



August 20, 2024

Natural Resources Agriculture Environmental Quality Appropriations

Dam Safety & Funding

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State Engineer's Authority

- *“The State Engineer has the authority to regulate the safety of dams for the purpose of protecting public safety.”*
- *To protect life and property, the State Engineer may make rules controlling the construction and operation of dams...”*

- Utah Code 73-5a-101

<p>Work of Office in 1897-1898.</p> <p>PREPARATION OF PLANS.</p> <p>Section 2451 of the Revised Statutes provides that the State Engineer shall, under the direction of the Board of Land Commissioners, prepare plans and specifications for, and have general supervision over, any works relating to irrigation in which the State may have any interest. No work of this kind has yet been attempted by the State.</p> <p>RECORD OF STREAM MEASUREMENTS.</p> <p>Section 2452 provides that the State Engineer shall keep a record of measurement of streams, etc. No provision is made, however, whereby he is enabled to measure the streams. The office, therefore, can only keep records of such measurements as have been, or may be, made by the United States Government. This is being done.</p> <p>APPROVAL OF PLANS.</p> <p>Section 2453 provides that all plans of dams or dikes, when the same are more than ten feet in height, shall be approved by the State Engineer. No provision is made, however, to enable him to see that the plans and specifications are carefully observed. He could not, therefore, be held responsible in any way for any failures. Still, this section of the law has been of service to the people, as it has given them the benefit of consulting engineering advice free of charge. State supervision of the construction of dams would be too expensive and too serious a burden upon the State.</p>	
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Utah's Dam Safety Program

- Design review
- Construction inspection
- Operation & maintenance
- Rehabilitation



Rehabilitation & Minimum Design Standards

- Evaluate high hazard dams with respect to slope stability, seismic, seepage, outlet and spillway
- High hazard dam rehabilitation priority list
 - 227 High Hazard dams
 - 107 dams have rehabilitation needs



Panguitch Lake

- Crack 60-80 feet long, 3-5 feet below the top of dam
- Concern of losing upper portion of reservoir if the section fell over
- Relieved ice pressure, stabilized the wall, lowered the reservoir
- Storage restriction placed on dam



Kolob Creek

- Water under spillway damages concrete
- Lower the reservoir
- Temporary repairs
- Owner desires to replace spillway and enlarge the reservoir



Division of Water Resources Role

- Mission is to plan, conserve, develop, protect
- The division has oversight from a nine-member board
- Utah Code 73-10-8 (2)(c) gives the Board of Water Resources direction to provide loans and grants ...

“to upgrade dams in conformance with the minimum standards established by the State Engineer.”



Juliette Tennert,
Chair



Mike Davis,
Co-chair



Charles
Holmgren



Randy Crozier



Spencer Jones



Dana Van Horn



Blaine Ipson



Kyle Stephens



Brian Steed



State Regulated High Hazard Dams

High hazard dams: 227

Dams needing funding for upgrade: $107 - 6$ (already contracted) = 101

Average state grant cost to upgrade one dam: \$4.4 million

Estimated total grant cost to upgrade remaining dams: \$444.4 million



Funding Sources

- State Minimum Standards Rehabilitation Grant
- FEMA High Hazard Potential Dam Grant
 - Water Resources was recently allocated \$7.2 million from FEMA to make upgrades to selected high hazard dams.
- NRCS Collaboration, PL-56



