on their project BCAs while FEMA instructors provide one-on-one guidance.

HMA Applications Submissions and Challenges

Despite the technical assistance and workshops DEM provides, many of the sub-grants submitted fail to meet the minimum requirements for a completed application. DEM is committed to ensuring all grants submitted to FEMA are complete. There is a lot of interest in HMA funding and an increase in NOI's being submitted each year, but many do not complete or submit an application. Many of these that are interested but do not submit are smaller communities lacking the resources. DEM would like to work on assisting these communities better.

HMA Grant Project Management

After grants have been awarded by FEMA, the sub-applicant is now a sub-recipient. DEM Mitigation Staff then prepare an award document and agreement between the state and the sub-recipient and provide further guidance on quarterly reports, site visits and reimbursements.

Once the award documents are signed, each sub-grant is assigned a grant specialist from the DEM Mitigation section, a cost code is assigned for each project, and an electronic document folder is created. DEM uses a spreadsheet to track all HMA grants, period of performance, award dates, award amounts, reimbursement requests and payments, notes from phone calls, meetings, and site visits, along with any other information regarding the sub-grant. The grant specialist is in constant contact with each sub-recipient for the life of their grant, providing technical assistance, collecting and reviewing quarterly reports, processing reimbursement

requests, conducting site visits when necessary and other tasks as needed or warranted.

Monitoring of Project Process & Reporting
Each grant is monitored throughout the life cycle of the grant from NOI to closeout by DEM. Oversight is provided to ensure projects are being completed on time and accurate fiscal and programmatic reporting is being submitted. Quarterly reports are required of all sub-recipients and must be based on measurable outcomes as outlined in the award documents based on the SOW and budget.

DEM has created a Site Visit Report form to enable productive visits. DEM completes a minimum of three site visits per project, one as the project is beginning, one during the project and one after the project is completed. If necessary, DEM will conduct more site visits to help ensure the sub-grantee is in compliance and the project is moving forward. The Site Visit Report requires the following information be entered prior to the visit and while on-site:

- Budget and amount expended
- Percentage completed
- Schedule
- EHP conditions
- Identifies persons present at the site visit
- Other notes

Time Extensions, Scope of Work Changes and Budget Realignments
DEM award documents outline that the sub-recipient is responsible to notify DEM of any change in SOW or budget prior to implementing these changes. Failure to notify DEM, will result in a reduction of funding. To assist the sub-recipient to remain in compliance, DEM provides close monitoring and coordination with the sub-recipient. All SOW changes and Budget realignments are reviewed by DEM for completeness and eligbiblity. Once DEM approves of the request they forward it to FEMA Region VIII and await approval or denial.

DEM works closely with the sub-applicants to avoid the need for time extensions. The expectation is on the sub-recipient to complete their projects within the period of performance. When a time extension is necessary due to unforeseen circumstances, an unreasonably short period of performances or construction delays DEM will work with the sub-applicant and FEMA to secure a time extension.

Reimbursements
Sub-recipients may request a portion of their expenditure reimbursement or the full amount awarded, as needed. DEM encourages sub-recipients to submit reimbursement requests frequently instead of waiting until the end of their project. When sub-applicants submit their reimbursement requests DEM mitigation staff review the documentation to ensure all costs are eligible and deemed reasonable and necessary for completion of the project. DEM requires the sub-recipient to submit 100% of their costs documented on a 85-21 form along with all supporting documents including invoices and proof of payments. The goal of DEM is to process payment requests to DEM finance within 14 days of receipt. Delays can occur if the sub-recipient's request for payment is incomplete or contains inaccuracies. DEM notifies sub-recipients as soon as discrepancies are noted, and payment request will be annotated as to the reason for the delay. The sub-recipient submits 100% of their costs and DEM reimbuses them 75% or what the local match cost share for the sub-grant is. This allows DEM to track the local match. The process and documents can be found here.

Grant Project Completions and Closeout
Upon completion of all projects, DEM will closeout the grant within 90 days. When the project is complete, the sub-recipient will request a final reimbursement and a closeout of the sub-grant. The closeout documents will include a letter that will include certification that reported costs were incurred in the performance of eligible work, the work was completed, the project was finished in compliance with the provisions of the award documents and request any final reimbursement or deobligation of funds. The sub-recipient will also include an Environmental Closeout Declaration with a document stating how they met their EHP condi-

tions along with any additional information requested by DEM or FEMA.

If DEM has not already completed their final site visit, they will do so after a closeout letter is received. DEM will submit the documents from the sub-applicant along with a letter requesting the project be closed out, a Final Federal Financial Report, and a Final Inspection Report.

Successful use of HMA fundings to reduce risk and increase resilience

The Utah DEM has overseen numerous hazard mitigation projects through the HMA program. Since 2015, DEM has been awarded 25 PDM and 3 HMGP grants for $15,702,482 with $11,201,075 federal funding. These projects, plans and technical assistance grants have helped make Utah a safer more resilient state. At the beginning of 2019 Utah is 100% up to date in local hazard mitigation plans, ensuring that all Utah communities have an understanding of their risks and are working towards mitigating their hazards.

Many of the projects awarded are for earthquake retrofitting of buildings, including schools, libraries, critical infrastructure and even single family residences. The Salt Lake City Fix The Bricks Program has been very successful in reducing risk to unreinforced masonry one house at a time. The project has generated considerable interest from other communities and will likely grow in the coming years to mitigate hazards in communities outside of Salt Lake. Other grant applicants have used FEMA HMA funded projects to build momentum and support for larger mitigation projects.

Cities in Washington County along the Virgin and Santa Clara Rivers have seen devastating flooding several times since 2005. They used FEMA 406 and 404 funding to restore the river channels and protect banks from severe erosion hazards. Due to the success of these projects, Washington County has passed an ordinance that increased water fees to provide funding to maintain these projects and finance additional mitigation projects both independently and utilizing PDM funding.

Below is a summary of Utah's HMA projects, plans and assistance grants:

Table 3: Pre-Disaster Mitigation (PDM) Grant Summary

Pre-Disaster Mitigation (PDM) Grant Summary				
Year	Project/Planning	Non Federal	Federal	Total
2003	University of Utah Marriott Library	$12,519,111	$2,994,038	$15,513,149
	DEM Grant Management	$16,667	$50,000	$66,667
Total 2003		$12,535,778	$3,044,038	$15,579,816
2005	Jordan Valley Water Conservancy District Structural Seismic Retrofit	$622,250	$1,866,750	$2,489,000
	City of Orem Fire Station #1 Seismic Retrofit	$25,000	$75,000	$100,000
	City of Orem Fire Station #2 Seismic Retrofit	$25,000	$75,000	$100,000
	Layton City Fire Station Reconstruction & Retrofit	$89,536	$268,609	$358,145
	Jordan Valley Water Conservancy District Structural Retrofit	$163,000	$489,000	$652,000
	Utah Forestry, Fire & State Lands Emigration Fire Mitigation	$60,221	$180,664	$240,885
	University of Utah Multi-Hazard Mitigation Plan	$179,114	$537,341	$716,455
	DEM Grant Management	$46,452	$137,064	$183,516
	Utah State Hazard Mitigation Plan Update	$50,660	$131,187	$181,847

Total 2005		$1,261,233	$3,760,615	$5,021,848
2006	JVWTP Filter Gallery & Chemical Control Building Seismic Retrofit	$546,500	$1,639,500	$2,186,000
	Ogden City Fire Station Retrofit	$124,751	$374,254	$499,005
	Wasatch Front PDM Planning Update	$126,981	$344,278	$471,259
	DEM Grant Management	$35,853	$107,560	$143,413
Total 2006		$834,085	$2,465,592	$3,299,677
2007	Leonardo Center Seismic Retrofit	$341,776	$1,025,328	$1,367,104
	JVWCD Headquarters Complex Seismic Retrofit Project	$680,000	$2,040,000	$2,720,000
	Bear River & Mountainland AOG Planning Updates	$51,787	$155,361	$207,149
	DEM Grant Management	$107,655	$322,965	$430,620
Total 2007		$1,181,218	$3,543,654	$4,724,873
2008	Weber Basin Water Conservancy District Mulithazard Mitigation Plan	$134,441	$106,707	$241,148
	Emigration Canyon Fire Reduction	$103,221	$298,779	$402,000
	Washington County – Flood	$131,550	$200,000	$331,550
	Utah State Hazard Mitigation Plan Update	$31,250	$93,750	$125,000
	Five County Planning Grant	$31,250	$93,750	$125,000
	Tobin Wash Crossing (LPDM)	$131,550	$200,000	$331,550
Total 2008		$563,262	$992,986	$1,556,248
2009	Midway Town Hall Stabilization Project	$244,926	$541,219	$786,145
	Brigham City Library Seismic Upgrade (LPDM)	$201,339	$573,043	$774,382
	DEM Grant Management (LPDM)	$21,729	$65,184	$86,913
	DEM Grant Management	$17,968	$53,904	$71,872
Total 2009		$485,962	$1,233,350	$1,719,312
2010	Six County AOG Planning Subgrant	$31,750	$95,250	$127,000
	Uintah Basin Basin AOG Planning Subgrant	$22,750	$68,250	$91,000
	Southeastern ALG Planning Grant	$25,000	$75,000	$100,000
	Snyderville Basin Planning Subgrant	$129,915	$65,287	$195,202
	Weber Basin Basin Non-structural Seismic Retrofit	$30,550	$91,650	$122,200
	Weber Basin Filter Building #4 Seismic Retrofit	$255,800	$767,399	$1,023,199
	Central Utah Water Conservancy District Seismic Retrofit	$561,500	$1,684,300	$2,245,800
	Brigham City Senior Center Seismic Upgrade (LPDM)	$83,450	$250,000	$333,450
Total 2010		$1,140,715	$3,097,136	$4,237,851

