

## CHAPTER 5 MITIGATION CAPABILITIES ASSESSMENT

### 5.1 INTRODUCTION

The State of Utah has an established comprehensive, multi-faceted state hazard mitigation program. This section of the plan discusses the state’s hazard management policies, programs, capabilities, and funding sources to mitigate the hazards identified in Chapter 4. True success in reducing the statewide risk to all hazards requires strong collaboration among state agencies, federal agencies, and local and tribal governments. State mitigation initiatives are integrated with Federal Emergency Management Agency (FEMA) programs and are designed to focus federal and state programs in support of local mitigation capacity building. State mitigation planning is integrated with other state agency efforts as well as other state and regional planning initiatives.

The 2023 update process provided an opportunity for the SHMT 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 and staff interviews - the SHMT 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, integrated planning, funding, mitigation programs, and local mitigation programs, concluding with a section discussing the overall challenges and opportunities of mitigation in the state.

The ESHMP must demonstrate, in order to be approved as an “enhanced” plan state, a commitment to implementing a comprehensive mitigation program. This means discussing actionable and tangible steps to advance (1) Statewide programs, initiatives, and plans that advance mitigation and resilience, (2) mitigation training and capability building, and (3) support local hazard mitigation plan development. A synopsis of these elements, and a location of where they are further discussed in the plan is noted in the following table. While much work is still needed to advance resilience, the State of Utah has detailed areas for additional effort in mitigation actions in Chapter 7.

**Table 5-1 Summary of Commitment to a Comprehensive State Mitigation Program**

ELEMENT	HIGHLIGHTS OF COMMITMENT	LOCATION
Statewide programs, initiatives, and plans that advance mitigation and resilience	<ul style="list-style-type: none"> <li>• SHMT and other coordinating structures for mitigation including Utah’s Post-wildfire Team and the Seismic Safety Commission</li> <li>• Integrated planning practices including crossover SHMT representation on various planning efforts</li> <li>• Effective use of federal programs and related funding including FEMA HMA, BRIC and HMGP Post-Fire</li> <li>• Floodplain management program including inclusion of nine jurisdictions in the NFIP since 2018</li> <li>• Flood Risk MAP program implementation and advances on flood hazard map coverage</li> <li>• Earthquake Program aligned with National Earthquake Hazards Reduction Program</li> </ul>	Sections 5.3, 5.4 Discussion on mitigation programs and initiatives by State agency in Section 5.5; Discussion of challenges and opportunities in Section 5.7

ELEMENT	HIGHLIGHTS OF COMMITMENT	LOCATION
Mitigation training and capability building	<ul style="list-style-type: none"> <li>• Development and implementation of the 2023 Utah Mitigation Direct Technical Assistance program including procuring contractor support</li> <li>• Procuring capability and capacity building support under the 2023 Program/Project/Grant Management Development support contract</li> <li>• Commitments to annual mitigation training and special topic webinars</li> <li>• Promotion of mitigation program and initiatives at APA, USFMA, ASFPM, annual Utah earthquake conference. American Public Works Association APWA - Utah Chapter, Utah EM Association and more</li> </ul>	Section 5.5.1 Utah DEM; Chapter 6 Coordination of Local Plans and Grants Section 6.4
Support local hazard mitigation plan development.	<ul style="list-style-type: none"> <li>• As of November 2023, 82.2% of all jurisdictions in Utah have an approved plan or are updating their plans.</li> <li>• Mitigation planning workshops and related technical assistance</li> </ul>	Chapter 6, Coordination of Local Plans and Grants Section

## 5.2 STATE LAWS, REGULATIONS AND BUILDING CODES RELATED TO HAZARD MITIGATION

The following is an evaluation of Utah laws, regulations, policies and programs related to hazards that improve or impede resilience to future natural hazard events and other future conditions, including the effects of climate change.

### 5.2.1 Legal Authorities

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.
- Adoption of the International Building Code 2021 edition, including Appendices C and J.

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 2017, the Utah Legislature allowed Transportation to receive a \$1 billion bond for new roads and infrastructure repairs. In 2020, Senate Bill 39 made new money and resources available for affordable housing initiatives.

