May 6, 2021

Oregon State Legislature - Joint Subcommittee on Capital Construction - 2021-05-07-13-00

Subject: Wallowa Lake Dam Rehabilitation Project
Public Testimony

Dear Members of the Committee:

My name is Morton D. McMillen and I am providing both written and oral testimony in support of the Wallowa Lake Dam Rehabilitation Project (Project) on behalf of the Wallowa Lake Irrigation District (District). I am serving as the Project Manager for the District, the owner and operator of Wallowa Lake Dam and Reservoir, to plan, design, and construct the Project. One of the District's Board of Directors, Joe Dawson, is also scheduled to provide oral testimony.

I am a native of Wallowa County and currently own a small ranch within the County. I grew up in Swamp Creek where I worked on several ranches and farms that received irrigation water from Wallowa Lake Dam. My involvement in the Project started in 2000 when I conducted a dam safety inspection and analysis of the existing dam. I have continued to provide planning and engineering support to the District since this initial dam safety review.

I have attached a two-page summary of the Project which outlines the purpose, history, benefits, budget request and schedule for the Project. My oral testimony will follow the basic information presented within this document.

Over the past year, the District has worked closely with the State of Oregon, Nez Perce Tribe (NPT), and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to develop a Memorandum of Understanding (MOU) allocating 5,000 acre-feet of water from the reservoir to support fish habitat improvement conditions. The MOU is signed and ready for implementation when the dam rehabilitation is complete, representing a truly collaborative approach to managing our critical water resource for multi-beneficial use. The District is continuing to work with these key stakeholders, as well as other local, state, and federal agencies, to advance the reintroduction of Sockeye Salmon into Wallowa Lake and provide effective fish passage for existing native and anadromous fish species at the dam. Our team has developed a Project configuration which addresses the required dam safety improvements with fish passage facilities. Our well-established and strong working relationships with our key stakeholders provide the foundation for efficient implementation of the Project.

I appreciate the opportunity to testify on behalf of the Project. Wallowa Lake Dam is critical infrastructure for the Wallowa Valley providing multiple benefits to the local community and our natural resources. The dam rehabilitation will ensure long term economic stability, public safety, and extensive benefits to the community and natural resources.

Sincerely,

Morton D. McMillen, P.E.
Project Manager

Wallowa Lake Dam Rehabilitation

Goals and Objectives

Wallowa Lake Dam was originally constructed in 1919 and does not meet current dam safety standards, putting at risk the downstream communities of Joseph, Enterprise and Wallowa. The objective of this project is to rehabilitate the existing dam to current design standards providing multi-discipline benefits to the agricultural community, the residents of Wallowa Valley, and enhanced benefits to fish and wildlife resources.

Existing Dam and Reservoir

Wallowa Lake Dam is located in Wallowa County (NE Oregon) approximately 1 mile south of Joseph. The dam is located on the natural outlet of Wallowa Lake and raises the lake 28.4 feet from natural conditions, providing over 50,000 acre-feet of storage in the reservoir. Constructed as a concrete gravity structure, the dam is over 35 feet high and has a crest length of 200 feet. The dam is owned and operated by the Wallowa Lake Irrigation District (WLID), based in Joseph, Oregon.

Project Owner

Wallowa Lake Irrigation District

Project Location

Joseph, OR

Project Duration

2021-2023

Project Estimate

$16.0M (2020 Dollars)

Project Contact

Dan Butterfield - President
Wallowa Lake Irrigation Dist.
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Consultant Contact

Morton D. McMillen, PE
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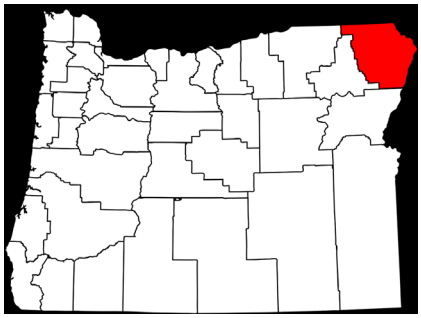
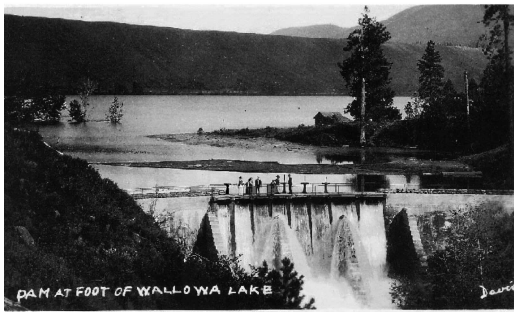
Image: Wallowa County – Oregon; Wallowa Lake Dam





