

Addendum: Wasatch County Lake Creek Debris Basin High Hazard Potential Dam

1.0 General Overview

1.1 Definition and Classification of Dam

A dam is an artificial barrier that can store water, wastewater, or liquid-borne materials for various reasons – including flood control, human water supply, irrigation, livestock water supply, energy generation, recreation, or pollution control. Certain dams pose a hazard to people and property downstream. The Utah Dam Safety Program uses a three-tier hazard rating system that indicates the magnitude of the potential impact of an incident. Ratings are categorized as either high, moderate/significant, or low (damsafety.org, “Dam Safety, Performance Report for the State of Utah”). This rating system considers variables such as the concentration of life and property located downstream, the size, height, volume, and the incremental risk/damage assessments of dams.

Table 1. Utah Dam Safety Program Hazard Rating System

Rating	Definition
High Hazard	Is typically defined as a dam whose failure will cause loss of human life and significant property destruction
Moderate/Significant Hazard	Is typically defined as a dam whose failure or will cause significant property destruction.
Low Hazard	Is typically defined as a dam whose failure will cause minimal property destruction.

High Hazard Potential Dams may be classified due to the type of construction materials used, the methods used in construction, the slope or cross-section of the dam, the way the dam resists the forces of water pressure behind it such as controlling seepage, and storage characteristics.

1.2 Causes of Dam Failure

Partial or full failure of dams has the potential to cause massive destruction to the ecosystems and communities located downstream. Most dams are typically engineered to withstand a flood with a computed risk of occurrence, such as a 100-year flood, which has a 1% probability of occurring in any given year. As the inflow to the water stored behind a dam approaches the dam's capacity, emergency measures can usually be taken to release the excess water stored in the dam. An emergency spillway is required to be built into dam structures within Utah to release excess water. If emergency measures are not taken, the dam structure may overtop, which occurs when water breaches the top of the dam. Overtopping can lead to dam failure and is the primary cause of earthen dam failures in the United States. Dam failures can also result from the following causes

- Inadequate or negligent operation, maintenance, and upkeep
- Internal erosion caused by embankment or foundation leakage or piping, root growth, and rodent/wildlife activity.
- Earthquake/seismic activity
- Prolonged periods of rainfall and flooding resulting in overtopping
- Improper design
- Inadequate spillway capacity resulting in excess overtopping flows and
- Deliberate acts of sabotage (terrorism)

Many dam failures in the United States have been secondary results of other disasters. The most common causes are earthquakes, landslides, extreme storms, equipment malfunction, structural damage, foundation failures, and sabotage. Poor construction, lack of maintenance and repair, and deficient operational procedures are preventable or correctable with regular inspections. Terrorism and vandalism are serious concerns that all operators of public and private facilities must plan for. These threats are continually reviewed by public safety agencies.

1.3 Wasatch County Lake Creek Debris Basin Dam Description

The Wasatch County Lake Creek Debris Basin was constructed in 1987 using the on site gravely soils. It has a surface area of 3 acres and holds 19 ac-ft in storage when the water elevation is at the spillway crest. The dam has a crest length of about 176 feet and is founded on native soils, primarily composed of fine to coarse sandy fine and coarse gravel with numerous cobbles and some occasional boulders. The Dam Safety database reports that the crest elevation of the dam is 6044 feet (DWR/DS, 2025).

The Wasatch County Lake Creek Debris Basin is utilized for flood control and is owned by Wasatch County.

The Wasatch County Lake Creek Debris Basin is classified as a High Hazard Dam by the State of Utah (DWR/DS, 2025). High-hazard dams have a high probability of causing loss of human life or extensive economic loss due to failure (Utah Code Section 73-5a-106). A catastrophic dam failure could challenge local emergency response capabilities in Wasatch County and Heber City, potentially requiring evacuations to save lives, depending on the warning time and available resources. The failure of the dam could potentially damage natural resources and loss of life could result, as well as potentially catastrophic effects to roads, bridges, homes, and other critical infrastructure. Factors that will influence the potential severity of a full or partial dam failure include the amount of water impounded, the density, type, and value of development and infrastructure downstream, the characteristics of the river channel, and the speed of failure.

2.0 Existing Plans, Studies, Reports, and Technical Information

2.1 Planning Requirements

Wasatch County coordinated with the Utah Division of Water Rights Dam Safety Section, the Utah Division of Water Resources, and other stakeholders. Sensitive and/or personally identifiable information was protected. Information available through the [DAMVIEW](#) Dam Safety Database Information Viewer includes correspondence, dam safety inspection reports, inundation maps, construction reports, hazard mitigation plans, emergency action plans, and dam survey reports. DamView also protects sensitive and/or personally identifiable information.



For the addendum to the 2022 Pre-Disaster Hazard Mitigation Plan, Jeremy Hales, Wasatch County's Emergency Manager, and Terry Ekker, Wasatch County Public Works Director, were included in the Nov 2025 letter from the Division of Water Resources requesting an update to the Pre-Disaster Mitigation Plan to fulfill HHPD requirements. Following this request, MAG met with the Steering Committee for the plan update on Feb 24, 2026, including representatives from Utah and Wasatch Counties. There were intermittent emails to coordinate the addendum, such as owner responsibilities, additional studies, dam construction, and timelines. Collaboration on the document itself included sharing local knowledge of the vulnerable population, verifying assets in the inundation area, and mitigation strategies. Ben Marett of the DNR, Division of Water Resources, was given access to the draft document and advised on the suitability of specific mitigation strategies. The County Emergency Manager attended multiple meetings regarding disaster mitigation between March and April 2026, and the addendum was shared with all parties (DWR, Utah DEM, County Emergency Managers, and responsible parties) before initial submission to FEMA.

The Division of Water Resources (Different from the Division of Water Rights) manages and administers funding from the State Dam Safety Grant and the High Hazard Potential Dams Grant, awarded through FEMA. They work closely with the Dam Safety Section of the Division of Water Rights to award funding according to priority as assessed by the Dam Safety Section. As funding from the State Dam Safety Grant and FEMA becomes available, the Division of Water Resources reaches out to local governments and dam owners (based on the priority assessment) and invites them to apply.