2011	Weber Basin Water Culinary Wells Multihazard Mitigation Project	$69,486	$208,457	$277,943
Total 2011		$69,486	$208,457	$277,943
2012	North Salt Lake Springhill Landslide Acquisition	$618,504	$1,855,513	$2,474,017
	Tooele County Plan Update	$20,013	$60,041	$80,054
	Salt Lake County All-Hazard Mitigation Planning Project	$20,000	$60,000	$80,000
	Morgan County Pre-Disaster Mitigation Plan	$13,018	$39,053	$52,071
	DEM Grant Management	$66,997	$200,992	$267,989
Total 2012		$738,532	$2,215,599	$2,954,131
2013	CUWCD Pkg 3&4 Seismic Retrofit	$333,790.21	$400,000	$733,790.21
	DEM Grant Management	$14,224.63	$42,673.87	$56,898.50
Total 2013		$348,014.84	$442,673.87	$790,688.71
2014	Murray School District Seismic Retrofit	$1,013,451	$990,000	$2,003,451
	Weber County Hazard Mitigation Plan Update	$11,712	$35,136	$46,848
	Mountainland AOG Hazard Mitigation Plan	$21,284	$63,824	$85,108
	Central Utah Water Conservancy District Mitigation Plan Update	$23,686	$71,059	$94,746
	Five County AOG Natural Hazard Mitigation Plan	$26,175	$78,525	$104,700
	DEM Grant Management	$25,000	$75,000	$100,000
Total 2014		$1,121,308	$1,313,544	$2,434,853
2015	Murray School District Horizon/Viewmont Schools Seismic Retrofit	$935,201	$994,302	$1,929,503
	Santa Clara Truman Drive Landslide	$390,678	$1,172,035	$1,562,713
	Carbon County Pre-Disaster Hazard Mitigation Plan 2018	$7,500	$22,500	$30,000
	Emery County Pre-Disaster Mitigation Plan 2018	$7,500	$22,500	$30,000
	Region 7 Mitigation Plan 2018	$7,500	$22,500	$30,000
	City of Saratoga Springs Multihazard Mitigation Plan Update	$10,625	$19,125	$29,750
	DEM Grant Management	$37,500	$112,500	$150,000
Total 2015		$1,396,504	$2,365,462	$3,761,966
2016	Salt Lake City Fix the Bricks	$199,524	$507,500	$707,023
	Brigham City Pre-Disaster Mitigation Project - Generator	$275,275	$825,825	$1,101,100
	West Haven Generator Project	$20,563	$61,689	$82,252
	Washington City Virgin River Stream Restoration Project	$361,995	$1,085,985	$1,447,980
	Uintah Basin Regional Pre-Disaster Mitigation Plan 2018	$18,000	$54,000	$72,000

	WBWCD Multihazard Mitigation Plan Update	$48,247	$144,743	$192,990
	Granite School District Multihazard Mitigation Plan	$18,750	$56,250	$75,000
	Utah State Hazard Mitigation Plan Update	$62,500	$187,500	$250,000
	DEM Grant Management	$130,945	$392,820	$523,765
Total 2016		$1,135,799	$3,316,312	$4,452,110
2017	City of North Ogden Flashflood/Runoff Mitigation Project	$291,565	$874,695	$1,166,260
	Saratoga Springs Generator Project	$57,000	$171,000	$228,000
	Salt Lake City Fix the Bricks	$638,798.50	$1,916,395.50	$2,555,194
	Six County AOG Hazard Mitigation Plan Update	$26,187.50	$78,562.50	$104,750
	Pre-Disaster Mitigation Plan Update for the Bear River, Utah	$30,000	$90,000	$120,000
	Salt Lake County Multi-Jurisdiction Multi-Hazard Mitigation Plan Update	$25,500	$76,500	$102,000
	City of Saratoga Springs Flood Hazard Mitigation	$305,573.25	$916,719.75	$1,222,293
	West Haven City Flood Mitigation Grant	$205,083	$615,249	$820,332
	DEM Grant Management	$157,981.99	$473,893.12	$631,875.11
Total 2017		$1,737,689	$5,213,015	$6,950,704
Total		$17,340,103	$40,690,362	$58,030,466

Table 4: Hazard Mitigation Grant Summary (HMGP) Grant Summary

Hazard Mitigation Grant Program (HMGP) Grant Summary				
Disaster	Project/Planning	Non Federal	Federal	Total
DR-1576	Weber University Union Center – Seismic	$147,581	$442,744	$590,325
Total 1576		$147,581	$442,744	$590,325
DR-1598	Fire Station Unified Fire – Seismic	$86,794	$118,206	$205,000
Total 1598		$86,794	$118,206	$205,000
DR-1955	Sunbrook Golf Course and Monterey Subdivision – Erosion Protection	$119,019	$357,057	$476,076
	Millcreek Electric Generation Facility – Erosion Protection	$154,478	$463,435	$617,913
	Davis County Mitigation Plan	$5,547	$16,643	$22,190
	Murray City School District – Multihazard Mitigation Plan	$10,500	$31,500	$42,000
	Snyderville Basin Water Reclamation District East Canyon WRF (1 of 2) – Seismic	$67,745	$203,235	$270,980
	Long Street Green River Project #2 (88"x65") – Flood	$30,255	$90,765	$121,020
	Long Street Green River Project #1 (48") – Flood	$43,202	$129,607	$172,809
	1955 HMGP Management Costs	$0	$67,339	$67,339

Total 1955		$430,746	$1,359,581	$1,790,327
DR-4011	Murray School District Riverview JH – Seismic	$366,583	$1,099,751	$1,466,334
	Riverside Drive Erosion Project	$86,174	$258,521	$344,695
	NSL Springhill Landslide	$53,240	$159,722	$212,962
	Weber Basin Water 12MGTank	$23,505	$70,515	$94,020
	U of U 5% Map Ordinance Project	$71,691	$71,691	$95,588
	4011 HMGP State Management	$0	$68,489	$68,489.00
Total 4011		$601,193	$1,728,689	$2,282,088.00
DR-4053	Brigham City Mantua Flood Project	$462,519	$399,758	$862,277
	4053 HMGP Management Costs	$0	$20,447	$20,477
	UGS LiDAR Proposal A	$7,000.00	$21,000.00	$28,000.00
Total 4053		$469,519.00	$441,205.00	$910,754.00
DR-4088	Weber Basin Water Backwash Tanks	$73,807	$221,420	$295,227
	UGS 5% Lidar Acquisition	$6,942	$12,892	$19,834
	4088 HMGP Management Cost	$0	$12,608	$12,608
Total 4088		$80,749	$246,920	$327,669
DR-4311	UGS 5% Hazard Mapper Web Application Reporting Tool	$6,416	$19,248	$25,664
	Ogden City Weber River Restoration	$125,000	$362,615	$487,615
	4311 HMGP State Management	$0	$24,423	$24,423
Total 4311		$131,416	$406,286	$537,702
Total		$1,947,998.00	$4,743,630.85	$6,643,865.00

Table 5: Flood Mitigation Assistance (FMA) Grant Summary

Flood Mitigation Assistance (FMA) Grant Summary for Utah				
Year	Project	Federal	Non Federal	Total
2006	Price City - Meads Wash Culvert	$79,515	*$87,952	$167,467

Emergency Management Program Grant (EMPG)

In 2012 Utah experienced an above average fire season with several of the wildfires burning steep mountain slopes above communities. The weather radar in Utah is centrally located in the capital Salt Lake City and is less accurate in predicting downpours across the state. Real time data is needed to provide residents of communities at risk of post fire debris flows. The National Weather Service (NWS) approached DEM with a proposal to improve the state's capability to adequately warn residents of debris flows from burn scars following wildfires.

The NWS and DEM discussed several mitigation options and determined the best plan of action was to purchase small mobile weather stations to temporarily place on individual fire burn scar areas. These weather stations are reusable, able to be placed on fire burn scars and left for several years then moved to monitor new areas, as needed. DEM purchased four weather stations for $36,582.96. These stations are currently in use throughout the state and have already proven useful in providing debris flow warnings to local jurisdictions. At the publication of this plan in 2019 the stations were placed at the Trail Hollow Burn Scar, Brianhead Burn Scar, Tank Hollow Burn Scar and Dollar Ridge Burn Scar.

Previous weather station locations:

- Alpine Burn Scar
- Clay Springs (Oak City, Millard County) to the Levan Burn Scar
- Corner Canyon Fire Burn Scar in Draper on an HOA private clubhouse lawn
- Lower Ebbs Burn Scar near Scipio
- Hickory Ridge on the HOA clubhouse lawn
- The Quail Burn Scar located adjacent to Alpine City
- The Dump Burn Scar, adjacent to Saratoga Springs and Eagle Mountain City
- The Wood Hollow Burn Scar, adjacent to Fountain Green City

When not in use, the weather stations are stored at the National Weather Service's Salt Lake Office 2242 W. North Temple Salt Lake City, Utah 84116. Using EMPG funding, DEM is currently in the process of purchasing two additional mobile weather stations to meet the latest monitoring needs following another severe wildfire season in 2018.

DEM will continue to use EMPGs to fund further mitigation plans and projects.

NFIP

Authority and Legal Context: Utah does not have a state legislated ordinance for floodplain management and the NFIP. The State Floodplain Manager does compliance visits on behalf of FEMA in Special Flood Hazard Areas. Utah does not have ordinances to support doing this on the state's behalf. The Legislature of the State of Utah Code Ann. § 10-3-701 and Utah Code Ann. § 17-53-201 delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. The State of Utah has currently adopted the IBC (International Building Codes) as of 2015. The 2018 IBC codes are currently up for adoption in Utah. The State NFIP Coordinator encourages communities to use these codes. The State NFIP Coordinator is working on building a relationship with the State Code Commission.

In order to mitigate flood risks statewide a state floodplain ordinance would be helpful. If the State had at least the minimum standard to follow this would help our communities and our State agencies understand the importance of floodplain management, and give them rules at a state level to follow. Higher standards to include 2 feet of freeboard could be beneficial in helping to mitigate flood loss at a state and local level.

Utah does have IBC codes (International Building Codes) but they are often amended or modified to a lesser standard and do not always include the updated codes in their entirety.

Many communities do not realize there are IBC codes that should be used that apply to floodplain management. The State Floodplain Manager has been working on disseminating this information to Utah communities. The state has asked for assistance from FEMA to bring IBC Floodplain training to the state.

Program Administration and Activities: The State Floodplain Manager runs the Floodplain Program for Utah. Providing assistance for the communities and state agencies and others on NFIP related matters.

- CAV (Community Assisted Visits)
- CAC (Community Assisted Contacts)
- GTA (General Technical Assistance)
- Trainings
- Outreach
- Other

Total in NFIP Flood Program 220
Total Not NFIP in Flood Program 25
Total in CRS Program 10:
490019 LOGAN, CITY OF CACHE COUNTY 8 /10%
490039 BOUNTIFUL, CITY OF DAVIS COUNTY 9 /5%
490040 CENTERVILLE, CITY OF DAVIS COUNTY 7 /15%
490052 WEST BOUNTIFUL, CITY OF DAVIS COUNTY 9 /5%
490072 MOAB, CITY OF GRAND COUNTY 9 /5%
490216 OREM, CITY OF UTAH COUNTY 7 /15% 05/01/2008
490159 PROVO, CITY OF UTAH COUNTY 8 /10% 10/01/1996
SANTA CLARA, CITY OF WASHINGTON COUNTY 9 /5%
490177 ST. GEORGE, CITY OF WASHINGTON COUNTY 6 /20% 10/01/2014
490214 NORTH OGDEN, CITY OF WEBER COUNTY 8 /10%
490187 WEBER COUNTY * WEBER COUNTY 9 /5%

**Two of these communities will be leaving the CRS program soon. The explanation being that it has become too much work for the local community and documentation is harder than it used to be.*

The State Floodplain Manager provides ordinance adoption support to communities. Encouraging communities to join the NFIP and adopt higher standards to mitigate flood risk.
Utah Repetitive Loss Properties

As of 2018, Utah has a total of 25 Repetitive Loss properties and no Severe Repetitive Loss properties. In Utah, the local jurisdictions are expected to monitor their respective repetitive loss properties and if any of them are to become severe repetitive loss properties the community is to make sure that the property is brought into compliance with NFIP regulations. The SHMP has repetitive loss properties as a goal to focus on mitigating those properties.

