

Addendum: Boyer Dam High Hazard Potential Dam

1.0 General Overview

1.1 Definition and Classification of Dams

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

According to a 2002 engineering study of Boyer Dam, the most probable causes of damage are earthquake ground shaking, landslides, and hydrologic springs. In general, 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 must be built into dam structures in Utah to release excess water. If emergency measures are not taken, the dam structure may overtop, meaning 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
- Landslide around the reservoir
- 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 Boyer Dam Dam Description

Boyer Dam and reservoir are part of a water system owned by the Chalk Creek-Hoytsville Water Users Corporation to supply irrigation water to agricultural lands located in Summit County. It is adjacent to Joyce Lake, which drains into Boyer Lake. The Boyer Dam was constructed in 1939 using the on-site soils. It has a surface area of 30 acres and holds 1200 ac-ft in storage when the water elevation is at the spillway crest. The dam has a crest length of 850 feet and is founded on native soils, primarily Pleistocene to Holocene landslide deposits composed of clay, sand and gravel, and large rock blocks. The Dam Safety database reports that the dam's crest elevation is 9430 feet (DWR/DS, 2025).

The Boyer Dam is utilized for flood control and is owned by Chalk Creek-Hoytsville Water Users Corporation.

The Boyer Dam 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 in the event of failure (Utah Code Section 73-5a-106). A catastrophic dam failure could challenge local emergency response capabilities in Summit County and Coalville, potentially requiring evacuations to save lives, depending on the warning time and available resources. The failure of the dam could result in damage to natural resources, loss of life, and catastrophic effects on 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

Summit County Emergency Management coordinated with the Utah Division of Water Rights Dam Safety, Division of Natural Resources, Summit County, Public Utilities, local jurisdictional emergency managers, and other critical local/state stakeholders. 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 protects sensitive and/or personally

identifiable information.

Minutes of a July 16, 2025 [Summit County Council](#) include a formal agreement between Summit County and the Chalk Creek-Hoytsville Water Users Corporation for Summit County to act as the fiscal partner receiving funds for the HHPD grant with the Water Users Corporation completing the work. For the addendum to the 2022 Pre-Disaster Hazard Mitigation Plan, Kathryn McMullin, Summit County's Emergency Manager, and Rodney Bagnell, of the Chalk Creek-Hoytsville Water Users Corporation, 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, 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 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 execute a dam rehabilitation project successfully. 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 downstream, the size, height, volume, and incremental risk/damage assessments of the dam. The Boyer Dam is rated as a High Hazard Potential Dam, meaning its failure will cause loss of human life and significant property damage. The Utah Dam Safety Program prioritizes inspections of high-hazard dams, inspecting them each year. Boyer Dam has had an Emergency Action Plan (EAP) since 2008 and updated it in 2024.

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. The Chalk Creek-Hoytsville Water Users Corporation, as the owner of the Boyer Dam, has responsibility for the safe operation, maintenance, and repair of the dam under normal conditions and the implementation of the Boyer Dam Emergency Action Plan under the emergency conditions described in the plan. The Chalk Creek-Hoytsville Water Users Corporation is responsible for the day-to-day operation and routine maintenance of the dam and for activating the EAP procedures outlined in the plan. The Chalk Creek-Hoytsville Water Users Corporation is also responsible for performing the following during emergency conditions, such as a failure, misoperation, 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 Chalk Creek-Hoytsville Water Users Corporation's responsibility, as the dam owner, to

coordinate and make the necessary adjustments and repairs. Chalk Creek-Hoytsville Water Users Corporation is responsible for all duties, obligations, and liabilities associated 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, such as Boyer Dam, annually.

