



US Army Corps
of Engineers®
Portland District

Detroit IRRM Project Overview

Detroit Dam Interim Risk Reduction Measures

The U.S. Army Corps of Engineers (Corps) is conducting an environmental review to assess the impacts of proposed dam safety interim risk reduction measures (IRRM) at Detroit Dam. The Detroit Dam and Lake spans the Linn County–Marion County border in the Oregon Cascades on the North Santiam River near the city of Detroit.



The Corps operates Detroit Dam to manage flood risk during major flood season (December to January). In spring, the reservoir pools are allowed to fill, capturing a portion of rainfall and snowmelt for conservation season (May to September). During conservation season, stored water is used to add additional flow to the downstream rivers to meet the downstream water needs. The dam is operated to meet minimum releases for the North Santiam and with 13 other dams in the Willamette River Basin as a system to meet flow targets at downstream river control points.

To reduce the risk of catastrophic flooding downstream of Detroit Dam following a large earthquake, interim risk reduction measures (IRRM) have been proposed to reduce life-safety risk while issues are further studied and permanent measures are being pursued including long term rehabilitation of the spillway gates. The Corps performed an assessment of the current technical information and identified the appropriate level of pool reduction to reduce risk to acceptable levels. These measures involve reducing the maximum conservation pool (summer storage) of the Detroit reservoir by 5 feet, starting in the spring of 2021.

The Corps' dam safety program includes inspections, performance monitoring, emergency action planning, and risk assessments to ensure life safety risk is understood. Based on these studies, the Corps has identified a moderate risk for Detroit Dam. The risk for Detroit is driven by the potential for extreme seismic (earthquake) loadings that might occur at the same time summer conservation pool elevations are the highest as well as a needed replacement of the spillway gate parts which need to be structurally reinforced. Although the likelihood of an extreme earthquake is low, a dam failure would result in large life-safety consequences. The Corps considered this level of life-risk to be unacceptable except in unusual circumstances and, therefore, immediate action is warranted to reduce risk to tolerable levels.