Table 6: 2018 Utah Repetitive Loss Properties

Jurisdiction	Repetitive Loss Properties	Last CAC Date	Last CAV Date
Cache County	8	10/20/2016	10/11/2018
Iron County	2	1/12/2017	8/2/2016
Morgan County	2	3/22/2018	9/15/2015
Salt Lake County	5	9/20/2016	2/20/2013
West Jordan	2	9/3/2015	6/18/2015
Washington County	2	11/23/2015	8/3/2016
Weber County	4	9/22/2016	2/28/2017
Total	25		

Outreach, Workshops, and Other Training

The State Floodplain Manager attends and presents at several conferences each year. Communicating the message of mitigation through floodplain management practices and flood insurance. Examples of conference are:

- Utah Floodplain Management and Storm water Management Association
- Utah Emergency Management Conference
- Public Works Conference State and National
- LEPC
- CCDC
- Utah Engineers Association

Workshops Preformed or sponsored by State Floodplain Manager:

- NFIP 101 (with CFM Exam)
- NFIP Basic Training (with added substantial damage section)
- MT1-MT2
- NFIP Regional Trainings
- NFIP 273 Course
- NFIP Insurance Workshops
- Flood After Fire
- Why Utah Needs the NFIP and Flood Insurance

Newsletters

Floodplain newsletters are produced by the State Floodplain Manager on a quarterly bases. Incorporated in these letters are sections on NFIP news, RiskMap, Mitigation, Floodplain technical information, and Army CORP information. This is a combined effort from all of these areas and partners.

Preparedness Fairs

- Utah Preparedness Expo (presentations, flood tables, Flood risk information, NFIP Insurance information)
- Box Elder County Preparedness Fair
- Preparedness on the Hill (State Capitol outreach to legislature and governor, and citizens)

Flood Awareness Brochure

The State Floodplain Manager was involved in updating Utah's flood awareness brochure it is a general preparedness document with information about the NFIP, FMA, Utah's history of flooding, mitigation, etc. This brochure is complete and is being distributed to many municipalities.

Coordination with Other Programs and Agencies

The State NFIP Coordinator is a member of the State Hazard Mitigation Team. On this team the NFIP Coordinator works to educate and work with State Dam Safety, Utah Department of Natural Resources, US Forestry Service, Utah Water Rights, UT DEQ Environment, Utah Water Rights, Dam Safety, Governor's Office Planning and Budget, Utah Geological Survey, UDOT Road Weather Systems, Envision Utah, Utah Department of Environmental Quality, Utah Geological Survey, Utah Dept. Agriculture, Salt Lake National Weather Service, U.S. Geological Survey, Water Science, US Natural Resource Conservation Service, USDA NRCS Resource, Western Water Assessment, University of Utah, Bureau of Land Management, USDA NRCS, Snow Survey, and Bureau of Reclamation. The State Floodplain Manager has also built relationships with the State Insurance Commission, State Facility Management, UDOT, Silver Jackets Team, and other entities to help them understand the NFIP and work on reaching the goals of the NFIP in the state of Utah.

Utah Floodplain and Stormwater Management Association (UFMSA)

The State Floodplain Manager assists, plans, and coordinate the annual associations conference each year, as well as other trainings in conjunction with UFSMA. These trainings are on various floodplain management subjects.

Certified Floodplain Manager Credentialing (CFM)
The State Floodplain Manager is a CFM. Most of the Utah's DEM Mitigation and Recovery staff have obtained NFIP Training and have gotten their CFM certification. In the last three years CFM's in the state have doubled.

Gap Analysis: Utah's floodplain program accomplishes a great deal with a very limited staff. There is only one full time staff Floodplain Manager and an occasional part time intern to run the program. More staff is needed to be able to obtain all of the goals of the NFIP. A recent hiring freeze preventing the replacement of the part time intern and a restriction on overtime will greatly reduce the capabilities of the program to maintain current activities.

As visits are made to communities it has been found that many have not been seen in a long time, if ever, by the state. New floodplain administrators are hired and have no idea what they are supposed to be doing. Often times the job of community Floodplain Administrator is one of several jobs the individual holds. They may not even know the job exists until they are visited by the state. Having the time and the resources is an issue for their positions as well. In several cases permitting has gone by the wayside, or was never started. This is often because there are not enough personal visits by the state to communities to help them to understand their duties. All Utah communities need to be visited and trained. More State NFIP staff is needed for this and the many other required duties of NFIP State Floodplain Programs.

It is very difficult to do all the community assistance, compliance visits, general technical assistance, training, outreach, meetings, state agency coordination, documentation in the FEMA CIS program, reports, grant writing, and FEMA CAP NOFO activates with such a limited staff. There are areas that suffer because others have to be prioritized and only so many items can be accomplished with limited resources and staff. As the years progress there are more requirements from FEMA without more funding or other resources being provided. In the new proposed goals of the NFIP this issue is likely to increase even more.
The State Floodplain Manager is required to do other Division of Emergency Management (DEM) staff duties outside of the NFIP program. An example of this is working the operations desk for SERT and exercises. This is likely to be a duty during a disaster. The state only provides its 25% match for the NFIP CAP-SSSE Program. There are no other dedicated state funds for the State Floodplain Program.

Risk MAP

Authority: There is no state statutory authority directly related to Risk MAP, however, the state Risk MAP program supports the state's Floodplain Management Program. The National Flood Insurance Act of 1968, which established the National Flood Insurance Program (NFIP) has several purposes, the most significant being to provide flood insurance, reduce future flood damage through regulations, and to reduce the cost of disaster assistance. The Legislature of the State of Utah Code Ann. § 10-3-701 and Utah Code Ann. § 17-53-201 delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Because a critical component of the NFIP is the identification and mapping of the Nation's floodplains to create a broad-based awareness of flood hazards and to provide the data necessary for community floodplain management programs and to actuarially rate flood insurance, the state of Utah signed a Cooperating Technical Partner Partnership Agreement on December 1, 2004. This agreement established the partnership with FEMA to create and maintain accurate, up-to-date flood hazard data for the state of Utah.

Agency/Department Administering Risk MAP: Utah Department of Public Safety's Division of Emergency Management (DEM) supports the Risk MAP program through FEMA's Cooperating Technical Partner Program (CTP). By definition, a CTP is an organization who enters into a formalized partnership agreement with FEMA which makes the organization eligible to apply for funding in the form of grants. However, often the term "CTP" references the individual at the CTP organization who is administering Risk MAP Activities.

Availability of Staffing and Resources: The Utah Risk MAP Program currently has one full time staff member (or CTP) administering all activities of the program and an intermittent intern to support Community Outreach and Mitigation Strategies (COMS). Both work for the Utah Division of Emergency Management and both staff are 100% federally funded through CTP grants as there is no state cost share. There are no local government, state or other jurisdictions that are CTPs within the state and there are no state funds available to administer the Risk MAP Program.

Activities of the CTP

The CTP (organization and individual) performs grant management activities, overall program management, project management, and provides outreach and trainings state-wide.

Grant management activities include grant application development and submittal, grant monitoring to include oversight of the program budget, progress reporting, and grant closeout. Since the March 20, 2014 Utah State Hazard Mitigation Plan was approved, 35 CTP grants have been awarded (2014-2018). Nationally, funding for the Risk MAP Program has increased and Utah has attempted to take advantage of this increase by applying for more project funding. Since 2014, Utah has seen an increase in the number of grants and funding awarded annually with the previous annual funding average from 2009 – 2013 of $615,000 to $1,700,000 from 2014 - 2018. As of November 2018, the state of Utah has 22 open CTP grants, but this number is expected to rise and fall as new grants are pursued, awarded and closed annually.

With the increase in grants, time spent on grants management activities have also increased taking time away from other activities to be completed by the CTP such as project management and training and outreach. In addition, in order to provide accurate information to inform grants, much of the project planning is moving toward relying on digital planning tools such as GIS and databases. The CTP was not intended to be a GIS Analyst, but the current CTP has limited GIS capability and can also utilize the DEM GIS Coordinator if necessary.

Program management activities include developing an annual (or biannual) business plan and maintaining a rolling 5-year business plan for the state's Risk MAP program, monitoring overall program budget, processes and procedures to ensure an effective program, develop partnerships, and evaluate mapping needs state-wide.

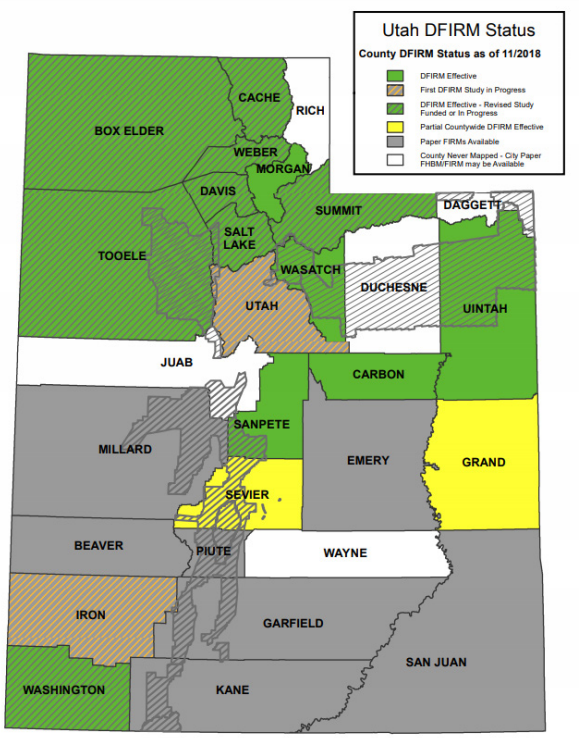
Business Plans are developed for an upcoming year (or biannually) and provides information on current project status and capabilities. The 5-year business plan provides the same information, but lists future anticipated projects the state intends to pursue to plan for future funding needs. However, as ongoing projects progress information can change as needed and as new priorities arise.

Developing partnerships is a large part of the program as the CTP provides data and information for communities to implement. Community support for projects are the key to a successful project and regular communication and comment opportunities are necessary for project support. The state CTP routinely communicates with communities that have ongoing projects. In addition, the state CTP also takes every opportunity to develop new partnerships with other state, federal, tribal and jurisdictions (such as water users) to ensure data developed uses the most up-to-date available information and practices to ensure data accuracy.

Project management activities include development, project oversight to include contracted providers, and closeout of each funded project. Because the CTP does not have in-house engineering capabilities, all flood risk projects are contracted through the state contracting and purchasing processes to qualified engineering firms.