Figures 1-3 show the locations of high- and moderate/significant-hazard dams in Summit County, along with their inundation areas, where available, including the Boyer Dam. 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 the location of high-hazard areas. 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. Summit County High and Moderate Hazard Dams

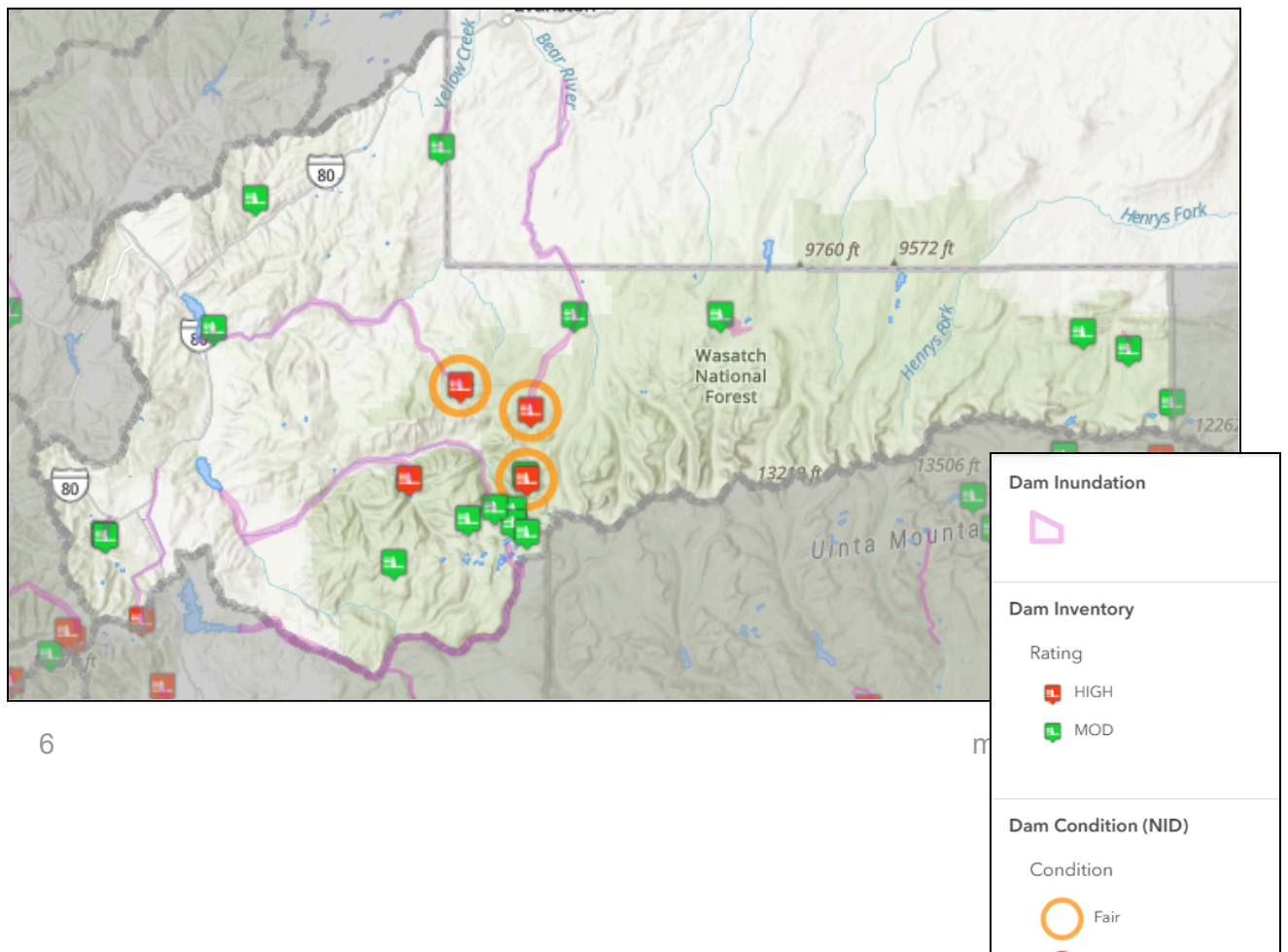
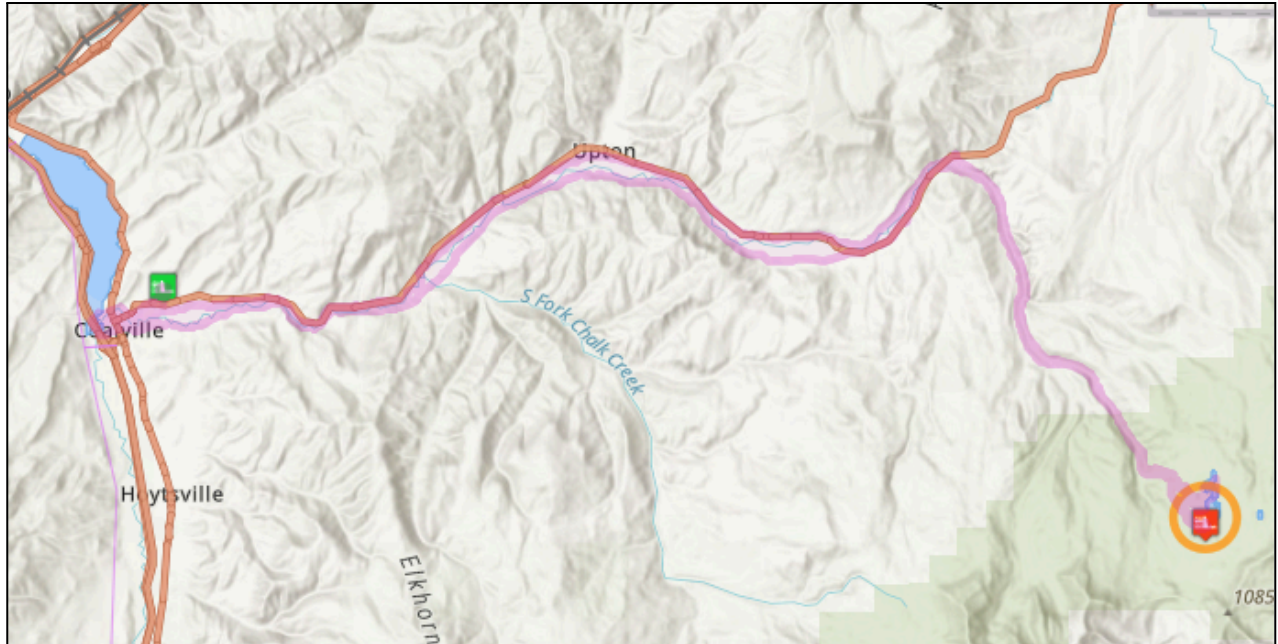
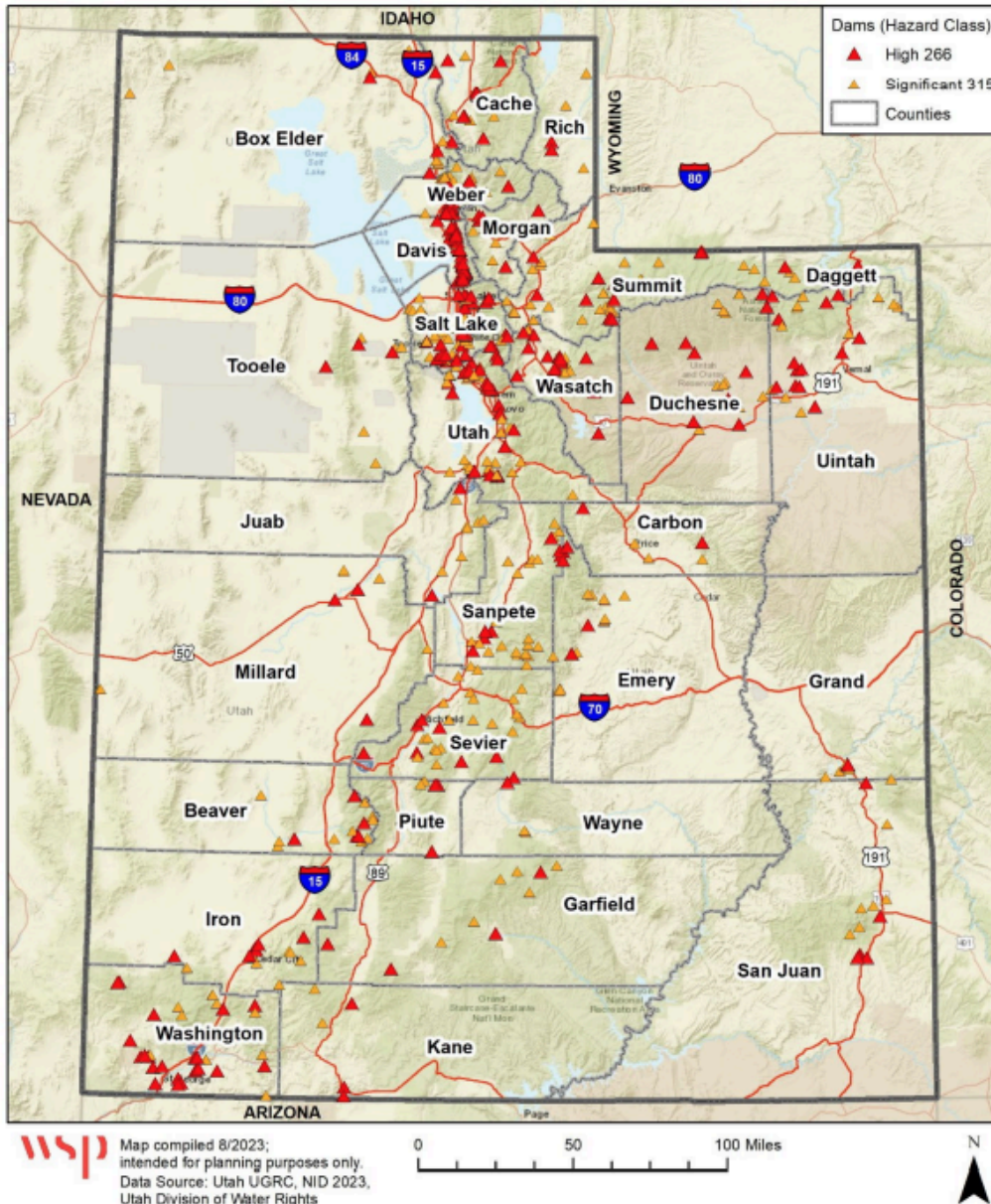