Both the Division of Water Resources and The Division of Water rights participate in the planning, design, and construction aspects of dam rehabilitation projects to ensure that projects are being designed and built in accordance with minimum state standards, to ensure that work being invoiced is actually being performed, and that dam owners and local government have everything they need to successfully execute a dam rehabilitation project. The Dam Safety Section in the Division of Water Rights is responsible for reviewing and approving construction drawings and specifications, construction monitoring, reviewing and approving Emergency Action Plans (EAP's), and annual inspections.

The Utah Dam Safety Program uses a three-tier hazard rating system that indicates

the magnitude of the potential impact of an incident. This rating system considers variables such as the concentration of life and property located downstream, the size, height, volume, and the incremental risk/damage assessments of the dam. The Wasatch County Lake Creek Debris Basin is rated as a High Hazard Potential Dam, which is a dam whose failure will cause loss of human life and significant property destruction. The Utah Dam Safety Program prioritizes inspections of dams with a high hazard rating, inspecting these dams each year. Wasatch County Lake Creek Debris Basin has had an Emergency Action Plan (EAP) since 2009.

Dams are unique components of U.S infrastructure, with many being privately owned. Dam owners within the State of Utah are solely responsible for keeping their dams safe and financing maintenance, repairs, and upgrades, which can be costly. Wasatch County, as the owner of the Wasatch County Lake Creek Debris Basin, has responsibility for the safe operation, maintenance, and repair of the dam under normal conditions and the implementation of the Wasatch County Lake Creek Debris Basin Dam Emergency Action Plan under the emergency conditions described in the plan. The Wasatch County Public Works is responsible for the day-to-day operation and normal maintenance of the dam and the Wasatch County Public Works Director is responsible for activating the EAP procedures within the plan. Wasatch County is also responsible for performing the following during emergency conditions such as a failure, mis-operation, or flooding caused by excessive runoff:

- Determine and Identify Emergency Conditions or Events
- Evaluate Emergency Conditions or Events
- Initiate Notification Flowchart Calls (Dispatch, other Public Utilities, Staff, etc.)
- Notify Evacuation Personnel (Sheriff, Highway Patrol, Emergency Services, etc.)
- Take Appropriate Emergency Measures at the Dam to Prevent Failure
- Obtain Emergency Supplies and Equipment

The State Engineer and Director of the State of Utah Division of Water Rights, has the authority to regulate the safety of dams to protect life and property and oversees the state's Dam Safety Section. The Division of Water Rights' dam safety staff work to identify safety concerns and maintenance issues. However, it is Wasatch County's responsibility, as the dam owner, to coordinate and make the



necessary adjustments and repairs. Wasatch County is responsible for all duties, obligations, and liabilities that come with dam ownership in the State of Utah. However, no person may construct, enlarge, repair, alter, remove, or abandon any dam or reservoir without obtaining written approval from the State Engineer. The Utah Division of Water Rights inspects high-hazard dams annually, such as Wasatch County Lake Creek Debris Basin.

Figures 1-3 show the locations of high-and moderate/significant hazard dams in Wasatch County, along with their inundation areas, where available, including the Wasatch County Lake Creek Debris Basin. Dam-failure inundation areas are relatively few compared to the number of dams on the map. This scarcity is due to many dam inundation areas not being delineated or readily available. Consequently, planners often have to infer where high-hazard areas exist. One approach to overcoming this limitation is to increase digital inundation modeling and mapping as methods become automated and more affordable. Understanding dam failure inundation is crucial for identifying areas of exposure and potential impact.