Unless otherwise provided by the community, all Risk MAP project data is developed by the contracted engineering firm, but input from affected communities is necessary. The CTP follows all FEMA Risk MAP guidelines and specifications for flood risk mapping and all flood risk project procedures. When maps become effective, flood risk products are provided to the community digitally and the data and maps are also hosted on FEMA's Map Service Center (MSC). The state keeps copies if requested, but relies on the MSC, Mapping Information Platform (MIP), and the National Flood Hazard Layer to store the information. Data storage is something the CTP is currently researching so data can be stored locally rather than relying on other resources. Improvement can be made for this aspect of the program

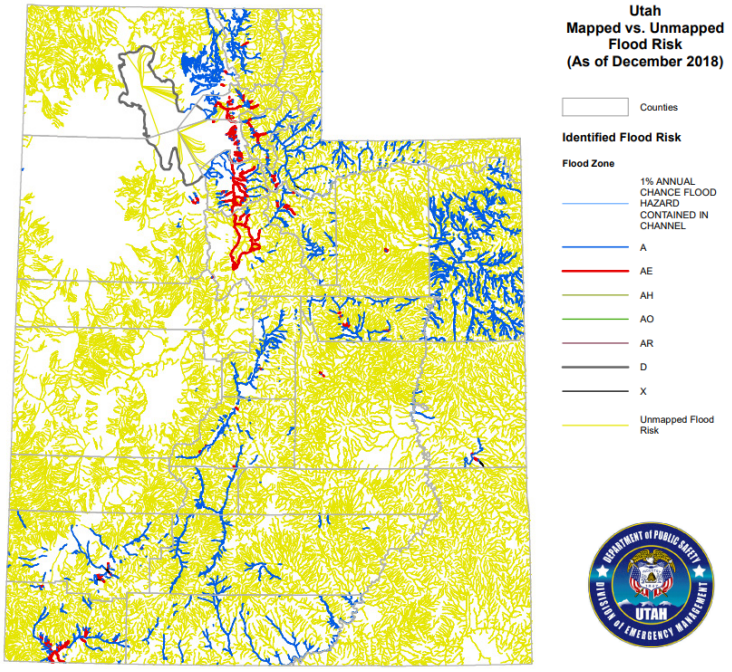
As of 2018, the state CTP has 14 funded or ongoing flood risk projects in various phases of development (Grand County is not a state CTP project but is monitoring flood risk). In addition, over the last couple of years the CTP has been assisting the state Automated Geographic Reference Center (AGRC) in obtaining funding for LiDAR acquisition so future flood risk projects can be pursued in order to reduce the paper map inventory and update outdated data for the state. Since 2011, the CTP has contributed 1.2 million which has been leveraged for USGS 3DEP grants. The CTP also plans to contribute at least 3.3 million more in the next five years – pending grant availability.



Author: Jamie Huff, Utah Risk MAP Program Manager

Although several projects are ongoing, one of the more concerning statistics is that only 7% of the State has flood risk mapped - based on FEMA's Coordinated Needs Management Strategy (CNMS) data. This percentage decreases even further if the National Hydrography Dataset (NHD) stream miles are used. The CTP is starting to develop projects using the new Base Level Engineering (BLE) process to increase the mapped stream miles within the state. Future flood risk projects are planning to use this process as an informational tool to identify community mapping needs. Using this process is also intended to help change the lack of awareness of flood risk due to the arid nature of the state. As the Hazard Mitigation Plan has already identified, the state is experiencing more high intensity, short duration and localized storms and flooding occurring across the state where flood risk is not mapped.

Outreach and training activities include delivering presentations, stand up trainings, or instruction to staff, management, clients, and the general public. The CTP has provided trainings to communities on Risk MAP and floodplain management activities which includes formal Risk MAP meetings such as flood risk review, CCO, and public open houses. The CTP has presented at conferences and outreach events such as the Utah Chapters of the Public Works Association, Planning Association, and floodplain association – Utah Floodplain and Stormwater Managers Association (UFSMA), at the Utah Prepare Expo and Conference, and at local emergency planning committee meetings. The CTP also participates on the UFSMA Board and is a member of the Utah State Hazard Mitigation Team (SHMT) to routinely identify projects for the U.S. Army Corps of Engineers Silver Jackets to pursue.



Encouraging mitigation is a key component to increasing community resilience. At all Risk MAP meetings, the CTP encourages the use of the Risk MAP data in not only mitigation planning activities, but if the information and data identify an area that can be mitigated, the CTP suggests ideas for mitigation projects or provides contact information for the State Hazard Mitigation Officer. The CTP has also contributed to the update of the State Hazard Mitigation Plan. Utah has a unique dynamic where all mitigation programs area located within the same state agency and division making coordination of mitigation activities easy and awareness of projects extremely beneficial, especially when discussing individual programs with the locals. This coordination prevents overlap of projects and project conflicts.

Gap Analysis

The Utah CTP Program functions at a high level with the resources available, but improvements can always be made. The Program is striving to provide as much updated and accurate data as possible in a timely manner, but with only one full-time CTP this is a challenging task because time and resources are at maximum capacity. The FEMA Region VIII Risk Analysis Chief has supported the idea of funding an additional full-time staff member to support the Risk MAP Program and this is intended to be pursued in the coming months and years. With additional staff, more projects, training and outreach can be pursued to support floodplain mapping and risk awareness.

Other items the CTP can increase to further improve the Utah Risk MAP Program is its GIS and data management capabilities, working with coordinating agencies to provide flood risk data post event, especially in areas where there is an increased flood risk after fire. Additional projects include identifying and pursuing state funds to support the Utah Risk MAP Program, the acquisition of LiDAR, and the development of a map viewer hosted by the CTP to increase awareness of flood risk.

Utah Department of Agriculture

The Utah Department of Agriculture administers programs serving the state's large agricultural sector. The department's response role during and after a disaster period has been to: coordinate damage reports for funding needs, provide loan and recovery program information, and provide assistance to disaster victims. These services are provided for flood, drought, insect infestation, fire, livestock disease, and damaging frost events.

Assistance During Drought Disasters

A damage reporting network coordinated through the existing County Emergency Board was established during the drought disaster of 1996. Each county agent assembles damage reports in his/her area, and reports are transmitted through a computer network located at Utah State University. The individual damage reports from each county were summarized and reported via the Department of Agriculture. The reports are developed on the criteria of submitted documentation that may be forwarded for appeal to the legislature—often requesting additional funds to mitigate the damage.

Loans Handbook

The department has prepared a handbook listing the types of loans available for flood damage to agriculture, funding requirements, and applications procedures. This handbook includes loans from both state and federal sources. There are three loan programs operated by the agriculture department, all of which can be used for flood damage:

- Rural Rehabilitation Loan Program (federally funded and operated by the state)
- Agriculture Resource Development Loan Program (state funded)
- Emergency Loan Program (state funded)

Soil Conservation Program

The Department of Agriculture administers the ongoing Soil Conservation Program. In each of the state's thirty-nine soil conservation districts, three unpaid, elected supervisors offer technical assistance and consultation for watershed protection. The state offers limited technical and planning assistance through a staff member. The program works cooperatively with the federal Soil Conservation Service, which provides most of the technical assistance. The ongoing program is not regulatory; however, it is directed towards improved water use and soil conservation.

Disaster Easements

Because of similarities between past events, the department is now working on a permanent hazard mitigation concept known as "Disaster Easements", which may have widespread agreements between irrigation companies, water districts, and/or water users' associations for the purpose of routing flood waters through local communities.

Monitoring Ground Water Quality

The Department also monitors the quality of groundwater, including individual wells and springs throughout the State.

Non-Point Source Pollution

The Department's Non-Point Source Pollution Program focuses on flood prevention through reduction of erosion, vegetating streams, and restoring "natural stream structure". The Department also monitors drought conditions, which are a precursor to wildfire.

Housing and Community Development Division

Community Impact Board

The Utah Permanent Community Impact Fund Board provides loans and/or grants to state agencies and sub-divisions of the state, which may be socially or economically impacted by mineral resource development of federal lands.

Permanent Community Impact Fund

The Permanent Community Impact Fund provides loans and/or grants to state agencies and subdivisions of the state, which are or may be socially or economically impacted, directly or indirectly, by mineral resource development on federal lands.

Under the Federal Mineral Lease Act of 1920, leaseholders on public land make royalty payments to the federal government for the development and production of non-metalliferous minerals. In Utah, the primary source of these royalties is the commercial production of fossil fuels on federal land held by the U.S. Forest Service and the Bureau of Land Management. Since the enactment of the Minerals Lease Act of 1920, a portion of these royalty payments, called mineral lease payments, have been returned to the state in an effort to help mitigate the local impact of energy and mineral developments on federal lands.

Funding Options

The Board has the option of funding projects with loans and/or grants. The Board's preferred financing mechanism is an interest-bearing loan.

Loan Requirements

In providing financial assistance in the form of a loan, the Board may purchase an applicant's bonds only if the bonds are accompanied by legal opinion of recognized municipal bond counsel to the effect that the bonds are legal and binding under applicable Utah Law.

The Board may purchase either a taxable or tax-exempt bond. The board may purchase taxable bonds if it determines, after evaluating all relevant circumstances, including the applicant's ability to pay, that the purchase of the taxable bonds is in the best interest of the state and the applicant.

Grants

Grants may be provided only when the other financing mechanisms cannot be utilized, where no reasonable method of repayment can be identified, or in emergency situations regarding public health and/or safety.

Community Development Block Grant

The Community Development Block Grant (CDBG) program, provides funding from the federal government's Department of Housing and Urban Development (HUD), to small cities and counties in the State of Utah.

Department of Heritage and Arts

Utah Division of State History

The Mormon Pioneers founded the Utah State Historical Society, Utah's Division of State History in 1897, which was on the 50th anniversary of the first pioneer settlement in the Salt Lake Valley. The Society became a state agency in 1917. It has since been housed in the historic Rio Grande Depot since 1980. The Division advances archaeological research and, study. The Division oversees the protection and orderly development of sites. It collects and preserves specimens, administers site surveys; keeps excavation records, encourages preservation, supports the preservation efforts of historic and pre-historic sites, and publishes antiquities records. The Division also issues archaeological permits, and consults with agencies and individuals conducting archaeological work.

Preserving and Sharing Utah's Past

The mission of the State Division of History is "preserving and sharing Utah's past for the present and the future".

State Historical Preservation Officer (SHPO)

The SHPO administers the Section 106 process (National Historic Preservation Act) in Utah. The SHPO also serves on the Utah State Hazard Mitigation Team, providing guidance on historical and cultural preservation regulations. Historic properties include districts, buildings, structures, objects, landscapes, archeological sites, and traditional cultural properties that are included in, or eligible for inclusion in, the National Register of Historic Places. These properties are not just "old buildings" or "well-known historic sites, but places important in local, state, or national history. Facilities as diverse as bridges and water treatment plants my, be considered historic.