Figure 2. Boyer Dam

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. Summit County is ranked as 'Moderate' regarding flooding and dam failure as a hazard.

Figure 3. 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 may be affected by a dam failure. Below is a summary of relevant incidents that have occurred in the State of Utah over the past 75 years. It is noteworthy to report that dam failures outside Utah can affect potential jurisdiction within our state by flooding local areas and causing road damage.

Little Deer Creek Dam Failure (1963)

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

Trial Lake Dam Failure (1986)

The Trial Lake Dam in Summit County failed in 1986 due to the organic material caught between the dam and the foundation. It was rebuilt in 1991 to modern safety standards.

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."

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 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 Boyer Dam 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 past dam failure incidents. 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 dam's age, 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 Boyer Dam, completed in 1939, is classified as a high-hazard dam and is now over 85 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.

Table 2. Dam Safety Condition Definitions

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.

No probability of failure has been assigned to dams in the State of Utah by any agency or entity. The Boyer Dam 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 Boyer Dam. Summit County is also susceptible to wildfire hazards in the Uintah National Forest. 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 in Summit County and Coalville reduces infiltration of rainwater and snowmelt, increasing runoff and the 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 affect both federal 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 Boyer Dam is primarily Wasatch Hinterland, typified by mixed, moderately rugged topography, discontinuous valleys, and random stream courses (Phase II Dam Safety Study, 2002). The U.S. Fish and Wildlife Service maintains a map of critical habitat for threatened and endangered species. None are in the dam area.

3.4 Risk/Vulnerability Analysis

The first analysis identified exposure of local, county, state, and critical infrastructure assets to a dam incident for the Boyer Dam. Figure 5 shows the Boyer Dam outlined in tan with affected parcels' value per acre in blue and includes GIS data for community centers, schools, fire stations, law enforcement stations, state facilities, Summit County and Coalville facilities, health care facilities, power plants, solid waste facilities, and wastewater treatment plants. Note the mobile homes outlined in purple. The data were overlaid with estimated dam-inundation

areas for the Boyer Dam to determine the risk. The Dam is typically full from runoff from roughly April to July.