Figure 1. Wasatch County High and Moderate Hazard Dams

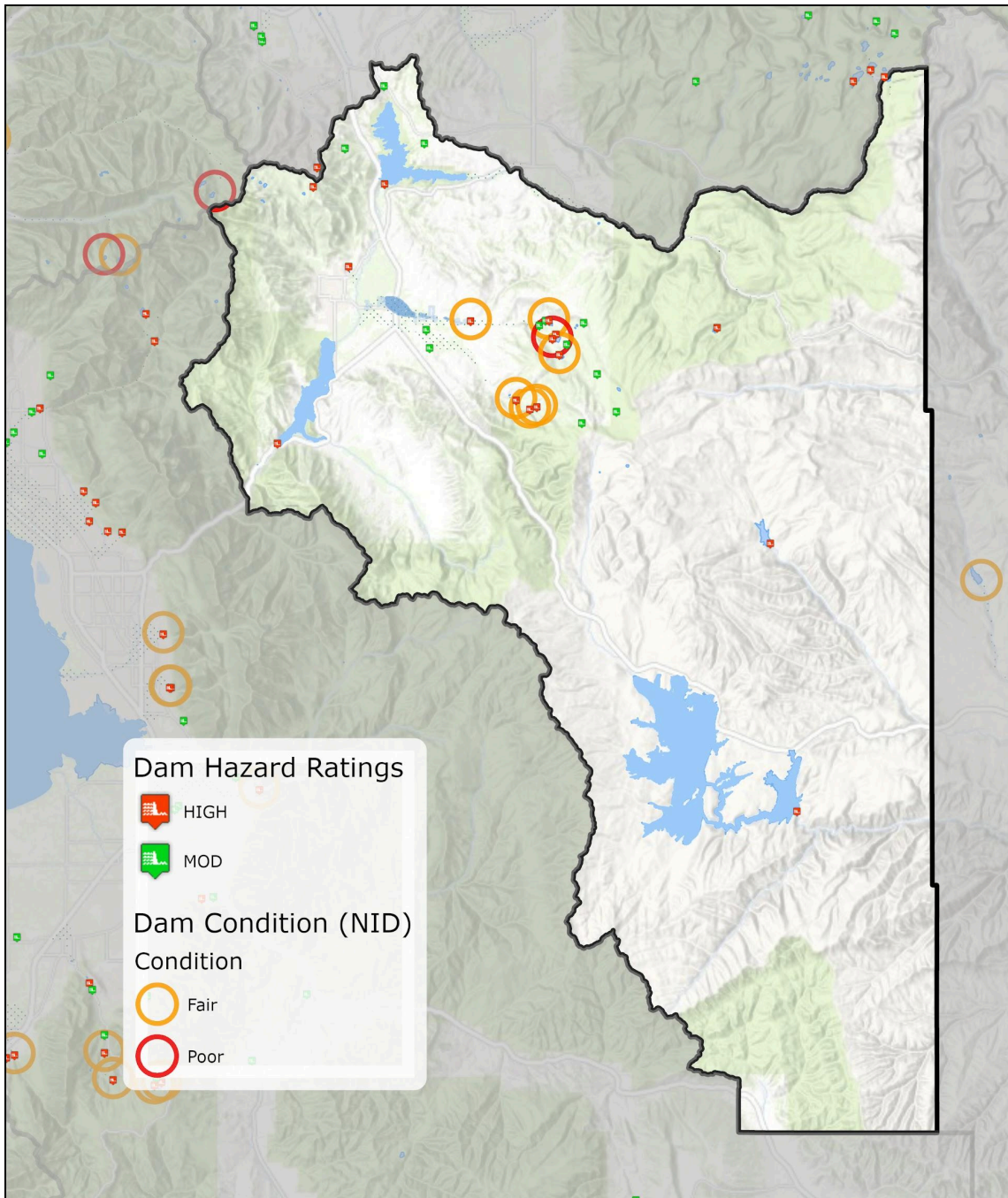


Figure 2. Wasatch County High and Moderate Dam Inundation Areas

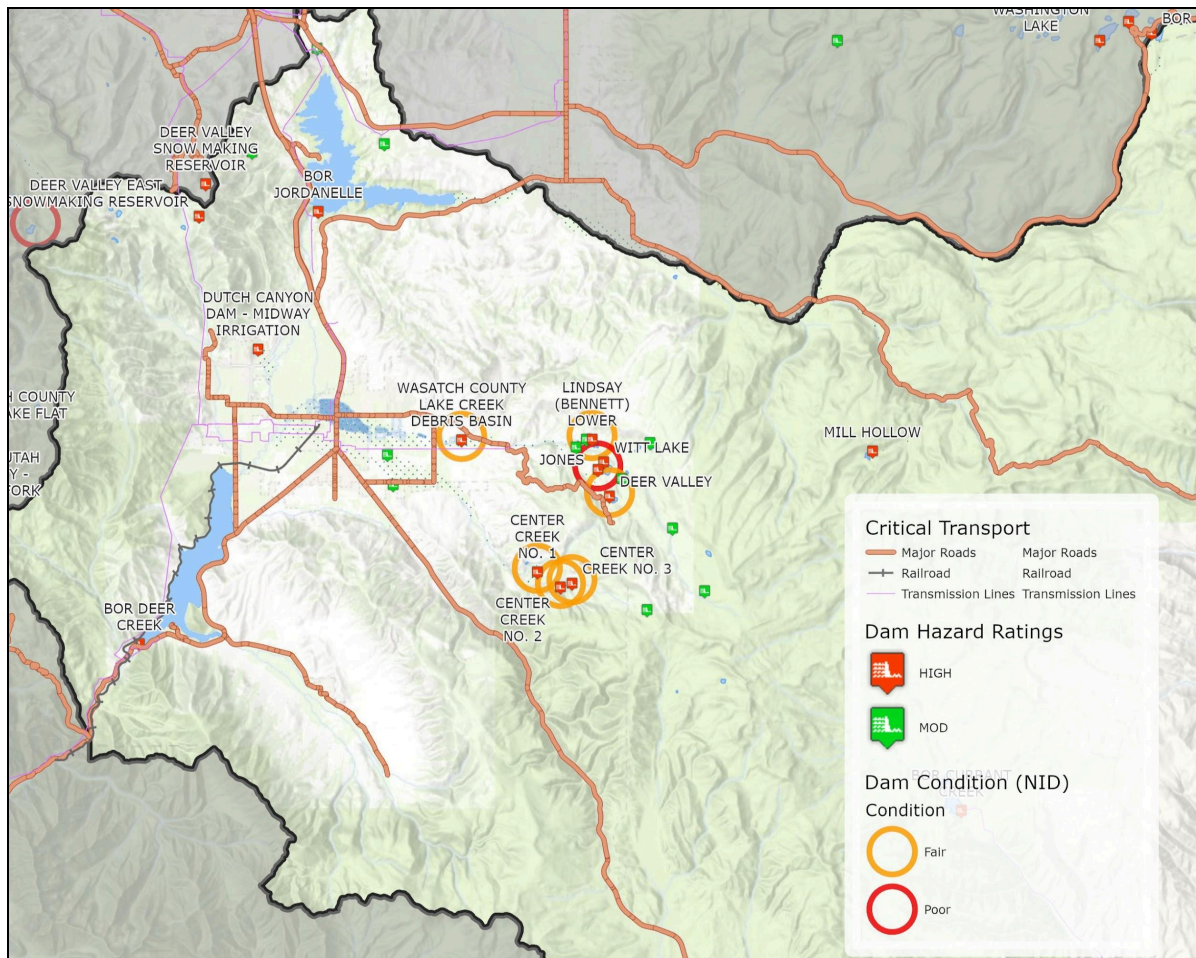
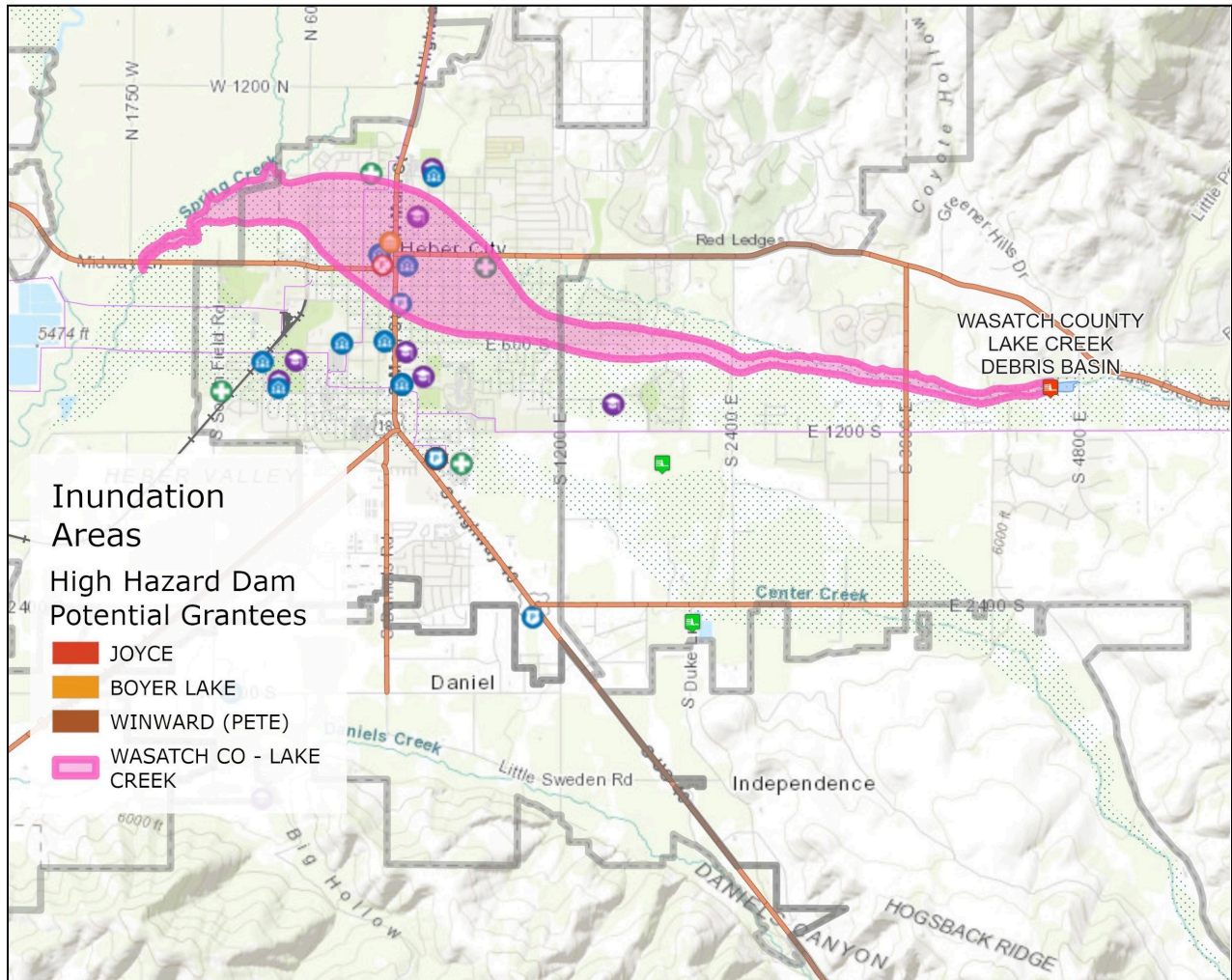