Utah Geological Survey

The Utah Geological Survey (UGS) is the principal state agency concerned with geologic hazards. The UGS is a non-regulatory state agency that provides timely scientific information about Utah's geologic environment, resources, and hazards. Through years of investigations, the UGS has developed considerable information on Utah's geologic hazards. When geologic events occur or threaten to occur, the UGS is consulted by other state agencies, local governments, and the public for assistance with geologic hazards. The UGS works in partnership with other agencies, such as DEM, in relating the threats from natural hazard to the communities at risk. Related to geologic hazards, the UGS provides:

- Geologic emergency response to hazard events in Utah for local, state, and federal agencies.
- Investigates and maps geologic hazards.
- Extensive online geologic hazard maps, data, and information.
- Geologic-hazard related educational and technical outreach, information, and workshops.
- Assistance to local governments in developing and updating geologic hazard related ordinances.
- Assistance to local governments in dealing with geologic hazards.
- Geologic review of critical facilities for local governments and the Utah Division of Water Rights.

Laws/authorities/policies of the Utah Geological Survey for Conducting Mitigation

Utah Code Annotated
Chapter 79-3 Utah Geological Survey
Establishes a state geological survey for Utah that shall (1) (a) assist and advise state and local agencies and state educational institutions on geologic, paleontologic, and mineralogic subjects; (b) collect and distribute reliable information regarding the mineral industry and mineral resources, topography, paleontology, and geology of the state; (c) survey the geology of the state, including mineral occurrences and the ores of metals, energy resources, industrial minerals and rocks, mineral-bearing waters, and surface and ground water resources, with special reference to their economic contents, values, uses, kind, and availability in order to facilitate their economic use; (e) determine and investigate areas of geologic and topographic hazards that could affect the safety of, or cause economic loss to, the citizens of the state; (f) assist local and state agencies in their planning, zoning, and building regulation functions by publishing maps, delineating appropriately wide special earthquake risk areas, and, at the request of state agencies or other governmental agencies, review the siting of critical facilities; (g) cooperate with state agencies, political subdivisions of the state, quasi-governmental agencies, federal agencies, schools of higher education, and others in fields of mutual concern, which may include field investigations and preparation, publication, and distribution of reports and maps; (j) prepare, publish, distribute, and sell maps, reports, and bulletins, embodying the work accomplished by the survey, directly or in collaboration with others, and collect and prepare exhibits of the geological and mineral resources of this state and interpret their significance; and (k) collect, maintain, and preserve data and information in order to accomplish the purposes of this section and act as a repository for information concerning the geology of this state.

Utah Division of Water Resources

The Division's role of planning, funding, and constructing water projects serves as both active and passive hazard mitigation against drought and flood situations throughout the state. The various State Regional Water Plans contain brief summaries of flood threat and risk for each basin.

The Division is one of seven agencies in the Utah Department of Natural Resources. The eight- member Water Resources Board, appointed by the governor, administers three state water conservation and development funds. These include:

Revolving Construction Fund – This fund started in 1947 with 1 million Legislative appropriations to help construct irrigation projects, wells and rural culinary water systems. Further appropriations have added to this fund.
Conservation and Development Fund – This fund was created in 1978 with the sale of 25 million in general obligations bonds. Money was added to this fund with bond sales in 1980 and 1983. The C & D Fund generally helps sponsors finance larger multi-purpose dams and water systems.
Cities Water Loan Fund – Established with an initial legislative appropriation of 2 million dollars in 1974, and with continued appropriations, this fund provides financing to help construct new culinary water projects for cities, towns, improvement districts, and special service districts.

Construction Funds
In addition to overseeing these three construction funds, the Division also manages the State funds appropriated each year for renovation and reconstruction of unsafe dams. As the funding arm of the state for water resource projects the Division works closely with Water Rights, the Regulatory arm of the state charged with jurisdiction over all private and state owned dams.

Water Resource Planning
The Division is also charged with the general water resource planning for the state. The State Water Plan is a process that is coordinated to evaluate existing water resources in the state, determine water-related issues that should be confronted and recommend how and by who issues can be resolved. The plan identifies programs and practices of state and federal agencies, water user groups and environmental interests and describes the state's current, future, and long-term water related needs. The plan is continually updated using current hydrologic databases, river basin simulations, water supply and demand models and water related land use inventories. Revisions reflect the latest water conservation and development options concerning water rights, water transfers, population, zoning, and many other complex issues for the next 50 years in the state's major river basins.

Utah Division of Forestry, Fire, and State Lands
The Utah Division of Forestry, Fire & State Lands (FFSL) utilizes the principles of stewardship and ecosystem management to assist non-federal landowners in management of their natural resources. The agency provides wildland fire protection for state and non-federal lands commensurate with risk. Wildfires are managed from six area offices: 1) Bear River; 2) Northeast; 3) Wasatch Front; 4) Central; 5) Southwest; and 5) Southeast. The Division operates under the authority of Utah Code Annotated 65-A.

Suppression Resources
Fire Wardens
The FFSL Fire Wardens are responsible for wildland fire suppression on unincorporated state and private lands within the county they are stationed in. Most operate a Type 6 wildland fire engine for initial attack. The Warden is also responsible to train and organize county and local fire department resources for response to wildland fires.

Lone Peak Resources
The Lone Peak Conservation Center in Draper, Utah manages several wildland fire suppression resources. These resources are available for wildland fire incidents both in Utah and nationally. The center hosts four 20 person hand crews and three wildland fire engines.

Handcrews
The Lone Peak Hotshots are a nationally recognized Type 1 Interagency Hotshot Crew (IHC). The crew operates under a cooperative partnership between the United States Forest Service Region 4 and the Division. The crew is available nationally for dispatch 180 days each year and seasonal employees may work up to 12 months each season.
The Alta hand crew is a Type Two Initial Attack (T2IA) crew that is in the process of working to become recognized as a Type 1 IHC.
Twin Peaks is a Type Two Initial Attack (T2IA) crew.

Dromedary is a Type Two (T2) crew available for a variety of wildland fire assignments but their main focus is on hazardous fuels reduction projects throughout the state.

Engines
Lone Peak Conservation Center staffs three wildland fire engines; one Type Six and two Type Three engines.

Single Resources
FFSL employees are available to fill a variety of positions to manage and upport wildland fire suppression incidents. Several serve on local, regional, and national incident management teams.

Hazardous Fuel Mitigation

National Fire Plan
The FFSL administers the state responsibilities of the National Fire Plan, a current emphasis of the U.S. Congress, which also addresses hazard and risk analysis and hazard mitigation. Each Area works collaboratively to identify and address hazard fuel mitigation priorities within their area of responsibility.

Living with Fire Committee
The Division works in partnership with the U.S. Forest Service, Bureau of Land Management, and various other entities tasked with suppressing wildland fires on the "Living With Fire" program promoting wildland fire mitigation.

Cooperative Agreements
Because most wildland fire incidents are multijurisdictional in nature, the Division maintains a system of cooperative agreements in order to facilitate the efficient allocation of suppression resources regardless of ownership. These agreements provide for initial attack based on closest forces, allow for the exchange of funds, and are the mechanism to access resources available through the interagency dispatch system. This system of agreements provides the authority for all agencies - local, state, and federal, to cooperatively work together to efficiently manage wildland fires in Utah.

Local participation in this system requires counties to adopt an urban interface ordinance, require minimum standards for training and certification, and to adopt a wildland fire suppression budget. These standards are defined in Utah Administrative Rules R652-122-200, 300, and 400.

Utah Division of State Parks and Recreation

The goal of the Division of Parks and Recreation is to enhance the quality of life for residents and visitors of our state through parks, people, and programs. They are responsible for protecting, preserving, and managing many of Utah's natural and heritage resources.

Hazard and Risk Analysis
The Division develops hazard and risk analysis for the State Parks as part of the park resource management plans. The DEM produced one analysis for Snow Canyon State Park in Washington County.

Non-Motorized Trail Program
The Recreational Trails Act of 1991 charged Utah State Parks and Recreation with coordinating the development of a statewide network of non-motorized trails. The Non-Motorized Trail program makes state and federal funds available on a 50/50 matching basis to any federal, state, or local government agency, or special improvement district for the planning, acquisition, and development of recreational trails.

Grants from State Parks Boards
The council advises the Division of Parks and Recreation on non-motorized trail matters, reviews requests for matching grant fiscal assistance, rates and ranks proposed trail projects and along with State Park's staff provides recommendations for funding to the State Parks Board.

Riverway Enhancement Program

In 1986, the Utah Legislature passed a bill, which established the Riverway Enhancement Program. The program makes state funds available on a 50/50 matching basis to state agencies, counties, cities, towns, and/or special improvement districts for property acquisition and/or development for recreation, flood control, conservation, and wildlife management, along rivers and streams that are impacted by high density populations or are prone to flooding. Public outdoor recreation should be the primary focus of the project.

Utah Division of Water Rights

The Division of Water Rights is the state agency that regulates appropriation and distribution of water in the State of Utah. It is an office of public record. Most records of the office are available online at http://waterrights.utah.gov. The position of State Engineer was first created in Utah Government in 1897. The State Engineer is the chief water rights administrative officer of the agency. A complete "water code" was first enacted in 1903 and as revised and reenacted is presently in force as Utah Code, Title 73. In 1963, the name of the agency was changed from the State Engineers office to the Division of Water Rights within the Department of Natural Resources.

Diversion and Use of Water

All waters in Utah are public property. A new right to divert and use public water is secured by application to the state engineer. Once an application is approved, the applicant shoulders the burden of placing water to beneficial use as proposed in the application and providing proof to the state engineer of the development such that the state engineer is persuaded to issue a certificate of beneficial use. A water right is a right to use pubic water based upon 1) quantity, 2) source, 3) priority date, 4) nature of use, 5) point of diversion, 6) place of use and any conditions imposed by the state engineer when the application was approved. Water users have an ongoing obligation to physically put water diverted under their rights to beneficial use and provide measuring and controlling works for their diversion. Failure to use a water right for a beneficial purpose for a period of 7 years subjects the right to assertions of forfeiture, which may be adjudicated in court. The state engineer is authorized to commence enforcement actions against a person using water without right or contrary to rights held. Water rights may be bought and sold as property and are conveyed in substantially the same manner as real property (by deed recorded with the county).

The state engineer has statutory responsibility to oversee the diversion of water by individual water users and see that the waters are divided among the several appropriators consistent with their respective rights and priorities. The state engineer appoints water commissioners after consultation with local water users and directs their efforts to carry out day to day distribution on more complex river and groundwater systems. Water commissioners are currently appointed on 39 water sources in the state.

Stream Alterations Program

The Division of Water Rights administers a Stream alterations program which permits activities affecting the bed or banks of natural streams. The State Engineer's working definition of a natural stream is any natural waterway in the state, which has flows of sufficient duration to develop a characteristic ecosystem distinguishing it from the surrounding environments. Any individual planning an activity that will affect a natural stream must first obtain a Stream Alteration Permit from this office. Some stream alteration activities permitted by the Division are covered by a General Permit 40 held by the Division under provisions of the United States Clean Water Act so additional federal Clean Water Act 404 permitting is not necessary. General Permit 40 does not apply in all instances and securing a separate U.S. Army Corps of Engineers Individual Permit may be specified as a condition of approval of the state permit. Projects requiring this additional permit include those involving wetlands, threatened or endangered species, properties where significant cultural or historic resources could be disturbed, stream relocation, or the pushing of streambed material against a stream bank.