Dam History

Wallowa Lake Dam was originally constructed in 1919 to provide irrigation water to the developing agricultural community in the upper Wallowa Valley. The dam was modified several times in the early years of operation with the final dam arrangement serving agricultural needs and multiple benefits to the community. The WLID has been working diligently to develop needed improvements to the existing dam ensuring public safety and long-term operation of the Project.

Date	Event
1919	Original curved dam section constructed.
1920	Curved dam section raised 3 feet, four buttress walls constructed, upstream concrete apron added, and outlet gates moved to the upstream side of the dam.
1929	Raised the dam crest 5 feet and added concrete on the downstream side to increase dam stability. Constructed a new penstock and powerhouse in Joseph for hydropower production.
1958	Powerhouse operation stopped following a fire in the powerhouse.
1979	USACE Dam Safety Inspection completed for the dam following Teton Dam failure as part of the National Dam Safety Inspection Program.
1996	Dam listed as a high hazard structure by Oregon Water Resources Department (OWRD) Dam Safety.
2001	Phase 1 Dam Safety Inspection and Phase 1 Report completed recommending outlet conduit repairs and planning of long-term dam safety improvements.

Wallowa Lake Dam Rehabilitation

Benefits

Wallowa Lake Dam is the centerpiece to water management within the Wallowa Valley. Fed from the wilderness area high in the Wallowa Mountains, the Wallowa Lake Reservoir provides high quality water supporting a wide range of uses, including the following:

- Irrigation of over 16,000 acres of prime agricultural land within the Upper Wallowa Valley.
- Secondary irrigation benefits to an additional 21,000 acres of agricultural land in the Lower Wallowa Valley.
- Potable water supply for the city of Joseph.
- Recreation with over 800,000 recreational users and tourists enjoying boating, water skiing, personal watercraft, swimming, and fishing.
- Flood control with the active storage managed to provide flood protection to the cities of Joseph, Enterprise, and Wallowa during spring runoff periods.
- Base flows to the Wallowa River and Grande Ronde River, preserving and enhancing riparian habitat, fish stocks, waterfowl, and overall water quality.

Completion of the Project will allow the WLID to return to the full reservoir pool operation, providing multiple benefits to the Wallowa Valley community, including:

- Flood protection
- Fish protection
- Water conservation
- Agricultural production
- Continued recreational use
- Economic stability
- Potable water supply
- Sockeye Salmon restoration
- Fish passage
- Improved fish and wildlife habitat
- Future low head and low impact hydropower production

Budget (2020 $) and Schedule

Project Phases 2 and 3 Budget Summary

Item No.	Description	Budget ($)
1	Phase 2 – Permitting/Regulatory and Final Design	$1,662,000
2	Phase 3 – Construction [1]	
	Dam Rehabilitation [2]	$12,440,000
	Upstream Fish Passage [3]	$1,498,000
3	Engineering and Supervision during Construction	$400,000
	TOTAL (Phase 2 + Phase 3)	$16,000,000

[1] Includes 20% estimating contingency.
[2] A new intake tower with intake exclusion fish screens will be constructed with the dam rehabilitation.
[3] Upstream fish passage is assumed to consist of a trap-and-haul facility located at the base of the dam with a fish entrance, holding pool, loading hopper, and jib crane lift.

Stakeholders

Coordination efforts include a diverse stakeholder group with continued collaborative efforts between the District and all affected stakeholder agencies/entities (Tribal, State, Federal, NGO's, Local Citizen Groups):

City of Enterprise, OR / City of Joseph, OR / Oregon Department of Fish and Wildlife / Nez Perce Tribe / Confederated Tribes of the Umatilla Indian Reservation / Oregon Water Resources Department - Dam Safety / National Oceanic and Atmospheric Administration Fisheries / United States Department of Agriculture Natural Resource Conservation Service / United States Fish and Wildlife Service / Wallowa County / Wallowa Resources / Farmers Conservation Alliance / Grande Ronde Model Watershed / The Freshwater Trust / Wallowa Lake Irrigation District