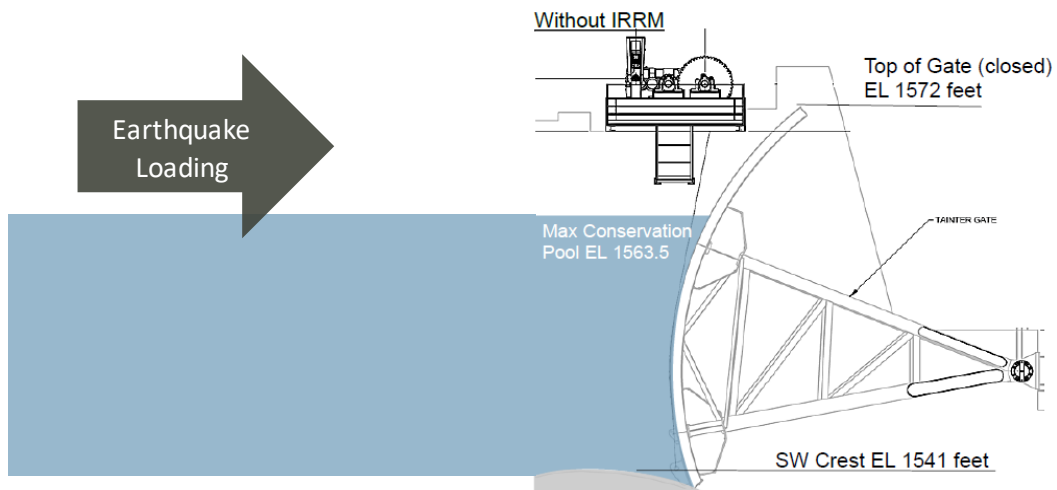
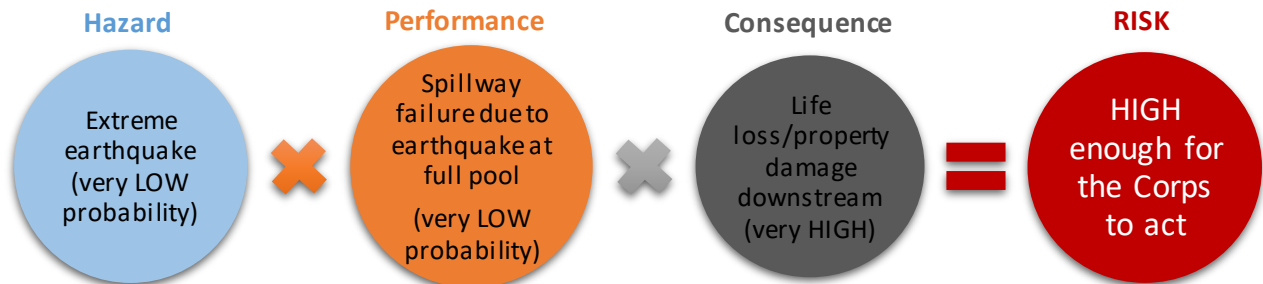
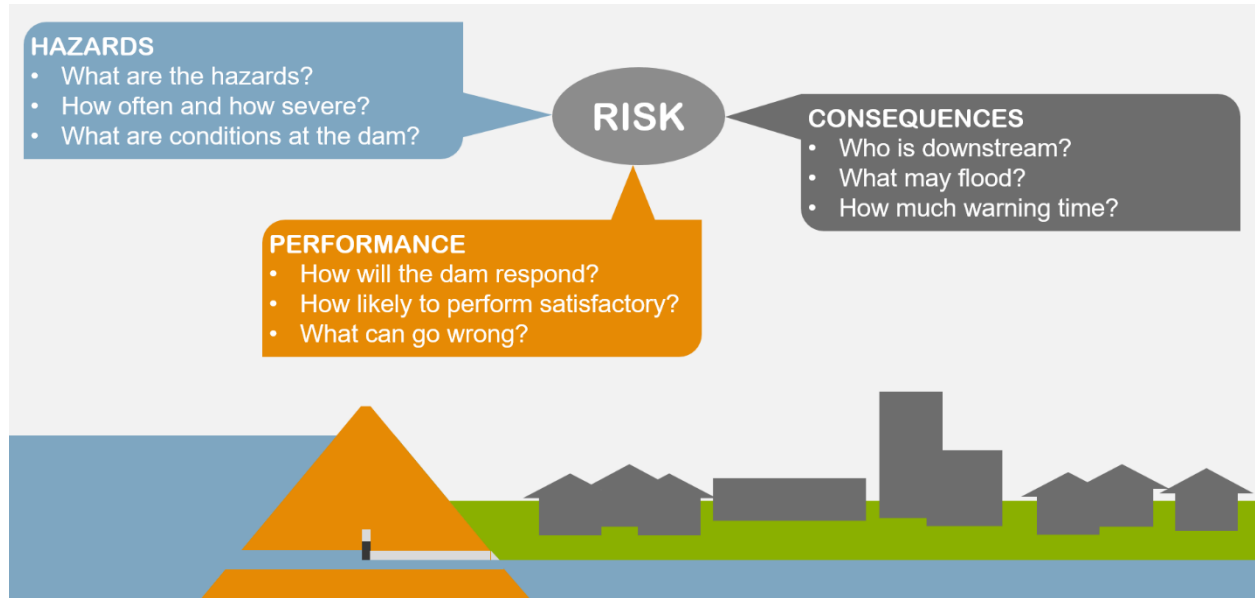