Dam Safety Program

The State engineer has the authority to regulate dams for the purpose of protecting public safety. Dams are classified according to hazard, size, and use. The dam inventory gives the identification, location, construction parameters, and the operation and maintenance history of the dams in Utah. The Dam Safety Section of the Division of Water Rights was established under Chapters 73-5a 101 thru 73-5a 702, Chapter 63-30-10 Waiver of Immunity of the Utah Code, and Rules R655-10 thru R655-12-6A. The

program basically has jurisdiction over all private and state owned dams in the state during design, construction, operation, and decommissioning. This involves periodic inspections according to hazard classifications, inventory maintenance, design approval, construction inspection, systematic upgrade of all the high hazard structures to current dam safety Minimum Standards, and creation of Emergency Action Plans for High Hazard dams. Since 1991, detailed dam reviews have been undertaken by the staff and by private consulting firms. Since 1995, the State Legislature has provided 3-4 million dollars per year to finance 50% of the instrumentation, investigations, and design and 80 to 90 % of the construction costs of retrofitting and upgrading deficient dams, starting with the worst dams in the most hazardous locations. The objective of the dam safety program is to promote storing waters of public for beneficial purposes while minimizing risk to life and property.

Canal Safety

The State Engineer has authority to inspect ditches and diverting works and order alterations, which he considers necessary for the security of the works, safety of persons, or the protection of property under Utah Code Section 73-5-7. No routine canal inspection program administered by the state engineer has been established or funded by the legislature. Utah Code Section 73-10-33 requires canal owners to assess and inspect their own water conveyance systems and maintain records of their assessment as a management plan. If the Division becomes aware of a public safety issue with a water conveyance structure the state engineer investigates and works with the owner to respond.

Emergency Flooding

The State Engineer has authority under Utah Code Sections 73-2-22 to make written findings of eminent flooding where public safety is threatened or substantial property damage is likely to occur and exercise control of stream flow and reservoir storage until the condition is abated. Such findings must be approved by the Emergency Management Administrative Council created under Utah Code Section 63K-3-201. Additionally, the state engineer under Utah Code Section 73-2-23 is to assist counties in emergency flood mitigation on intercounty waterways where certain conditions exist. Under Utah Code Section 17-8-3 the State Engineer is responsible to operate flood control projects provided the cost of operation is borne by the county who contracted for the construction and operation with the United States.

Utah Division of Wildlife Resources

It is the mission of the Utah Division of Wildlife Resources to serve people of Utah as trustee and guardian of the State's wildlife. Regulates hunting, fishing and trapping, and promotes recreational, educational, scientific and aesthetic enjoyment of wildlife.

Wildlife Habitats and Hazards

Wildlife species and/or their habitats are frequently exposed to hazards. These may be either natural or human influenced (i.e. drought, flood, fire, wind, snow, wetland drainage, water diversions, hazardous material spills, improper/illegal chemical use, earthquake, and other land or water construction/development). Impact resulting either directly or indirectly, from individuals or an accumulation of several hazards, may cause but not be limited to: decreased water supply, stream/lake channel/basin morphology change, riparian/upland vegetation loss or degradation, and impairment of water quality. These in turn have a varying influence, in the extreme causing death or at a minimum temporary stress, on wildlife populations and their habitats. Hazards mentioned may affect a fairly large geographic area or be very localized in nature.

While the Division of Wildlife Resources (DWR) is charged with the management of wildlife, they do not have regulatory authority over water appropriations, water quality, development, or land management; except as allowed or occurring on properties they own. Therefore, when hazards occur, outside DWR property, DWR is limited to be a participating influence only through comments to the other regulatory agencies or individuals.

DWR management of wildlife is carried out largely through regulation of taking controlling, disturbance and/or possession of wildlife, and introduction of movement of species. However, there are numerous non-regulatory means (i.e. conservation agreements, memorandum of understanding, contract, lease agreements, cooperative agreements, and technical assistance) by which DWR interacts with other agencies, groups and individuals, to have an influence on wildlife and/or their habitat.

Hazard Areas of Commentary Interaction

While not being able to control/regulate many of the elements necessary for the benefit of wildlife; DWR provides technical comments for the maintenance, protection, and enhancement of wildlife and/or habitats for various value reasons. It is too extensive list all the areas of comment; however, the following are examples of fairly frequent concern:

- Steam Channel Alteration Permit Applications
- Water Rights Filings
- Energy and Mineral Exploration and Extraction Applications
- Federal Agency land management plans
- Waste Water Discharge Permit Applications
- Hydroelectric plant licensing or regimenting
- Urban and rural development project planning
- Utility transmission line style and locations
- Wetland alteration
- Federal land management planning
- Highway constructions

Utah Division of Drinking Water

Division of Drinking Water's Mission Statement is to "protect the public against waterborne health risks through assistance, education, and oversight." The Division acts as the administrative arm of the Utah Drinking Water Board. It implements the rules, which they adopt. As such, it is engaged in a variety of activities related to the design and operation of Utah's public drinking water system. The Utah Drinking Water Board is an 11-person board appointed by the Governor. It is empowered by Title 19, Chapter 4 of the Utah Code to adopt rules governing the design, operations, and maintenance of Utah's "public drinking water system".

Safe Drinking Water Act

There is a Federal Safe Drinking Water Act, which applies to all public drinking water systems in the country. The U.S. Environmental Protection Agency (EPA) has given Utah "primacy" for enforcing the federal act within its boundaries. To qualify for this Utah's laws and rules governing public drinking water systems must be at least as strict as the federal law.

Sanitary Surveys

The Division performs sanitary surveys on the water systems, which is a compliance action that identifies system deficiencies.

Emergency Response Plans

The Division of Drinking Water requires water utilities to prepare emergency response plans under the State Safe Drinking Water Act, Utah Code Section 19-4. The Division operates according to DDW Rules: R309 gives them authority to administer actions: R309-301 through R309-104 and R309-113, R309-150, R309-301, and R309-211.

Utah Division of Solid and Hazardous Waste

The Tier II Chemical Inventory report, required by the Federal Emergency Planning and community Right-to-Know Act, requires facilities to submit lists of hazardous chemicals present on site. These reports are computerized and the information is provided to local emergency planning committees, the general public, and others for contingency planning purposes. To implement the Federal law, the State operates under Utah State Code, Section 63-5-5. The Division of Solid and Hazardous Waste requires that hazardous waste treatment storage and disposal facilities prepare and emergency response plan as required by regulations authorized by the State Solid and Hazardous Waste Act, Utah Code Section 19-6.

Other Agency programs are regulatory in nature requiring proper use or disposal of hazardous substances or pollutants. For example the Division of Solid and Hazardous Waste regulates the disposal of hazardous waste, the Division of Radiation Control regulates the proper usage and disposal of radioactive materials. As such there is a threat mitigation nature to these programs.

Utah Division of Water Quality

The Utah Division of Water Quality protects, maintains, and enhances the quality of Utah's surface and underground water for appropriate beneficial uses; the Division of Water Quality regulates discharge of pollutants into surface water, and protects the

public health through eliminating and preventing water related health hazards which can occur as a result of improper disposal of human, animal, or industrial wastes while giving reasonable consideration to the economic impact.

Water Quality Fund and Wastewater Treatment Project Fund: The Division Manages the Water Quality Revolving Fund that can be used by local governments for water quality projects and a Wastewater Treatment Project Fund.

Abating Watershed Pollution: Federal and State regulations charge the Division with "preventing, controlling, and abating" watershed pollution. Other state and local agencies have similar responsibilities. The Watershed Approach forms partnerships with these groups to pool resources and increase the effectiveness of existing programs. For each watershed management unit, a watershed plan will be prepared. The watershed plan addresses management actions at several spatial scales ranging from those that encompass a watershed management unit to specific sites that are tailored to specific environmental conditions. Ground water hydrologic basins and eco-region areas encompassed within the units will also be delineated.

State Revolving Fund Program

In 1987, Congress replaced the Construction Grants Program, with the State Revolving Fund Program. Rather than provide direct grants to communities, the federal government provides each state with a series of grants, then each state contributes a 20 percent state match. Grants from the federal government are combined with state funds in the Water Quality Project Assistance Program (WQPAP) and are used to capitalize a perpetual source of funds to finance water quality construction control activities at below market interest rates. Projects eligible for WQPAP financing include such traditional activities as construction of wastewater treatment plants and sewers. The program also will finance non-traditional water quality-related activities such as agricultural runoff control, landfill closures, contaminated industrial property (Brownfield) remediation, stream bank restoration, and wellhead protection.

Table 7: Mitigation programs, application, and assessment

Type of Existing Protection	Type of Disaster Assistance	Description	Effectiveness and/or Enforcement	Improvement and/or Changes Needed
Hazard Mitigation Grant Program (HMGP) – Robert T. Disaster Relief and Emergency Assistance Act, Public Law 3-288	Post Disaster	Authorized under Section 404 of the Stafford Act, the Hazard Mitigation Grant Program (HMGP) provides grants to States and local governments to implement long - term hazard mitigation measures after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster declaration	FEMA and DEM. HMGP was used after DR-4011 to fund five mitigation projects around the state. After DR-4053 HMGP was used for LiDAR acquisition for the UGS.	Increase percentage back to 15%. Also address tax issues on individual projects (relocation and elevation)
Pre-Disaster Mitigation Program (PDM) Grants for Mitigation Planning and Projects.	Pre-Disaster	The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds	The State of Utah received over $20 million in PDM funding from FEMA to aid in mitigation planning and projects. Utah has received 13 planning grants and 21 project grants.	Establish a set-aside planning funds for States. Use the Mitigation plan in identifying projects
Flood Mitigation Assistance (FMA) Planning Grants	Pre-Disaster	FMA was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the NFIP. Funding for the program is provided through the National Flood Insurance Fund, and FMA is funded at $20 million nationally. FMA provides funding to assist States and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the NFIP.	This program is not effective in Utah due the focus on repetitive loss structures. Utah has a limited number of repetitive loss structures.	Federal government should reconsider the focus on repetitive loss structures, especially in States that do not have a significant repetitive loss issues.
Flood Mitigation Assistance (FMA) Project Grants	Pre-Disaster	There are three types of grants available under FMA: Planning, Project, and Technical Assistance Grants. FMA Planning Grants are available to States and communities to prepare Flood Mitigation Plans. NFIP-participating communities with approved Flood Mitigation Plans can apply for FMA Project Grants. FMA Project Grants are available to States and NFIP participating communities to implement measures to reduce flood losses. Ten percent of the Project Grant is made available to States as a Technical Assistance Grant. These funds may be used by the State to help administer the program. Communities receiving FMA Planning and Project Grants must be participating in the NFIP. A few examples of eligible FMA projects include: the elevation, acquisition, and relocation of NFIP-insured structures.	FEMA	Emphasis on repetitive loss should be removed.