Between 2021-2022, several bills were passed to protect water and watersheds. In 2021, the Utah Legislature passed a bill establishing a Colorado River Authority to assist the state renegotiate its

water allowance from the river. In 2022, several bills were passed protecting the Great Salt Lake and its watershed. A watershed enhancement bill that piggybacks on a separate instream flow legislation, created a water trust to protect the Great Salt Lake and its watershed, which in turn allows for leasing water rights for conservation.

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 278S01 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.

Floodplain Management 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. In order to mitigate flood risks statewide, a state floodplain ordinance is helpful for communities and State agencies to understand the importance of floodplain management and provides state-level guidance for compliance with applicable laws. Communities that participate in the National Flood Insurance Program (NFIP) have adopted and enforce floodplain management regulations and codes that govern development in Special Flood Hazard Areas.

The following table summarizes existing legal authorities related to hazard mitigation and emergency management in Utah and indicates if pre or post disaster related.

**Table 5-2 Existing Legal Authorities Related to Hazard Mitigation and Emergency Management in Utah**

AUTHORITY	PRE OR POST DISASTER	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 branches.
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. States and communities, working with facilities, can use the information to improve chemical safety and protect public health and the environment.

AUTHORITY	PRE OR POST DISASTER	DESCRIPTION
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 recover 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	<p>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:</p> <ul style="list-style-type: none"> <li>• two or more counties are involved</li> <li>• the flood mitigation activity has or may have an adverse effect on the county</li> <li>• the county executive of that adversely impacted county requests the state engineer's involvement</li> <li>• 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</li> <li>• the requesting county has established a flood control program through zoning.</li> </ul> <p>Multi-county flood mitigation activities by the state engineer shall include:</p> <ul style="list-style-type: none"> <li>• assisting the counties in emergency flood mitigation planning</li> <li>• furnishing engineering or other technical services</li> <li>• making recommendations in emergency situations, and, if requested, participating in making emergency flood control decisions; and</li> <li>• in the event a decision is not reached, the final decision-making authority.</li> </ul> <p>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.</p>
Utah State Building Code - Utah Uniform Building Standards Act, 58-56	Pre-Disaster	Building codes and amendments adopted by the State of Utah

AUTHORITY	PRE OR POST DISASTER	DESCRIPTION
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 warehouses on a speculative basis and is displayed for customer viewing. Items normally available include 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.

AUTHORITY	PRE OR POST DISASTER	DESCRIPTION
School Building Earthquake Inspection program	Pre-Disaster	In 2013, the state approved a \$150,000 one-time budget item that anticipates FEMA 154 Rapid Visual Screening 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.

### 5.2.2 Building Codes

In July 2023, the Utah Legislature made statewide amendments to the State Construction Code to include the 2021 edition of the International Building Code, including Appendices C (Agricultural Buildings) and J (Grading). Additionally, the statewide amendments include International Residential Code including; the Appendix AQ, the 2020 edition of the National Electrical Code issued by the National Fire Protection Association, and 2021 edition of the International Existing Building Code.

The 2021 IBC/IRC specify seismic provisions for earthquake hazards. Section 1613.1 of the IBC states, "Every structure, and portion thereof...shall be designed and constructed to resist the effects of earthquake motions..." and Section R301.1 of the IRC states, "Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including...seismic loads as prescribed by this code." Both the IBC and IRC assign structures, with some exceptions, to a Seismic Design Category 26 Engineering-geology and geotechnical investigations are often needed to properly determine the seismic design parameters required to implement the code requirements. Seismic provisions of the IBC and IRC are intended to minimize injury and loss of life by ensuring the structural integrity of a building but do not ensure that a structure or its contents will not be damaged during an earthquake.

Specifically, the 2021 IBC (Section 1803.5.11) requires an investigation for all structures in Seismic Design Categories C, D, E, or F to include an evaluation of slope instability, liquefaction, differential settlement, and surface displacement due to faulting or lateral spreading.

The 2021 IBC/IRC addresses issues related to problem soil and rock in Chapter 18, Soils and Foundations and Appendix J, and Chapter 4, Foundations, respectively. IBC Section 1803.5.3 and IRC Section R401.4 contain requirements for soil investigations in areas where expansive soil may be present.