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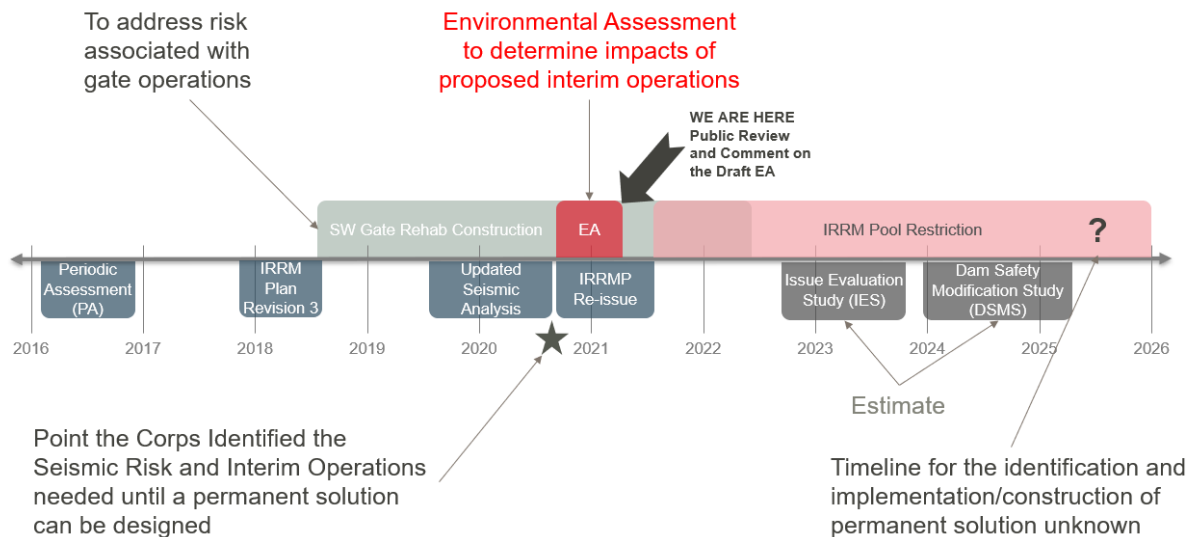
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Why Now?