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

Table 3. Potential Losses from Joyce Dam Failure

Structures and Infrastructure at Risk	
Population at risk	700 (estimate based on 2.7 occupants/ building)
Building Value at risk	\$3,538,308
Substations	0
Major Road	4 miles
Transmission Line	0 miles
Critical Facilities	6 bridges

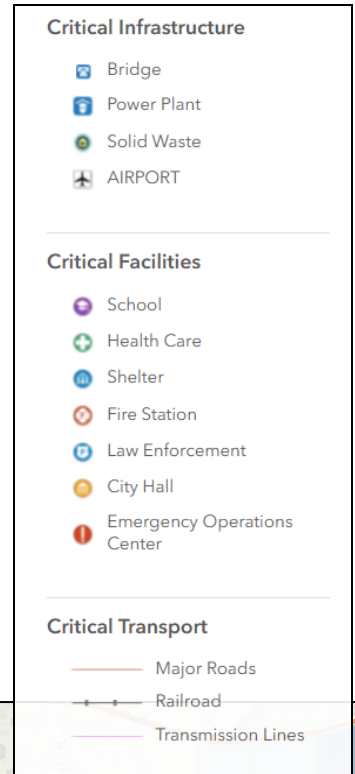
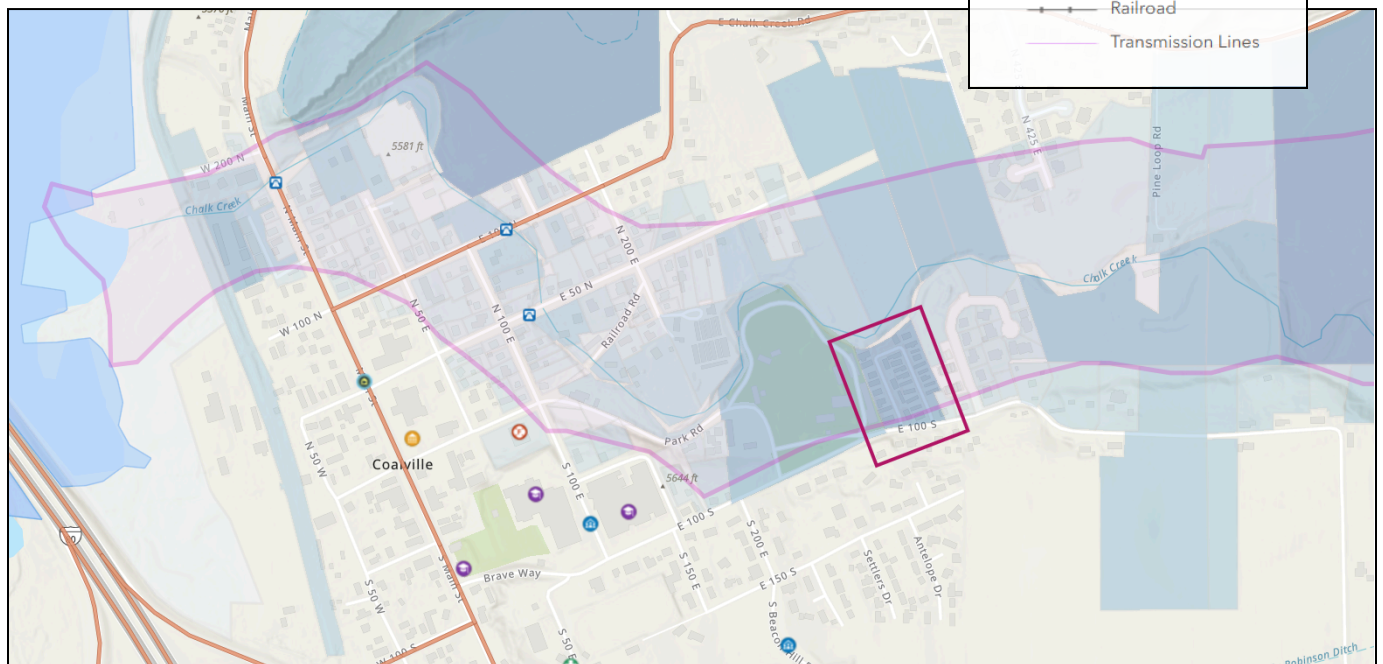