For shallow groundwater, the 2021 IBC Section 1805 and IRC Section R406 contain damp proofing and waterproofing requirements for structures built in wet areas. IBC Section 1803.5.4 contains requirements for soil investigations in areas of shallow groundwater.

The 2021 IBC does not address radon hazards; however, investigators should always evaluate radon potential, and if present, provide recommendations to mitigate the risk from radon exposure. Appendix F, Radon Control Methods of the 2021 IRC and ASTM Standard E1465-08a Standard Practice for Radon Control Options for the Design and Construction of New Low-Rise Residential Buildings 27 describe radon-resistant construction techniques. The adoption of 2015 IRC, appendix F and implementation of its construction techniques is at the discretion of local jurisdictions, none in Utah have adopted it to date. Regardless, radon hazard should be evaluated during a comprehensive engineering-geology investigation.

For tsunami-generated flood hazards, the 2021 IBC, appendix M contains brief tsunami regulatory criteria. No tsunami hazard maps have been developed for Utah (Bear Lake, Great Salt Lake, or Utah Lake, where sub-lacustrine faults exist). The adoption of the 2021 IBC, appendix M is at the discretion of local jurisdictions, which none in Utah have adopted; however, tsunami hazards should be evaluated during a comprehensive engineering-geology investigation regardless for areas near Bear Lake, Great Salt Lake, and Utah Lake. The potential for ground-shaking-related seiche waves on these lakes should also be evaluated, as appropriate.

In May 2023, the Utah Legislature adopted the International Fire Code into the state Construction Code to repeal tall wood buildings of mass timber construction in an effort to strengthen fire safety.

For flooding, the 2021 IBC (Section 1612.1 and Appendix G) and IRC (Section R301.1) state that construction of new buildings and structures and additions to existing buildings and structures must be designed and constructed to resist the effects of flood hazards and flood loads. These requirements apply to construction in flood hazard areas (Zone A and other zones identified by the local jurisdiction) identified on Flood Insurance Rate Maps by FEMA.

The State of Utah has adopted the IBC (International Building Codes), with the most current version being the 2021 codes (as of 2023). 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.

The International Residential Code® (IRC) and International Building Code® (IBC), by reference to ASCE 24 - Flood Resistant Design and Construction, are design standards that include requirements that govern the design and construction of buildings and structures in flood hazard areas. FEMA has determined that the flood provisions in the 2018 edition of the International Codes® (I-Codes) meet or exceed the minimum NFIP requirements (44 CFR §60.3).

ASCE 24 establishes a standard for a minimum of 1-foot freeboard, which is the height above the level surface water will likely reach during a 100-year flood. Dwellings and most other buildings have 1-foot of freeboard; certain essential facilities have 2-3 feet; only agricultural facilities, temporary facilities and minor storage facilities are allowed to have their lowest floors at the estimated surface water level. The IBC/ASCE 24 limits construction in high-risk flood hazard areas, including alluvial fan, flash flood, mudslide, erosion-prone, high velocity flow, ice jam, and debris areas.

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.

- Hazard Specific Regulations

### **Dam Safety Rules**

The following are Utah dam safety rules that are in effect as of September 2023:

- Rule R655-10. Dam Safety Classifications, Approval Procedures and Independent Reviews: The purpose of this rule is to outline the procedures necessary to obtain approval to design, construct, operate, and remove a dam.
- Rule R655-11. Requirements for the Design, Construction and Abandonment of Dams: This rule provides minimum design requirements that will serve as a guide to the owner's

engineer for earth fill or rockfill dams. Structural design criteria for concrete dams are developed by other dam regulatory or dam design agencies.

- Rule R655-12. Requirements for Operational Dams: The rule is established to describe procedures that constitute minimum operational requirements for dams. These rules apply to any dam constructed in the state with the exception of those specifically exempted and those dams not requiring plans.

Details and full text on these rules are available at [waterrights.utah.gov/daminfo/rules.asp](http://waterrights.utah.gov/daminfo/rules.asp).