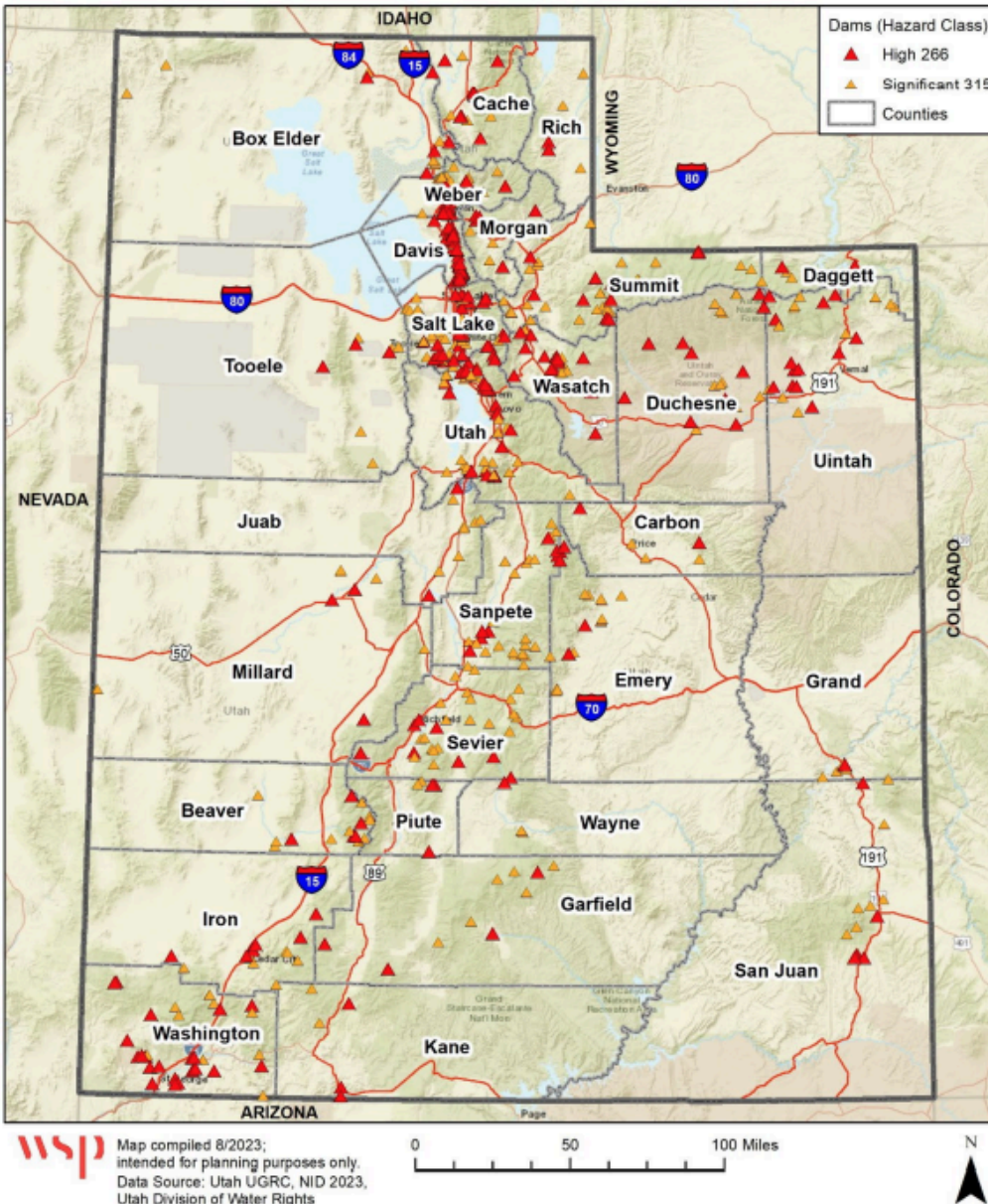
Figure 3. Wasatch County Lake Creek Debris Basin