Dam Safety Funds

Annual ongoing funds

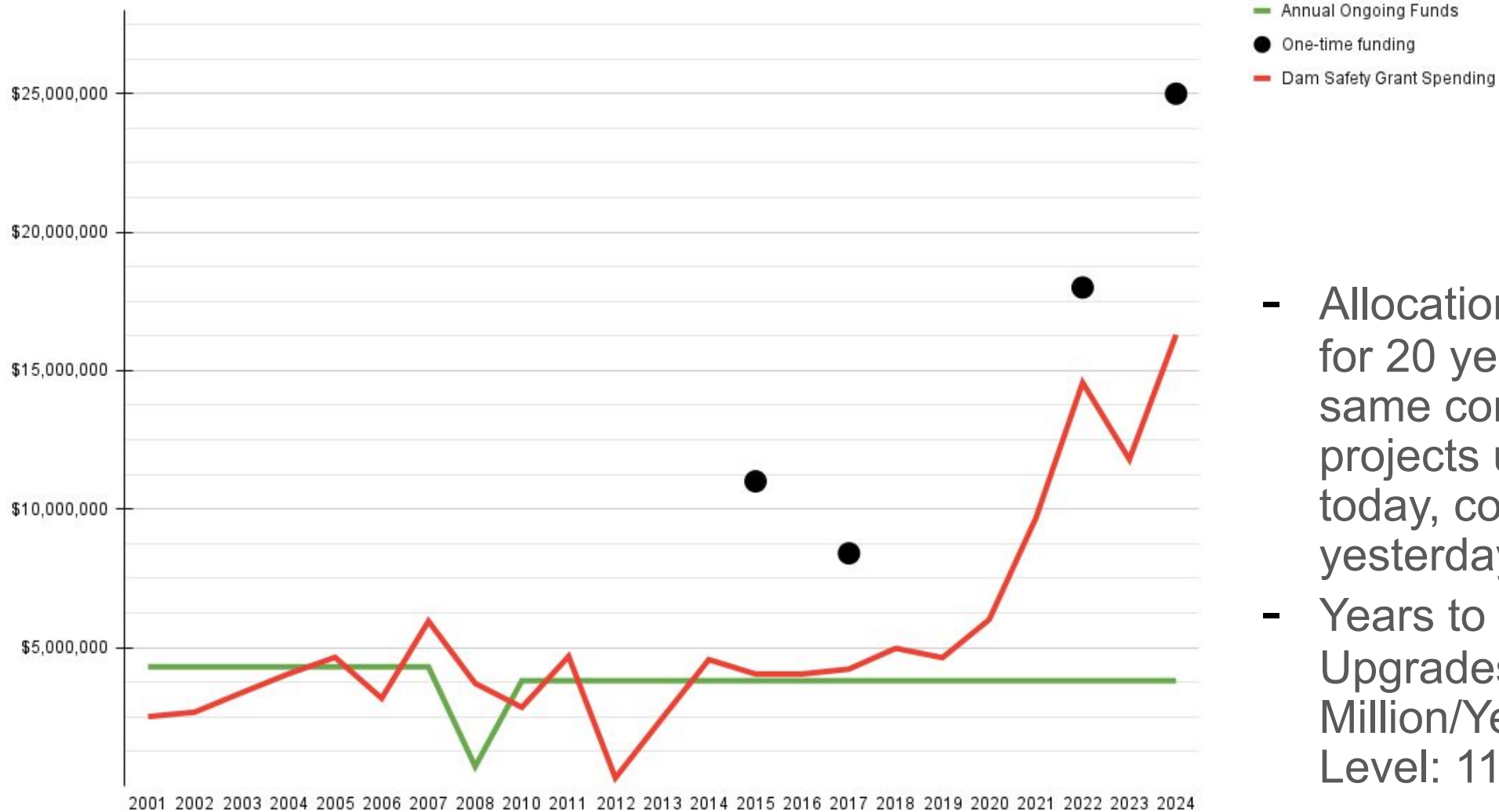
- Through 2007: \$4.3 million
- 2008: \$700,000
- Since 2008: \$3.8 M

One-time funding

- 2015: \$11 million (general fund)
- 2017: \$8.4 million (restricted)
- 2022: \$18 million (restricted)
- 2024: \$25 million (general fund)



Dam Safety Allocations and Spending from the past 20 years



- Allocations have been flat for 20 years. However, the same construction projects undertaken today, costs more than yesterday.
- Years to Complete Upgrades at Current \$3.8 Million/Year Funding Level: 117 years (?)



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