### **Drought and Water Conservation**

- H.B. 121 Water Conservation Modifications: Around 60% of residential water use is for outdoor watering; accordingly, Utah is encouraging the elimination of non-functional grass from landscapes throughout the state. In the 2022 session, legislators passed one of the nation's first statewide grass rebate programs and allocated \$5 million in funding.
- H.B. 121 Water Conservation Modifications 63A-5b-1108. Water conservation and state government facilities. Legislators passed limits on grass allowances on new and remodeled state facilities.

### **Climate Change**

See the discussion in Section 4.14.5 regarding planning and policy initiatives related to climate change mitigation and adaptation.

## **5.2.3 Policies Regulating Development in Hazard Prone Areas**

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. Utah's building code reflects the International Building Code (IBC) of 2018, with amendments and exceptions at the state and local level. The building codes adopted for Utah are located in the State Construction Code Adoption Act and State Construction Code. Approved codes that may also be adopted by local compliance agencies are located at Utah Uniform Building Standard Act Rules beginning in section R156-46b.

### **Land Use Planning/Local Control of Growth and Development**

In Utah much of the control concerning growth and development lies at the local level. Cities and towns derive their land use regulation powers and authority from the state constitution, state charters, and state statutes. Utah local governments are enabled by the Utah State Legislature with very broad powers to control land use and development. For example, in Utah Land Use Regulation Deskbook (Utah Land Use Institute 2016), Chapter 254, 2005 General Session 10-9a-505 Zoning Districts states that a municipality may enact an ordinance regulating land use and development in a flood plain or potential geologic hazard area to protect life; and prevent the substantial loss of real property; or substantial damage to real property.

This poses a challenge at the state level as, the state will have to work with local jurisdictions but cannot impede too much oversight over where development occurs at the local level, unless restricted in the building codes. The state can make suggestions and provide resources to help reduce hazard vulnerability and avoid development in hazard prone areas, but it is not a requirement for local jurisdictions to follow them. The state has developed model ordinances to highlight best practices for local government consideration specifically related to geologic hazards, flood hazards, and wildland urban interface development. These model ordinances are examples of efforts of the SHMT key partners to promote and achieve outcomes that are mutually beneficial for risk reduction/mitigation and adaptation. To regulate the amendment of building codes, Utah Code Section 15A-1-203 governs the Uniform Building Code Commission -

Unified Code Analysis Council, which the local level can go to seek exceptions to code concerns. However, if a community wants to implement something above the highest standard Utah Code 15A-1-204 (a) (8) prevents this, as the community cannot adopt or enforce a rule, ordinance, or requirement that applies to a subject specifically addressed by, and that is more restrictive than, the State Construction Code. This could potentially limit the ability of local governments to adopt higher code standards should they choose to do so.

A case of interagency collaboration in land use policies and enhancing building code enforcement is model ordinance sharing with local governments to promote resilient land use policy. State subject-matter experts, including the State Floodplain Manager and representatives from the Utah Geological Survey (UGS), engage in model ordinance sharing concerning flood hazard areas and geological concerns during updates to hazard mitigation plans for Areas of Governments (AOG) and Counties. For instance, during the planning process of the Bear River Association of Governments (BRAG), these experts presented a sample model ordinance to communities, advocating for elevated standards in vulnerable areas. Some communities, like Logan, Utah, sought further dialogue and subsequently embraced a more stringent standard for their special flood hazard area, implementing a 2-foot freeboard requirement.

A 2022 Survey of State Planning Laws by the American Planning Association notes that Utah has adopted statutes that require adoption of local comprehensive plans inclusive of specific elements. There are no statutes that require a hazards-related plan element. A general conclusion of the study is that few states have updated their laws in response to the growing threats posed by a changing climate and increasingly frequent and severe natural hazards. The study also concluded that generally most states still have room for improvement when it comes to promoting community resilience through planning.