2.2 State of Utah Local Hazard Mitigation Plan Assessment

The State of Utah's Hazard Mitigation Plan includes a map that ranks hazards, including dam failure, for each county. Wasatch County is ranked as 'Moderate' regarding flooding and dam failure as a hazard.

Figure 4. Dam Failure Rankings from LHMPs



Source: State of Utah Hazard Mitigation Plan (2024)

3.0 Dam Failure and HHPD Risk Assessment (HHPD2)

3.1 Past Occurrences

The history of dam failures in the State of Utah can provide valuable lessons for decision-makers and local communities that a dam failure may impact. Below is a summary of notable incidents that have occurred in the State of Utah over the past 75 years. It is noteworthy to report that dam failures occurring outside of Utah can impact potential jurisdiction within our state due to floodwaters entering local areas, causing road damage.

Little Deer Creek Dam Failure (1963)

Little Deer Creek Dam failed on its first filling due to extensive foundation seepage caused by construction deficiencies on June 16, 1963. The catastrophic failure resulted in the drowning of a four-year-old child.

Laub Detention Dam Failure (2012)

The Laub Detention Dam breached on September 11, 2012, flooding parts of Santa Clara and St. George. The failure was declared a major disaster by President Obama; however, no lives were lost. The cause of failure was internal erosion during a heavy precipitation event, likely triggered by animal burrows. The Dam was rebuilt in 2013 and renamed "Tuacahn Wash Lower Detention Basin."

21 Mile Dam Failure (2017)

The 21 Mile Dam failure occurred in Elko County, Nevada on February 8, 2017. The dam failed due to heavy runoff from a rain-on-snow event. The earthen dam breached, causing flooding that damaged ranches and destroyed parts of the State Route 233 as well as a section of the Union Pacific railroad. Floodwater impacted northwestern Utah, causing road damage.

Trial Lake Dam Failure (1986)

The Trial Lake Dam failed in 1986 from the piping of organics in the foundation contact. It was then rebuilt in 1991 to modern safety standards.

Panguitch Lake Dam (2024)

-Extensive cracking, which was likely due to ice pressure, forced officials to close

State Route 143 and issue a flood watch. Crews lowered the reservoir and reinforced the dam to prevent a breach. An emergency spillway was quickly constructed to maintain safe water levels and meet storage restrictions. The \$3.7 million dollar reconstruction of the dam began in 2025. (Utah Division of Water Rights Press Release, July 14, 2025)

3.2 Probability

The probability of a future dam failure of Wasatch County Lake Creek Debris Basin has not been quantified, either by government agencies or other local partners. However, indicators exist that provide insight into the likelihood of future dam failures.

The first indicator is the frequency of dam failure incidents in the past. According to the 2024 Utah Hazard Mitigation Plan, the state has experienced roughly one notable incident per decade over the past 75 years. This provides planners and local officials with a rough understanding of the typical frequency of dam incidents in the State of Utah.

The second indicator is the age of the dam, which provides a rough estimate of the future probability of failure. Dams deteriorate over time and have a designed lifespan, meaning the likelihood of failure increases as they age. The Wasatch County Lake Creek Debris Basin, completed in 1987, is classified as a high-hazard dam and is now over 30 years old.

A third indicator of a future dam failure is the dam safety condition rating. The rating is based on dam inspections and assesses the safety conditions of dams on a four-tier scale, as referenced below.

NID Rating	Definition
Satisfactory	No existing or potential dam safety deficiencies are recognized.
Fair	No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency.
Poor	A dam safety deficiency is recognized for loading conditions that may realistically occur. Remedial action is necessary. Poor may also be used when uncertainties exist as to critical analysis parameters that identify a potential dam safety deficiency. Further investigations and studies are necessary.
Unsatisfactory	A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.

Table 2. Dam Safety Condition Definitions

No probability of failure has been assigned to dams in the State of Utah by any agency or entity. The Wasatch County Lake Creek Debris Basin has been given a rating of fair, indicating that Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency.

3.3 Geography Impacted

Land cover significantly affects hazard vulnerability as winter storms bring several feet of snow to the mountains, especially near Wasatch County Lake Creek Debris Basin Dam. Wasatch County is also susceptible to wildfire hazards due to the forest coverage. As urbanization occurs, areas that were once covered with trees and grass are being replaced by impervious surfaces, such as roads and parking lots. This type of urbanization within Wasatch County and Heber City reduces infiltration of rainwater and snowmelt, increasing the amount of runoff and potential for flash flooding.

