Anderson Dam Seismic Retrofit Project
Frequently Asked Questions (FAQ)

1. What is the Anderson Dam Seismic Retrofit Project?

Anderson Dam creates the county's largest surface water reservoir—Anderson Reservoir— that stores local rainfall-runoff and imported water from the Central Valley Project. With a capacity of nearly 90,000 acre-feet, enough water to supply almost a million people for a year, the reservoir is a critical part of the region's water supply system. The reservoir provides water to drinking water treatment plants and for groundwater recharge.

Anderson Dam, situated in Morgan Hill, was built in 1950 to the seismic and dam safety standards of the day. Studies have shown a large earthquake could damage the dam, causing an uncontrolled release of water that could inundate cities and rural areas from San Francisco Bay south to Monterey Bay, including much of Silicon Valley.

Anderson Dam Seismic Retrofit Project will rebuild the dam in compliance with today's seismic and safety standards and regulations. The project will also increase the dam's spillway and outlet capacities to allow a rapid, controlled drawdown in emergency and to enhance incidental flood protection.

2. When will project construction begin?

Valley Water will construct the project in two stages. The first stage entails constructing a diversion tunnel with a low-level outlet, while the second stage consists of constructing high-level outlet works and removing and reconstructing the spillway and the dam embankment.

We are working closely with Federal Energy Regulatory Commission (FERC) and regulatory permitting agencies to begin construction of the tunnel and the low-level outlet in 2021, provided we receive the required permits on time and can obtain a qualified construction contractor. Construction is estimated to take approximately two to three years. This schedule conforms with the February 20, 2020, FERC directive discussed below that Valley Water prioritize early construction of a new low-level outlet. The outlet will allow Valley Water to reliably and quickly draw down the reservoir, thus providing greater control over the water levels and increased public safety.

Construction on the second stage will begin after stage one is completed, and the required permits are received. Stage two construction is estimated to take seven to eight years and is dependent on the permit requirements and the field conditions.

A critical part of the project schedule depends on the acquisition of environmental permits from state and federal agencies, such as National Marine Fisheries Service (NMFS), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW) and the California State Water Resources Control Board.

3. What is the recent FERC order?

On February 20, 2020, FERC gave Valley Water four directives, three of which are immediate or interim measures to reduce risk until the full project is completed. These are:

1) Maintain the Anderson Reservoir at a level no higher than 565 feet elevation immediately.
2) Begin lowering the reservoir to an elevation of 488 feet in a safe manner no later than October 1, 2020. (This essentially means almost emptying the reservoir.)
3) Prioritize work on the design and construction of a new low-level outlet tunnel that will allow for greater controlled releases of water than the current dam outlet allows. By March 20, 2020, provide a plan and schedule for preliminary and final designs and an overall construction schedule.
4) Continue to work with all haste to design and secure the necessary permits and complete the design for the larger Anderson Dam Seismic Retrofit Project.

4. Why were there so many delays with the project?

The project delays are a result of a greater understanding of the potential seismic performance of the existing dam, as well as increased public health and safety and environmental protection regulatory mandates.

Specifically, analysis of the field samples from the existing dam embankment and underlying foundation material found a greater potential for the dam to slump during a large earthquake than originally anticipated. As a result, the design for the retrofit project was revised to completely remove the unsuitable material from the dam embankment and reinstall suitable material, as opposed to reinforcing the existing embankment material in place.

Additionally, originally the dam spillway was to undergo spot repairs as opposed to a full replacement. However, after the 2017 event at Oroville Dam, the California Department of Water Resources Division of Safety of Dams (DSOD) revised the design criteria for spillway design. This revision requires removing and replacing the existing spillway.

Finally, although Valley Water's initial discussions with FERC centered around mitigating the potential impacts resulting from only the reconstruction of the dam, NMFS has requested that potential impacts related to post-construction dam operations (including even areas above Anderson Reservoir) also be considered.