### **Floodplain and Flood Zone Regulations**

The IBC requires building structures to be compliant with the National Flood Insurance Program (NFIP) minimum standards. Additional floodplain laws in Utah were drafted in partnership with national, state and local building codes. FEMA sets a basic standard of regulations for communities participating in the NFIP, but NFIP ordinances and regulations are handled at the community level. Each local government assesses their own flood vulnerability and calculates their potential losses in a flood event relative to people, residential units, commercial units, and critical facilities. Each local floodplain manager then has the responsibility to regulate and enforce floodplain management. 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. To facilitate a statewide cohesion between state and local regulations, The DEM - Utah Flood Hazards and Floodplain Management Programs supports local Floodplain Managers with the development and effective implementation of local floodplain programs through the use of a one-stop website resource that provides all necessary and helpful information, guides, and tools that are applicable to this effort. (<https://floodhazards.utah.gov/floodplain-management/>)

The State Floodplain Program Manager and team review multiple community flood damage prevention ordinances on a yearly basis. When a community has received a Letter of Final Determination (LFD) stating that a new or updated Flood Insurance Rate Map (FIRM) has been completed floodplain program specialist informs the communities they are required to adopt new maps through their “Flood Damage Prevention Ordinance” or “Floodplain Ordinance” to be compliant with the National Flood Insurance Program (NFIP). This process includes an Ordinance 101 training with explanations of Higher Standards and what a community can do to mitigate flood risk using Higher Standards in their ordinance updates. The state provides a model ordinance template that includes higher standards language such as:

- A maintenance requirement for alteration of a water course.
- Best available data language to include both areas identified and non-identified in special flood hazard areas be used to review development in the community.
- Utah has adopted the IBC/IRC 2021 codes and requires when developing the special flood hazards area to elevate the lowest floor to an additional one foot above the base flood elevation (BFE).

Between 9/2022 and 11/2023 the state has conducted five Ordinance 101 trainings and reviewed through LFD:

- Davis County 11 communities,
- Cache County 16 communities,
- Weber County 12 communities

Logan City has adopted a freeboard option of two feet above BFE during their LFD as a higher standard. St George has an additional Erosion Protection zone that is evaluated with their floodplain development permitting. Grand County has adopted language in their ordinance requiring all critical facilities new and substantially improved are prohibited from developing in the special flood hazard areas and areas within the 500-year (0.2%) flood zones, and that all new subdivision lots within an appropriate A Zone have base flood elevations provided regardless of acre or lot size.

The State will be participating in a FEMA Headquarters Substantial Damage Administration Planning workshop to equip communities with an organized set of procedures to assess properties and bring non-new construction/substantial damaged development into compliance with both NFIP minimum regulations and updated building codes. The pilot workshop works to increase local administration and enforcement of Substantial Improvement (SI)/ Substantial Damage (SD) requirements, most notably readying communities to carry out these activities in the post-disaster environment. The workshop will be held in Fall 2024, with follow up activities to include development of community-specific substantial damage plans and a state template.

The state has 13 communities participating in the FEMA community rating system (CRS), recognized as exceeding the minimum requirements of the NFIP to help their citizens reduce flood losses and lower flood insurance costs.

### **Geologic Hazard Regulations**

Utah Geological Survey has an online, interactive Quaternary Fault and Fold Database to raise awareness of areas that are susceptible to surface fault rupture, liquefaction, landslides, slope instability, debris flows, rockfalls, avalanches, radon gas, and/or other hazards. These areas present a risk to life and/or substantial damage or loss of real property.

The State of Utah has established several guidelines for addressing geologic hazards, including:

- Guidelines for Evaluating Surface-Fault-Rupture Hazards in Utah (Lund and others, 2019; UGS Circular 122, Chapter 3, <https://ugspub.nr.utah.gov/publications/circular/c-122.pdf>).
- Guidelines for Evaluating Rockfall Hazards in Utah (Lund and Knudsen, 2019; UGS Circular 122, Chapter 7, <https://ugspub.nr.utah.gov/publications/circular/c-122.pdf>); and Rockfall hazard maps.

- Guidelines for Evaluating Land-Subsidence and Earth Fissure Hazards in Utah (Lund, 2019; UGS Circular 122, Chapter 6, <https://ugspub.nr.utah.gov/publications/circular/c-122.pdf>) WA (Utah Code 17-27a-103[19]: <https://le.utah.gov/xcode/>, as appropriate.

As recommended by the Western States Seismic Policy Council, the development of local regulations should be risk specific:

**Local Earthquake** - should be based on the activity level of surface faulting (<https://www.wsspc.org/public-policy/adopted-recommendations/>).