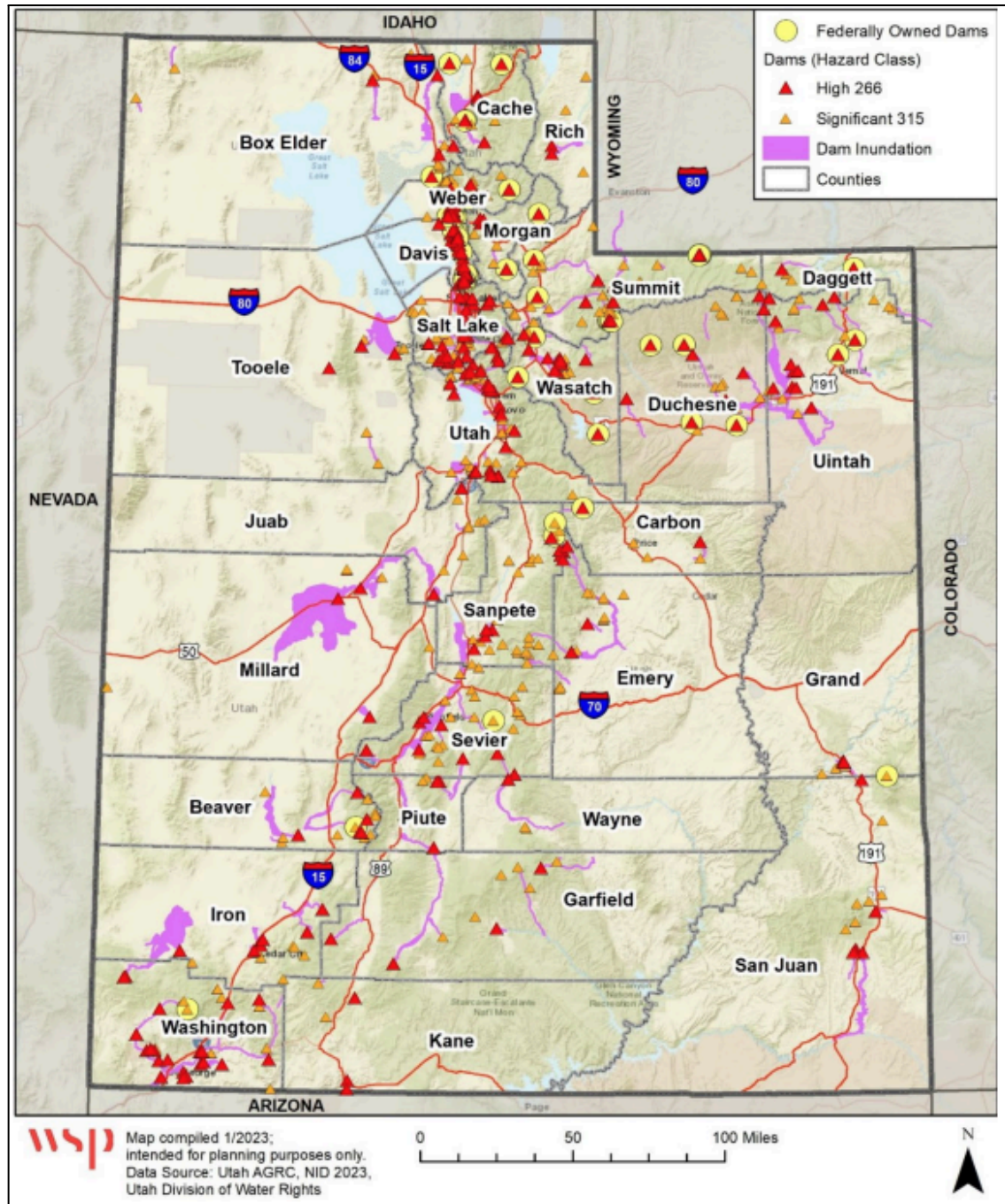
Figure 4. Joyce Dam Inundation Area



3.5 Potential Vulnerability of Jurisdictions

Figure 5 shows the locations of all available high-hazard and significant-hazard dams in Utah and inundation areas, including Boyer Dam. The 81 federally owned dams with high or significant hazard potential are indicated with yellow circles.

Figure 5. Potential Dam Inundation Areas and Federally Owned Dams



3.6 Population Impacts

The impact of dam failure hazards on people in Summit County and Coalville 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. There is limited vehicular recreation on surrounding private property: snowmobiles in winter and UTVs in the fall. The reservoir is rarely full at these times.

Per the Emergency Action Plan, the most immediate risk will affect recreational summer camp cabins at Pine Cliff that are low and near the stream channel. All other structures in Chalk Creek are set high enough and far enough from the creek channel to be safe from flood or at risk of only a few inches of flooding at the structure site. The Channel of Chalk Creek Below Pine Cliff is large and has a large carrying capacity within the banks of the creek.