Type of Existing Protection	Type of Disaster Assistance	Description	Effectiveness and/or Enforcement	Improvement and/or Changes Needed
RiskMAP (Federal and State)	Pre-Disaster	The goal of RiskMAP is to upgrade the nation's 100,000 panel flood map inventory by: • Developing up-to-date flood hazard data for all flood prone areas nationwide to support sound floodplain management and prudent flood insurance decisions. • Providing the maps and data in digital format to improve the efficiency and precision with which mapping program customers can use this information. • Fully integrating FEMA's community and state partners into the mapping process to build on local knowledge and efforts. • Improving processes to make it faster to create and update the maps. • Improving customer services to speed processing of flood map orders and raises public awareness of flood hazards.	Age of Flood Maps in Utah 70% are more than 15 years old State has developed and is implementing two plans: State Business Plan and Five Year Strategic Plan. Both plans focus on flood mapping and the overall NFIP in the State.	Continue ongoing funding of flood mapping in states and ensure new maps reflect new H&H study. It is also critical to continue funding for State Mapping Coordinator positions.
Envision Utah – Planning references; Utah Code 10-8-301/302 and 17-27-310/302	Pre-Disaster	In 1997, the state partnered with Envision Utah, a public/private community partnership dedicated to studying the effects of long-term growth, creating a publicly supported vision for the future, and advocating the necessary strategies necessary to achieve this vision. Land Use, population and growth analysis, transportation and circulation, Environmental Analysis (which includes topography, climate, natural features and hazards, man-made environmental impacts and an analysis of lands suitable for development), Public Utilities and facilities, social conditions (housing and redevelopment), economic analysis, community visual quality and urban design.	Envision Utah	Greater emphasis on natural hazards in the planning areas.
Pre-Disaster Mitigation Program (PDM) Grants for Mitigation Planning and Projects. Hazard Mitigation Grant Program (HMGP) – Robert T. Disaster Relief and Emergency Assistance Act, Public Law 3-288	Pre/Post-Disaster	DEM is highly involved in the PDM and HMGP process from the beginning of each application. DEM has done the BC for many of the applicants and has reviewed the BC for the rest. DEM is highly involved in all mitigation planning done in the State. DEM manages all mitigation planning, offers assistance, mitigation training to locals and reviews plans.	DEM, SHMT Over $20 million federal share in PDM grants for plans and projects and over $3 million federal share for HMGP grants.	

The Utah Energy Office	Pre-Disaster	Utah Energy Office promotes efficient use and appropriate development of energy resources in Utah. This mission is accomplished by providing the public, private industry, nonprofit organizations, and government agencies with information, objective research, technical assistance, and energy-related policy analysis, as well as access to federal and state energy programs. As an example, the "Cool Communities" program works to reduce energy consumption and increase air quality in Utah by promoting "cool" strategies of appropriate placement of trees and shrubs and use of reflective roofing and pavements. Partnering with many groups, the program is involved in education and demonstration projects, and incorporating "Cool Communities" strategies into municipal policy and city ordinances. Utah offers a state income tax credit for renewable energy systems. The credit for residential systems is 25 percent of the equipment and installation cost up to a maximum of $2,000. Commercial systems receive a 10 percent tax credit up to a maximum of $50,000. The technologies included are: solar electric, solar thermal, passive solar, wind, and hydropower. Businesses can also receive the tax credit for biomass systems.		
LeRay McAllister Critical Land Conservation Fund – State of Utah, Governor's Office of Planning and Budget	Pre and Post Disaster	The LeRay McAllister Critical Land Conservation Fund (LMF) is an incentive program providing grants to encourage communities and landowners to work together to conserve their critical lands. The fund targets lands that are deemed important to the community such as agricultural lands, wildlife habitat, watershed protection, and other culturally or historically unique landscapes. LMF Conservation Funds can be used to protect lands possessing resources deemed critical to your community. These resources may include, but are not limited to agricultural lands, historical and cultural sites, wildlife habitat, natural recreation, wetlands and watershed protection areas. Funds may not be used to purchase land for "active recreation" sites such as city parks containing constructed playgrounds, baseball or soccer fields, etc. The funded project must be something that will be preserved predominantly in, or restored to its natural state or used for agricultural production.		
Utah Tomorrow – Strategic Plan, Utah Code 36-18-1	Pre-Disaster	Utah Tomorrow is a broad-based, ongoing strategic planning effort designed to enable all segments of Utah society to focus on and measure progress toward specific goals for Utah's future. Protecting, enhancing and restoring watersheds are a key strategic element of the plan as well has drought mitigation practices.		
Resource Development and Coordinating Committee, Governor's Office of Planning and Budget	Pre and Post Disaster	The RDCC assists the State Planning Coordinator in fulfilling the responsibilities of reviewing and coordinating technical and policy actions which may affect the physical resources of the state and facilitate the exchange of information on such actions among State agencies and other levels of governments.		

Local Mitigation Capabilities

LOCAL MITIGATION PLANNING

Local Government Planning Support

The Utah Division of Emergency Management (DEM) serves as the primary contact and support agency for local governments to develop their Local Hazard Mitigation Plans. DEM works to assist any type of Local Hazard Mitigation Plans whether it is a multi-jurisdictional plan, county plan, city plan, tribal plan, or special district plan. DEM will help initiate the process for local jurisdictions to begin the update process for their LHMP. For the jurisdictions that choose to use FEMA grants to help fund the update of their LHMP, DEM provides resources, technical assistance, and training for application development. DEM will then provide a formal review of the submitted application and provide suggestions for revision to improve the planning application.

Once a jurisdiction begins the update process, DEM will provide many resources to the local jurisdiction to aid in the planning process. Some of these resources include: Hazard Mitigation Planning Overview, Local Mitigation Planning Handbook, Local Mitigation Plan Review Guide, Mitigation Ideas document, Integrating Hazard Mitigation into Local Planning, Mitigation Planning How-To Guides, Hazard Mitigation Planning Risk Assessment, etc. Other resources supplied to the local jurisdiction deal with risk assessment data sources and key websites and links. DEM will also conduct a personalized meeting with the local mitigation planners in charge of updating the plan and review planning guidance, go over all of the mitigation planning requirements, and ensure that the local jurisdiction understands the planning process and federal requirements.

During the planning process, DEM mitigation staff will try to attend planning meetings and will give presentations on the planning process when asked to do so. Throughout the whole update, DEM is available to provide technical assistance and answer concerns and questions. DEM also performs a State review of the LHMP and helps facilitate the FEMA review.

Local Hazard Mitigation Plan Review

When a local jurisdiction is ready to submit their LHMP to the State for review, DEM recommends that the local jurisdiction submit, along with the final draft of the mitigation plan, a filled out FEMA Plan Review Tool document. The LHMP submitted to DEM is then formally reviewed. DEM has allotted a maximum of 30 days to complete the State review and submit a response back to the local jurisdiction. DEM mitigation staff will review the plan and the plans are reviewed against the FEMA planning tool. Once the State review is completed, DEM will provide a filled out copy of the Plan Review Tool to the local jurisdiction and if there are any required revisions, DEM will also provide a State review document that provides information and clarification on the revision needed in detail. Additional plan reviews are completed once the required revisions are finished and the local jurisdiction has resubmitted the plan.

Once an LHMP has completed the State review process, DEM will submit the local jurisdiction mitigation plan to FEMA along with the State review document. DEM will coordinate with FEMA for their review. FEMA has 45 days to complete their review. When FEMA has completed their review, DEM will work with the local jurisdiction to help complete any required revisions and will facilitate any conference calls or emails with FEMA, if needed. DEM will process any further submittals to FEMA and then will help coordinate the Approval Pending Adoption (APA) status of the plan. Following APA status, DEM will assist the local jurisdiction in the adoption process and will provide examples of adoption letters. DEM will then submit all adoption letters to FEMA.

LOCAL MITIGATION IMPLEMENTATION

While the majority of communities is Utah strive to have up to date mitigation plans, and desire to implement effective mitigation strategies and projects, they face many obstacles at both the local and state level. Similar to state programs, many local jurisdictions lack dedicated funding for hazard mitigation, and must compete with other communities for limited federal and other funds.

Ordinances and Codes

Local communities are required to adopt the IBC and other building, environmental, and zoning codes as they are federally

required and adopted by the State of Utah. The current IBC codes are from 2015 and include several amendments and exceptions. Most communities adopt the minimum codes as required by federal and state mandates. There are, however, individual communities that have been successful in adopting standards that go beyond the federal/state minimums. These are discussed in more detail in the strategy sections of the individual hazard chapters. Examples of such ordinances include:

Avalanche ordinances that require buildings to be built to withstand the forces of an avalanche. Two communities have adopted these standards.
Many communities have ordinances that require geotechnical studies before building in certain areas, such as on hillsides or potential landslide areas.
Salt Lake City has adopted a buffer zone around earthquake faults.
CRS communities require stricter floodplain management and ordinance requirements.
Marriott-Slaterville has enacted an ordinance which requires "no development' in the floodplain.
Fire prone communities have strict Wildland Urban Interface restrictions and building requirements.

Incentive Programs

Many communities also provide incentives for hazard mitigation or hazard resistant design.

- Salt Lake City Fix the Bricks program offers reimbursement for a percentage of the cost of retrofitting the roofing structure of Unreinforced Masonry Dwellings (URM) of homes that participate in their program.
- Utah Water Savers provides rebates for smart irrigation timers.
- Salt Lake County changed the ordinance restricting rainwater collection by residents and now offers an annual allotment of discounted rain barrels to residents.
- Communities in drought prone areas have offered rebates, discounts, and incentives for residents converting their lawns to xeriscape landscaping and reducing their irrigation water use.
- Local jurisdictions have enacted tiered water rates to encourage water conservation in the dry summer months.

Grant Utilization

Utility services within Utah are majority run by private companies, and the state is not always aware of their mitigation priorities, activities, or projects. However, many communities are beginning to work with private utility companies, developers, residents, and others to complete public infrastructure mitigation projects. These include projects such as flood control systems, retention ponds, river restoration, etc.

Special districts have also been successful in creating individual mitigation plans and utilizing federal Pre-Disaster Mitigation grants to help achieve strategies and goals within them. These include: Central Utah Water Conservation District's earthquake retrofit of their water treatment facilities. Murray and Salt Lake City School Districts earthquake retrofitting and flood mitigation of their school facilities. These districts contributed large amounts of their own funding in addition to the provided HMA funds to complete their projects, and have been used as examples by FEMA on a national level for their success in effective mitigation implementation.