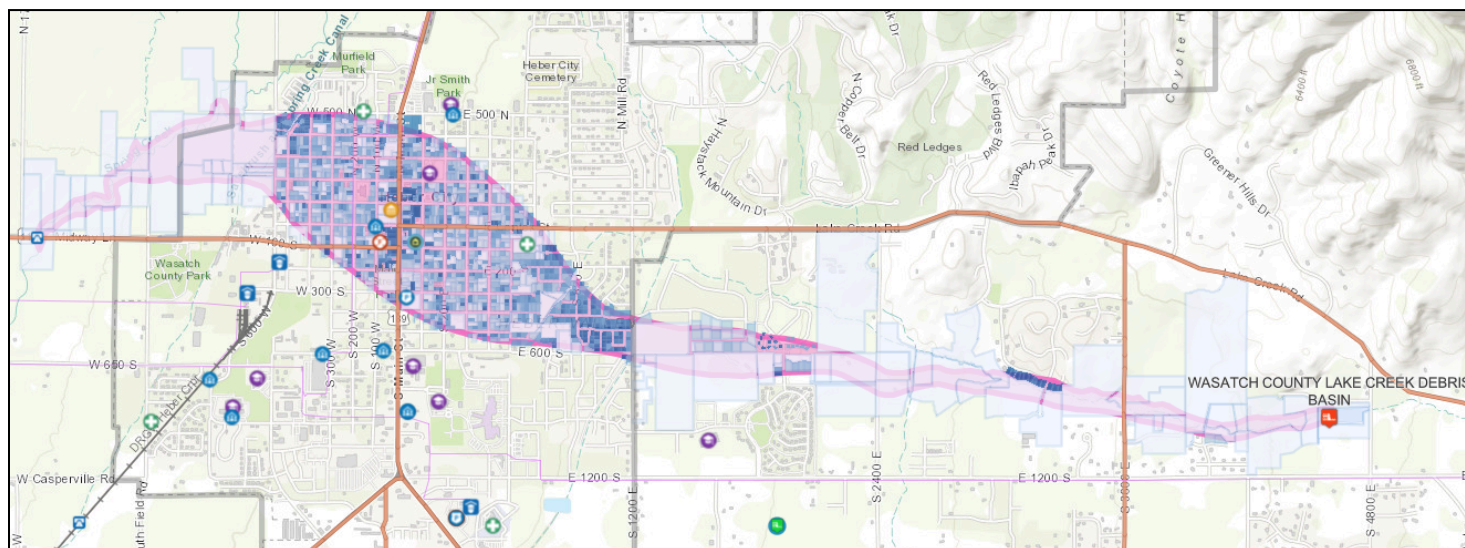
Many hazards, such as dam failures, wildfires, and floods, impact overlapping federal, state, and private lands. For example, a dam failure may impact federal land and private land. Mitigation projects are often made possible through partnerships among local, state, federal, and private agencies, which may require permits to work on federal land. Coordinating with federal agencies is integral to Utah's disaster planning and recovery efforts.

The ecosystem within and surrounding the Wasatch County Lake Creek Debris Basin is primarily Mountain Valleys, containing terraces, flood plains, alluvial fans, and hills. It is affected by cold temperatures and has a short growing season. Potential natural vegetation is mostly Great Basin sagebrush. Today, irrigated cropland, irrigated pastureland, and rangeland are common. The U.S. Fish and Wildlife Service maintains a regular listing of threatened species, endangered species, species of concern, and candidate species for counties across the United States. Utah has 44 species that are listed with the U.S. Fish and Wildlife Service (five birds, ten fish, 25 flowering plants, three mammals, and one reptile). The species of greatest conservation need in the Center Creek area are the Monarch Butterfly, Flammulated Owl, Columbia Spotted Frog, and Bonneville Cutthroat Trout. None is federally listed as threatened or endangered.

3.4 Risk/Vulnerability Analysis

The first analysis identified exposure of local, county, state, and critical infrastructure assets to a dam incident for the Wasatch County Lake Creek Debris Basin Dam. Figure 5 shows the Wasatch County Lake Creek Debris Basin outlined in pink with affected parcels' value per acre in blue and includes GIS data for community centers, schools, fire stations, law enforcement stations, Wasatch County and Heber City facilities, health care facilities, power plants, solid waste facilities, and wastewater treatment plants. The data was overlaid with the Probable Maximum Flood dam inundation information for the Wasatch County Lake Creek Debris Basin to determine the risk. As far as seasonality goes, the dam only holds water during the runoff season and is empty at other times. Damage would likely coincide with high-runoff events such as a sudden thaw or high rainfall around May and June.

Secondary Hazards Raw sewage/health risk, electrical fires, gas spills.

Figure 5: Potential Losses from Wasatch County Debris Basin Failure

Legend
Critical Infrastructure

-  Bridge
-  Power Plant
-  Solid Waste
-  AIRPORT

Critical Facilities

-  School
-  Health Care
-  Shelter
-  Fire Station
-  Law Enforcement
-  City Hall
-  Emergency Operations Center

Critical Transport

-  Major Roads
-  Railroad
-  Transmission Lines

Dam Hazard Rating
Hazard Rating

-  High
-  Moderate

Building Parcels attached to Dams - Wasatch


Value per Acre

Structures and Infrastructure at Risk

Population at risk	3,400 (estimate based on 2.83 occupants/building)
Buildings at risk	1,200
Total Building Value	\$474,269,067
Substations	0
Major Road	1.72 miles
Transmission Line	0.74 miles
Critical Facilities	8
Health	Wasatch County Health
Schools	Wasatch Learning Academy (online school)
Police	Heber City Police Dept
Fire	Wasatch County Fire District - Heber City
City Hall	Heber City Hall
Shelter	Wasatch County Event Center and Saint Lawrence Church
Solid Waste	Disposal at Event Center

Figure 6 shows the locations of all available high-hazard and significant-hazard dams in Utah and inundation areas, including Wasatch County Lake Creek Debris Basin Dam. The 81 federally owned dams with high or significant hazard potential are indicated with yellow circles.