Coalville is the only downstream town, 12 miles from Boyer Dam. Vulnerable populations will experience the impacts of a dam failure more severely.

The FEMA Community Resilience Challenges Index (CRCI)¹ shows relatively moderate levels of vulnerability in the inundation areas. This accounts for older adults, low income, Census tracts in rural areas can be very large and local knowledge is more helpful for identifying areas of concern.

¹ FEMA Resilience Analysis and Planning Tool ([RAPT](#))

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. Access to food, water, shelter, and healthcare could 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.

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.

Vulnerable populations include the nearby Pine Cliff camp and its recreationists, mobile home residents (see the purple box on Figure 4), and the yet-to-be-built high school near 113 N 150 E. Not only are mobile home residents often lower-income, but the homes themselves are more susceptible to being moved off their foundations. The part of the high school in the floodplain is likely the parking lot and sports fields.

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

4.1 Mitigation Strategies

Mitigation strategies are the long-term blueprint for reducing the potential losses identified in the risk assessment. These strategies outline 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 includes actions detailed in this section. Background information on each action, along with implementation and administration details such as responsible office, partners, potential funding, estimated cost, and timeline, is provided. These actions aim to reduce 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, based on each jurisdiction's perceived authority.

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	Rehabilitate Dam Outlet Increase the outlet pipe diameter and install an upstream guard gate
Mitigation Goal	Goal #2 & Goal #3 from section 4.2
Assessing the Risk	
Risk(s) addressed	90% of the active storage cannot be evacuated within 30 days Outlet pipe isolation for inspection & maintenance
Implementing the Action	
Cost estimate	TBD
Timeline	2028
Potential funding sources	FEMA HPPD Grant Program, State Dam Safety Grant
Responsible party	Chalk Creek-Hoytsville Water Users Corporation (lead), Summit County Engineering Department
Partner agencies (optional)	Summit 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	Freeboard and PMF Study
Mitigation Goal	Goal #2 & Goal #3 from section 4.2
Assessing the Risk	
Risk(s) addressed	Freeboard to meet state requirements PMF confirmation with consistent freeboard date
Implementing the Action	
Cost estimate	TBD
Timeline	2026-2027
Potential funding sources	FEMA HPPD Grant Program, State Dam Safety Grant
Responsible party	Chalk Creek-Hoytsville Water Users Corporation (lead), Summit County Engineering Department, J-U-B Engineers
Partner agencies (optional)	Summit County Emergency Management, Utah Division of Water Rights Dam Safety Section
Priority and Level of Importance (Low, Medium, High)	Medium

Mitigation Action #3	
Action description	Increase Slope Stability
Mitigation Goal	Goal #1, Goal #2 & Goal #3 from section 4.2
Assessing the Risk	
Risk(s) addressed	Seepage Internal erosion through the abutments
Implementing the Action	

Cost estimate	TBD
Timeline	2028
Potential funding sources	FEMA HPPD Grant Program, State Dam Safety Grant
Responsible party	Chalk Creek-Hoytsville Water Users Corporation (lead), Summit County Engineering Department
Partner agencies (optional)	Summit County Emergency Management, Utah Division of Water Rights Dam Safety Section
Priority and Level of Importance (Low, Medium, High)	High

Mitigation Action #4	
Action description	Additional planning and studies to identify mitigation and rehabilitation action items
Mitigation Goal	All Goals listed in Section 4.2
Assessing the Risk	
Risk(s) addressed	Minimum State Dam Safety Standards. Seepage. Slope Stability. PMF Concerns. Spillway erosion & concerns. Environmental Assessments. Modern geotechnical analyses. Unknown risks identified. Risks identified in previous studies.
Implementing the Action	
Cost estimate	\$1.2 million

Timeline	2026-2027
Potential funding sources	General Funds, FEMA HPPD Grant Program, HMPG, State Dam Safety Grant
Responsible party	Chalk Creek-Hoytsville Water Users Corporation (lead), Summit County Engineering Department, J-U-B Engineers, RB&G Engineering
Partner agencies (optional)	Summit County Emergency Management, Utah Division of Water Rights Dam Safety Section
Priority and Level of Importance (Low, Medium, High)	High