**Rock Slope Stability** - should be based on current rock mechanics practice based on Practical Rock Engineering ([https://www.rocscience.com/assets/resources/learning/hoek/Practical-Rock-Engineering\\_Full-Text.pdf](https://www.rocscience.com/assets/resources/learning/hoek/Practical-Rock-Engineering_Full-Text.pdf)); and Federal Highway Administration (1989); and <https://www.rocscience.com/learning/hoek-corner/publications>.

**Ground Accelerations** - should be based on USGS National Seismic Hazard Maps (<https://earthquake.usgs.gov/hazards/hazmaps/>).

**Liquefaction** - should be based on UGS geologic maps (<https://geology.utah.gov/apps/intgeomap/>).

### **Model Geologic Hazard Ordinance**

The Utah Geologic Hazard Model Ordinance by the Utah Geological Survey (UGS) is based on work with Morgan County in updating their geologic hazards ordinance, and prior geologic hazard ordinances used in Draper City, Salt Lake City, and Salt Lake County, Utah. The current Morgan County ordinance was developed with UGS and Morgan County staff based on the prior county ordinance and extensive new information. The model ordinance reflects the statewide adopted 2021 International Building Code and related standards.

The Geologic Hazards Model Ordinance was designed to be easily adaptable to conditions in Utah cities and counties. The UGS has not published comprehensive geologic hazard maps for all of Utah. However, Geologic Hazard Study Areas are defined in the ordinance for areas where current mapping is not available, based upon specific geologic and other conditions.

## **Wildfire Regulations**

### **Wildland-Urban Interface Code**

Utah developed a Wildland-Urban Interface Code in 2006 addressing the mitigation of fire in the urban-wildland interface., based on The International Wildland-Urban Interface Code 2003 edition. Included in the code is a model ordinance. A challenge with the code has been adoption and enforcement, and the code also needs to be updated. This is addressed by a mitigation strategy in Chapter 7.

### **Drought**

House Bill 121 passed in May 2022 imposes water conservation requirements and drought resistant landscaping incentives for state facilities. This includes a state agency that owns or occupies a state government facility that is built or reconstructed on or after May 4, 2022, may not have more than 20% of the grounds of the state government facility be lawn or turf. Moving forward, State agencies must reduce the state agency's outdoor water use as compared to the state agency's outdoor water use for fiscal year 2020.

HB33, passed in 2022, changed an old “use it or lose it” law so farmers could leave some of their water in streams without losing their allotted amount.

An issue noted by the State Climatologist during the update of this plan is that water compacts have historically provided less water to tribes than they could legally obtain; renewed focus on this topic could change this moving forward to potentially benefit the tribes. As a result, reductions in water allotments to other state users may be in store, further emphasizing the importance of evolving water conservation and drought mitigation laws and policy to adapt to changing future conditions.

#### **5.2.4 State Mitigation Funding Capabilities**

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

The state maintains a Disaster Recovery Restricted Account (Utah Code 53-2a-603, superseded 5/4/2022), 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 qualify for reimbursement. The 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 reseeded 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. DEM has been successful in leveraging and administering FEMA mitigation grant programs to build resilience within the state, as described further in Section 5.5.

The State uses general funds for match for federal grants where the state is the applicant; some grants are a 75/25 match, while some, such as the Cooperating Technical Partner (CTP) are 100% federally funded.

The State has provided funding for a Wildland Fire Suppression Fund. According to the Utah State Legislature Budget Summary 2023 General Session there was a set aside of \$10.0 million ongoing and \$45.0 million one-time from the General Fund to the Wildland Fire Suppression Fund for future costs of fighting wildfires.

The opportunity exists to leverage HB 1001 Emergency Response Funding for Utah for infrastructure improvements in the wake of 2023 flooding; see related mitigation action in Chapter 7.

### **5.3 COORDINATING STRUCTURES FOR MITIGATION**

#### **5.3.1 State Hazard Mitigation Team**

The Utah State Hazard Mitigation Team (SHMT) is the principal body responsible for coordinating the state's comprehensive hazard mitigation program. The State Hazard Mitigation Team was originally organized in 1983 to assure appropriate input from state and federal agencies involved in the hazard mitigation process after the 1983 floods. The group meets on a