Other communities that have also recently been successful in utilizing available funding pools include:

- **Salt Lake City and the Fix the Bricks:** The Salt Lake City Fix the Bricks Program has been very successful in reducing risk to unreinforced masonry one house at a time. Salt Lake City's Fix the Bricks facilitates seismic improvements for its residents URMs in an effort to save lives by reducing the number of deaths, injured and trapped after an earthquake. Residents apply through the city and are evaluated and accepted based on known high risk URM criterion. Currently they accepting single family homes, but hope to expand to multi-family homes and apartment complexes in future. Accepted as a pilot program for residential/private homeowner reimbursement for URM retrofitting, it was initially awarded PDM funds during the 2016 grant cycle. Fix the Bricks was also awarded for the 2017 year, and is currently under application for the 2018 cycle. The project has generated considerable interest from other communities and will likely grow in the coming years to mitigate hazards in communities outside of Salt Lake City.

- **Washington County Flood Control Authority:** In 2012, Washington County, the City of St. George, Washington City, and Santa Clara City entered into an inter-local agency cooperative agreement to form the Washington County Flood Control Authority. The purpose of the Flood Control Authority (FCA) is to better share management, administration, and cost responsibilities for regional storm water drainage and flood control concerns that cross common community boundaries.

  The Washington County Flood Control Authority consists of a Technical Advisory Committee (TAC) and a Political Advisory Committee, or Executive Board. The Technical Advisory Council consists of staff members familiar with flood control issues from each of the member public works departments. A representative from each member city council and the county commission participate on the Executive Board. Funding is provided from each member city from monthly fees assessed to residential utility connection.

  The Technical Advisory Council meets on a monthly basis to coordinate regional flood control needs and concerns. The Executive Board meets as needed to review TAC recommendations and to authorize expenditures. Past projects have included erosion protection construction and maintenance, debris basin maintenance and reconstruction, and river corridor maintenance including flood sediment removal, invasive species vegetation removal, native riparian vegetation restoration.

The first project funded by the FCA was the Lower Tuachan Wash Replacement Dam Public Assistance project in 2013. The first Pre-disaster mitigation projects funded are the 2017 Washington City Virgin River Restoration project and the 2018 Pineview Estates River project. The FCA currently has two Virgin River projects planned for the 2019 PDM grant application period. They are also working with Washington County to participate in the current mitigation plan update to qualify as their own applicant for future grants.

Implementation Challenges

In working closely with local communities and engaging in surveys and conversations with local emergency management personnel about the potential and challenges to hazard mitigation, several key themes related to local mitigation implementation have been consistently identified.

Staffing: Local emergency managers and other related positions often fill multiple staffing roles within the community, with only a portion of their time available to be dedicated to mitigation and other emergency management related programs. They have many administrative duties, projects, program requirements, and unexpected situations competing for their time. While they have a desire to create and implement effective mitigation plans and strategies competing priorities, multiple workloads, and lack of sufficient staff often means they must just focus on getting the minimum required done.

Funding: Lack of local and state funding dedicated to mitigation planning and projects means that local communities are often dependent on competing for federal funding. The staffing issues mentioned above also inhibit many communities' abilities to implement projects, or even to submit quality mitigation grant applications. While federal funding is a primary source of mitigation funding for many local communities, other barriers make it underutilized.

Public Support: Public perceptions about the need for certain mitigation strategies and projects can lead to lack of support or outright opposition to mitigation projects. The removal of privacy providing vegetation and unsightliness of hard mitigation construction can be off-putting to residents and their attachment to the 'status quo' of their neighborhoods and property views. Many projects have been delayed or failed because of public opposition and misunderstanding of the risks. Utah's relatively low disaster rate makes it difficult to relate the true risk of hazards to residents, and it is often only after an event has occurred in a specific area, or a change in flood mapping increases flood insurance premiums that communities become amenable to mitigation projects.

Local Administrative and State Legislative Support: As with communicating risk to residents, Utah's relatively low disaster rate gives a false sense of security and can make it difficult to convey the true need for mitigation to administrators and legislators. Tight budgets and more publicly visual needs can make mitigation a low priority on state and local budgets. Stricter mitigation friendly laws, ordinances, zones, codes, and regulations are also more difficult to pass and enforce.

Table 8: Local Capability Assessment

Resource	Description	Capabilities	Limitations
Staffing	Personnel available and dedicated to emergency management, planning, technical assistance, and data acquisition.	All 29 counties and some cities have emergency managers (not all full-time). Some jurisdictions have GIS and technical abilities. State and AOG staff provides assistance to local jurisdictions. Some communities are able to use contractors.	Many local jurisdictions have limited full-time staff and must use part-time staff or volunteers. Many rural communities lack GIS and technical skills. Many personnel have diverse responsibilities.
Funding	Financial means available to carry out mitigation and planning activities.	Most communities use federal and state funding sources like, DEM, NRCS, UGS, UDA, UDOT, etc. for large mitigation projects.	Local funding resources are very limited, especially in rural areas. Local jurisdictions must compete with other communities for funding. Many mitigation practices are not implemented due to insufficient funding.
Zoning	Zoning regulations and ordinances related to mitigating against hazards.	Many communities have adopted a zoning ordinance. Some communities have a "sensitive area" or "hazard area" overlay zone.	Many of the ordinances are outdated and do not address natural hazards. Many of the ordinances are not consistent with a jurisdictions "General Plan".
Building Codes	Utah has passed mandatory and optional state-wide codes regulating the design and construction of structures.	Communities are required to adopt the mandatory state building codes.	Communities are not required to adopt the optional state building codes. Many communities must contract with their county for enforcement of building codes.
Floodplain Management	Most floodplain management falls under the local floodplain ordinances adopted in accordance with the NFIP.	Utah allows local jurisdictions to adopt stricter regulations than the NFIP minimum. Management of the floodplains is managed at the local level with help from the state floodplain manager and FEMA Region VIII.	Many communities have Approximate A studies that are not as good as Limited Detailed Studies. Many communities would like to improve flood studies, but lack funding. Many communities do not have any flood studies, but still participate in the NFIP.
Agencies	State and local agencies available to help with mitigation and planning activities at the local level.	All 29 counties are divided into 1 of 7 Associations of Governments. A few communities have departments dedicated to emergency management. Many local state agencies are available to provide technical assistance, expertise knowledge, data, and assistance.	Many communities lack the resources to have agencies focused on emergency management and must rely upon county or state level agencies and private consultants.

Mitigation Challenges and Opportunities

Utah is a state with a limited history of disaster events - a fact which presents as a double-edged sword in the implementation of hazard mitigation. On one hand, residents and communities can function for long periods of time with relatively few disaster disruptions to their routines and programs; on the other, a lack of disaster events and experience can engender a false sense of security and an underestimation of true hazard risk.

In working on the update of the mitigation plan capabilities SHMPC members gathered information not only about mitigation successes, but also the challenges and barriers to implementing mitigation plans and projects throughout the state. This was accomplished not only through formal surveys and meetings, but also through engaging conversations in the field.

STAFFING

The most cited and pervasive challenges facing both state and local mitigation personnel is a lack of adequate mitigation staffing. Limited staff members, often performing many functions and filling many roles outside of mitigation, makes prioritizing and providing quality and effective mitigation strategies and activities difficult.

State Mitigation Staff

Mitigation staff members at the state agency level are often only assigned mitigation as an additional role or duty along with many other important priorities. Mitigation staff at DEM consists of six full time employees and occasional part time interns, all of whom also fulfill the duel duty of all Recovery functions, as well as general state employee roles and requirements.

- Mitigation and Recovery Section Manager/State Hazard Mitigation Officer
- 3 Generalist Mitigation and Recovery staff members, managing and fulfilling roles in all FEMA mitigation and recovery programs; including all HMA programs, PA, IA, long term Recovery, etc.
- 1 RiskMAP program manager and occasional part time intern, funds depending
- 1 NFIP/Floodplain manager and occasional part time intern, funds depending

These limited staff numbers and multiple role/title duties can make administering projects, improving programs, and expanding services to meet growing needs very difficult. Increased administrative duties and requirements, as well as overlapping and converging program and deadlines results in work that is focused on meeting due dates and administrative task checklists, as opposed to producing quality work and program improvement.

State mitigation staff, as DEM and other state agencies, are qualified, experienced, and dedicated workers, who are passionate about their work and find creative ways to do more with less. They work together well and often partner on ambitious and potentially effective mitigation strategies and activities. Unfortunately, in spite of mitigation staff member passion, intention, and expertise, these endeavors can be limited or lost in the burden of staff and time shortages.

Local Mitigation Staff

Similar to state mitigation staff, local mitigation staff also have many duties and fulfill multiple roles within their community. Emergency and floodplain managers are often a secondary duty assigned to another primary role. Little or no set aside funding for mitigation makes implementing mitigation strategies and activities difficult. Staff shortages, other priority duties, and lack of time to dedicate to mitigation makes creating quality applications for federal mitigation funding difficult.

Funding

A lack of dedicated mitigation funding at both the state and local level affects mitigation programs and personnel in many ways.

Beyond construction project costs and cost-shares, program staffing, overtime, travel for education/experience, education materials, technical support capabilities, staff expertise availability, public outreach, and grant administration duties are all impacted.

The low rate of large disasters and a general sense of immunity and underestimation of risk makes it difficult to advocate for state and local level government funding.

ADMINISTRATIVE AND LEGISLATIVE SUPPORT

A history relatively few large natural disasters that affect residential populations makes it difficult to advocate for or pass laws, rules, regulations, and codes for pre-disaster mitigation. Requesting mitigation funding to be prioritized with many other more visual and politically advanced line items is also a challenge.

Administrative restrictions on staff and spending due to tight budgets or misunderstanding of federal reimbursement programs limits the ability of mitigation staff to perform their duties effectively.

PUBLIC SUPPORT

Public support when it comes to disaster response in Utah is overwhelmingly positive. Donations, volunteer hours, and other services are often far beyond what is required. Pre-disaster mitigation efforts, however, are often hampered by negative public views. Attachment to natural features, resistance to change or hard engineering, a perception of historical safety and underestimation of risk, and a reluctance to reallocate spending to a perceived low need priority all hinder mitigation activities within communities.

CHALLENGES AND OPPORTUNITIES MOVING FORWARD

Opportunities and goals to improve the State of Utah's mitigation capabilities moving forward;

- Advocating for increased pre-disaster mitigation funding at the state level.
- Encouraging set aside funds for mitigation activities and programs at the local level.
- Increase staffing numbers and capabilities at DEM and other state level mitigation programs to meet future growth of the state.
- Improve education and understanding among legislative and administrative leaders as to the importance and need of pre-disaster mitigation.
- Improve local capabilities in mitigation plan strategy creation and mitigation grant applications.
- Improve state DEM staff experience with and understanding of 406 and other disaster related mitigation programs to better leverage mitigation opportunities after a disaster.

As an exponentially growing state, with rapid expansion into unmapped and higher risk areas, Utah's capacity for mitigation needs to not only meet current demands but also plan for the challenges of future development.

Intentionally left blank.