Legend:

- Federally Owned Dams (Yellow circle)
- Dams (Hazard Class)
 - High 266 (Red triangle)
 - Significant 315 (Orange triangle)
- Dam Inundation (Pink shaded area)
- Counties (Black outline)

Map Labels: IDAHO, WYOMING, NEVADA, COLORADO, ARIZONA, Box Elder, Cache, Rich, Weber, Morgan, Davis, Salt Lake, Summit, Daggett, Tooele, Utah, Wasatch, Duchesne, Uintah, Juab, Carbon, Sanpete, Emery, Grand, Millard, Sevier, Wayne, Beaver, Piute, Garfield, Iron, Washington, Kane, San Juan.

Scale: 0 50 100 Miles

**Map compiled 1/2023;
intended for planning purposes only.
Data Source: Utah AGRC, NID 2023,
Utah Division of Water Rights**

3.6 Population Impacts

The impact of dam failure hazards on people in Wasatch County and Heber City is similar to riverine flooding, but the potential magnitude and sudden onset of dam-induced flooding can be especially catastrophic. Potential impacts range from death and physical harm to displacement, property damage, and inconvenience. Road closures due to damage, road congestion, and possible disruptions to services such as utilities, power, water supply, and wastewater are all potential consequences.

Vulnerable populations will experience the impacts of a dam failure more severely. Tools like the Social Vulnerability Index have been developed to help planners and local officials understand and identify the characteristics and locations of vulnerable individuals.

The Social Vulnerability Index, using 2022 census information, was overlaid with municipal boundaries and inundation data in ArcGIS Pro to assess the socially vulnerable populations that could be impacted by the Wasatch County Lake Creek Debris Basin failure. Figure 7 shows the different areas within the inundation zones, indicating ranges from high to low levels of vulnerability. Populations in the inundation areas are relatively low to low vulnerability.

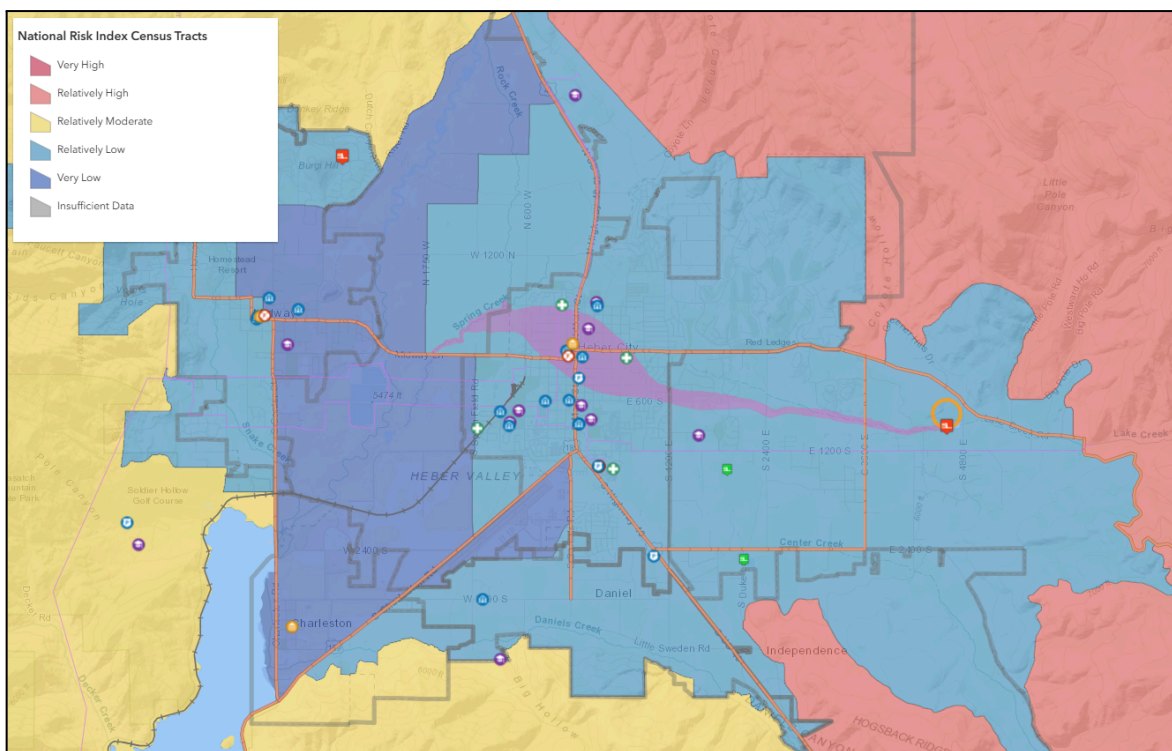


Figure 7 Social Vulnerability Index

3. 7 Community Lifelines and Infrastructure at Risk

In the aftermath of a dam incident, such as a high-hazard dam failure, any and/or possibly all community lifelines will be impacted. The immediate concern is the safety and security of the population residing in inundated areas. It is likely that access to food, water, shelter, and healthcare will be compromised and/or possibly overwhelmed based upon the cascading impacts of failure. Dam failures have been notoriously destructive, with impacts to above-ground power distribution and generation expected. The same can be said for transportation, including damaged roadways. Cellular communications may also be impacted or possibly overwhelmed. However, inundation zones are relatively narrow and elongated, allowing unaffected transmission towers to service inundated areas. The possible release of hazardous materials is an area of uncertainty and unpredictability, especially with the amount of truck traffic on US40. However, what does seem certain is a widespread impact, although articulating precisely what these impacts mean and how to mitigate them is a difficult knowledge gap to fill.

Dam safety concerns include not only the potential impact on the community but also the vulnerability of dams to hazards such as floods, earthquake ground shaking, surface faulting, and landslides, all of which pose a risk of dam failure. According to the National Risk Index, Wasatch County's risk index rating is low compared to the rest of the United States. This rating reflects a combination of expected annual loss, low social vulnerability, and relatively high community resilience.

The Risk Index scores are calculated using an equation that combines scores for Expected Annual Loss due to natural hazards, Social Vulnerability, and Community Resilience ($\text{Expected Annual Loss} \times \text{Social Vulnerability} \div \text{Community Resilience} = \text{Risk Index}$). While dam failure is not calculated individually within the National Risk Index, the Wasatch County Lake Creek Debris Basin is susceptible to failure due to an earthquake or other seismic events.