Although the risk of spillway failure has existed since Detroit Dam was constructed, the tools for predicting the probability of large earthquakes and for identifying and assessing seismic risk to a dam has only recently been developed. The Corps' Dam Safety Program periodically assesses and reassesses risks to all our dams on a 5-year cycle. The assessment process identifies many risks, and we analyze those risks using the latest science and engineering methods and standards. Many of the risks we analyze end up being either not consequential or probable enough to merit further action. However, after completing a detailed analysis of the seismic risk in question towards the end of 2020, it was concluded immediate action to mitigate the risk at Detroit was necessary. This determination resulted in the development of the proposed IRRM and an Environmental Assessment was immediately begun to assess the associated environmental and social impacts of the IRRM. The EA

PROJECT TIMELINE



Effects of the Detroit IRRM

The proposed IRRM would have no to negligible effects on fish and wildlife, cultural resources, water quality (including temperature and Total Dissolved Gas), water supply, and air quality. The proposed IRRM would have minor to moderate effects to recreation, specifically boat ramp accessibility. The upper reservoir boat ramps could see an earlier draft prior to Labor Day. During some years (25%) this will be about 5 days/1 week earlier. Most years the impacts won't occur until after Labor Day.

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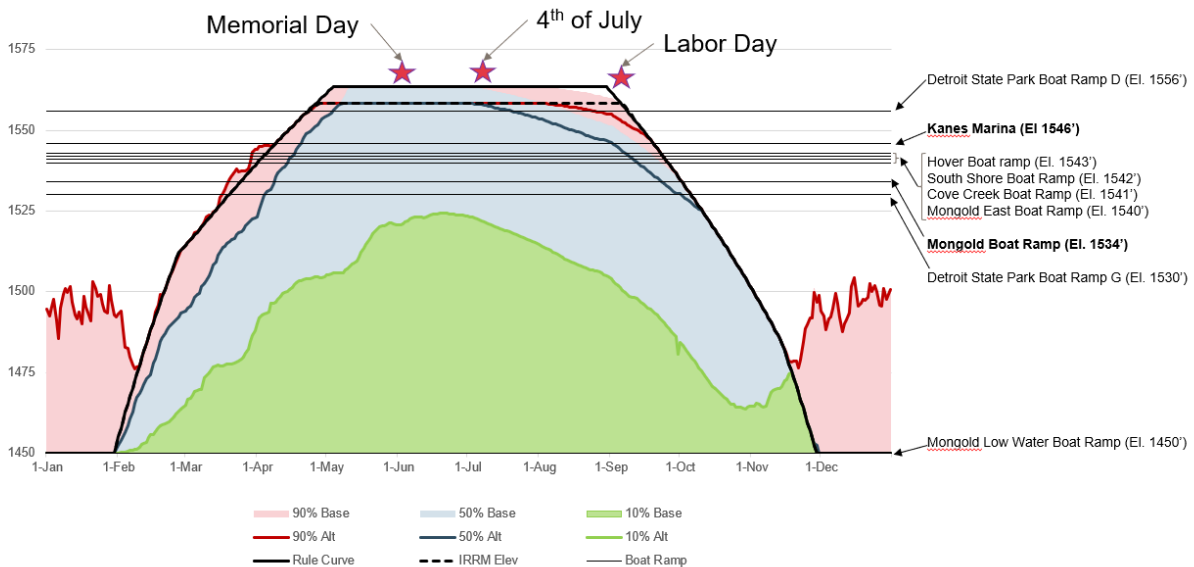
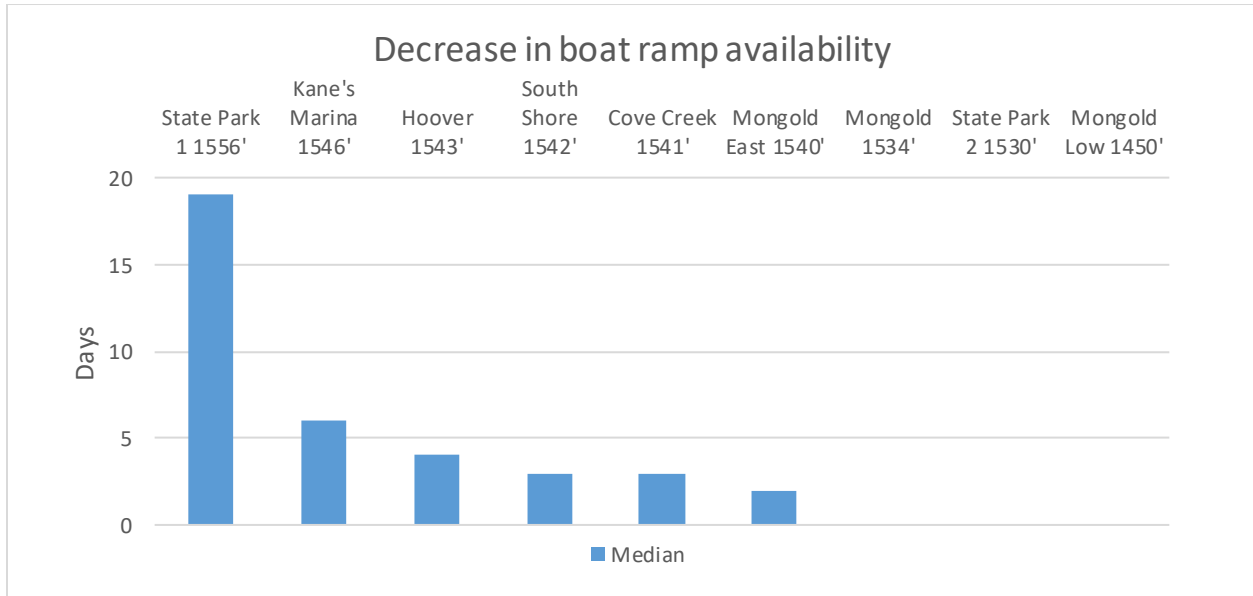
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Environmental Assessment Public Comment Period

This draft EA is being made available for a 15-day public review period. The Corps will review all comments received or post marked by the expiration date of the public notice.



<https://www.nwp.usace.army.mil/Willamette/Detroit/IRRM/>

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Comments will be accepted until April 1, 2021



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Q&A session of Virtual Public Meeting

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