4.0 Mitigation Goals to Reduce Long-Term Vulnerabilities from HHPD's

4.1 Mitigation Strategies

The core of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. This strategy outlines how the community will achieve the overall purpose, or mission, of the planning process. In this section, mitigation goals and objectives were reevaluated and updated. Mitigation actions and projects were identified, evaluated, prioritized, and, where necessary, amended.

4.2 Mitigation Goals

The Mitigation Planning Team has organized resources, assessed hazards and risks, and documented mitigation capabilities. Based on these tasks, the team developed the resulting goals, objectives, and mitigation actions. A series of meetings was held to develop the mitigation strategies detailed throughout this section.

The goals for this mitigation plan are statements that:

- Represent the desires of the entire community
- Include all members of the community, both public and private
- Can be accomplished in the near-term or long-term future

These goals form the basis for the objectives and actions to be taken, regardless of the feasibility of implementation. Objectives differ from goals in that they define specific, measurable strategies to accomplish the goals.

Goal 1

Reducing the impact of natural hazards on life, property, and preserving the environment

Goal 2

Minimizing damage to infrastructure and services and protecting their ability to respond

Goal 3



Preventing potential hazards from affecting area or mitigating its effects

Goal 4

Increasing public awareness, capabilities and experience

Goal 5

Ensuring the safety of citizens and visitors

Goal 6

Enabling cooperation between citizens and emergency and public services

Goal 7

Maintaining cooperation with, and adherence to, FEMA guidelines

Goal 8

Developing zoning and other plans that decrease development in hazardous areas

5.0 Mitigation Actions for HHPD and Prioritization (HHPD4)

The mitigation action implementation plan for HHPD contains seven total actions detailed within this section. Background information on each action, along with implementation and administration details such as responsible office, partners, potential funding, estimated cost, and timeline, are provided. These actions target reducing losses for both existing and future developments.

5.1 Mitigation Action Estimated Cost Parameters

The "Cost Estimate and Potential Funding Sources" column describes the estimated costs. Although the preference is to provide definitive costs (in dollar figures) for each mitigation strategy/action, this is not possible for every strategy/action. Therefore, the estimated costs for the mitigation initiatives identified in this addendum are categorized as high, medium, or low, according to what each jurisdiction considers within its power.

Potential mitigation funding sources are referenced for each action; however, these are not intended to be an exhaustive list of funding opportunities. As efforts to complete individual actions progress, the best available funding sources will be

evaluated and pursued. Many actions involve efforts that fall within the regular functions of state, county, and municipal governments, as well as the duties of their staff. Additional relevant funding sources are listed where applicable (denoted by 'staff time' or 'minimal'). General funds, which refer to local funds/budget, may also be utilized where appropriate.

5.2 Mitigation Action Timeline Parameters

While the preference is to provide definitive project completion dates, this is not possible for every mitigation strategy/action. Therefore, cities identified and anticipated year of implementation, ongoing programs, or long-term strategies, usually more than 5 years out.

5.3 Mitigation Action Prioritization Process

The action plan must be prioritized according to a benefit/cost analysis of the proposed projects and their associated costs (44 CFR, Section 201.6(c)(3)(iii)). The benefits of proposed projects were weighed against estimated costs as part of the project prioritization process. The benefit/cost analysis was not of the detailed variety required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. Instead, a less formal approach was used because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. Therefore, a review of the apparent benefits versus the apparent costs of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to the costs and benefits of these projects.

The guiding factor in prioritizing mitigation strategies for local communities was the principle that mitigation should provide the greatest amount of good to the greatest number of people, after considering resources, staffing, and other constraints. Probability of occurrence, past events, and damage estimates compiled during the risk assessment in this plan were heavily considered. Overall, each community individually considered its own capabilities, staffing, and resources as it prioritized its own mitigation strategies.

For many of the strategies identified in this action plan, the partners may seek financial assistance under the HMGP or HMA programs, both of which require detailed benefit/cost analyses. These analyses will be performed on projects at the time of application using the FEMA benefit-cost model. For projects not seeking financial assistance from grant programs that require detailed analysis, the partners reserve the right to define "benefits" according to parameters that meet the goals and objectives of this plan.

Mitigation Action #1	
Action description	Complete Planning and Study for Wasatch County Lake Creek Debris Basin Dam Rehabilitation
Mitigation Goal	Goal #1, #2, #3, #5
Assessing the Risk	
Risk(s) addressed	Analyze current risk, evaluate structure, and plan/design remediation.
Implementing the Action	
Cost estimate	High
Timeline	Short-Term
Potential funding sources Example: FEMA Hazard Mitigation Grant Program (HMGP), local budget for match	General Funds, FEMA HHPD Grant Program, State Dam Safety Grant
Responsible party	Wasatch County Public Works
Partner agencies (optional)	Wasatch County Emergency Management, Utah Division of Water Rights Dam Safety Section
Priority and Level of Importance (Low, Medium, High)	High

Mitigation Action #2



Action description	Enhance Spillway Capacity of the Lake Creek Debris Basin Structure
Mitigation Goal	Goal #1, #2, #3
Assessing the Risk	
Risk(s) addressed	Seepage along downstream face Lack of toe drain and piping susceptibility Distressed concrete on spillway and spillway capacity concerns for the probable maximum flood Upstream culvert capacity Other risks identified in previous study project
Implementing the Action	
Cost estimate	High
Timeline	Short-Term
Potential funding sources Example: FEMA Hazard Mitigation Grant Program (HMGP), local budget for match	General Funds, FEMA HPPD Grant Program, HMPG, State Dam Safety Grant
Responsible party	Wasatch County Public Works
Partner agencies (optional)	Wasatch County Emergency Management, Utah Division of Water Rights Dam Safety Section
Priority and Level of Importance (Low, Medium, High)	High