All these developments have greatly expanded the scope of the project and extended the project schedule.

5. What is Valley Water doing to reduce public safety risks until the construction of the new dam?

Valley Water is working closely with state and federal regulators—FERC and DSOD—to maximize safety. We have been operating Anderson Reservoir at levels required by the regulators so that if the dam were to slump during an earthquake, the top of the dam would still be expected to remain higher than the water levels behind the dam.

In terms of rebuilding the dam, Valley Water's priority is to design and construct a low-level outlet that would allow quick reservoir drawdown, thus providing greater control over the water levels and increased public safety.

6. What are the impacts of this FERC order on public safety?

Valley Water agrees with FERC that we need to do everything possible to reduce the dam safety risk. That is why Valley Water, in agreement with the FERC-mandated independent Board of Consultants, put forward an operations plan in October 2019 that we believe would best reduce the risk of a catastrophic dam failure. This is the reason why Valley Water is prioritizing designing and constructing a low-level outlet to lower the reservoir through safely controlled releases.

Valley Water is concerned that emptying the reservoir could result in unsafe conditions. At current levels, the water in the reservoir provides a stabilizing effect for the dam's outlet structure. Further lowering of the reservoir would remove the stabilizing effect and the outlet would be severely damaged in the event of a large earthquake. A severely damaged outlet would reduce our ability to release water, resulting in higher public safety risk.

Valley Water will work closely with FERC and DSOD to monitor the dam structure as we empty the reservoir to ensure that we quickly address any signs of compromised structural integrity.

7. What are the impacts of this order on water supply in Santa Clara County?

There is an adequate water supply for this year. Valley Water has a diverse water supply portfolio, which includes groundwater, imported water (both state and federal) and recycled water. Additionally, Valley Water has 350,000 acre-feet of water stored in Kern County in the Semitropic Water Storage District.

Since 2013, our community has responded to "conservation as a way of life" and reduced countywide water consumption by approximately 20 percent. Reduced water consumption (lower water demand), a diverse water supply portfolio and a healthy groundwater basin will provide water countywide for this year.

While we anticipate that water supply conditions for this year are favorable, we will continue to assess water supply conditions into the future. Staff continually explores other sources of water that come from outside of the county and these efforts will now take into account the changes to storage in Anderson Reservoir. If this winter ends without much more rain and next winter is dry as well, it could require everyone to reduce their water use significantly.

Meanwhile, Valley Water is developing Anderson Reservoir dewatering plans as per the FERC order. We plan to put the reservoir water to beneficial use by sending usable water to our drinking water treatment plants and for recharging groundwater basins.

8. What are the impacts of this order on fish, wildlife and the environment?

Valley Water is concerned about the environmental impacts of the order. The inability to keep a consistent flow in Coyote Creek downstream of the dam year-round will likely impact sensitive native fish, amphibians, reptiles, wetlands and riparian habitats.

Dewatering Anderson Reservoir will have impacts on steelhead and critical habitat within Coyote Creek. Because of the seriousness of the potential impacts on steelhead and critical habitat below the dam, Valley Water has worked hard to design a feasible construction project that limits the duration for which the reservoir is dewatered. However, FERC's order directing early dewatering could increase the period of time that critical habitat will be impacted. It could also impact water quality downstream of the dam.

Valley Water is currently exploring and developing measures to reduce impacts of early dewatering on fisheries. We will seek input from regulatory agencies on the measures being developed.

9. What are the impacts of this order on recreation and public access to the surrounding parks?

While the reservoir is being drained and during construction, there will be no boating in the reservoir.

We are currently determining the construction staging areas that will be needed to support the construction of the low-level tunnel and outlet. At this time, we believe Anderson Lake Park and Toyon Picnic Area will be closed for the duration of the low-level tunnel and outlet construction. Potential impacts to Live Oak Picnic Area are still being determined.

We are working closely with County Parks to minimize the impacts on public access to this popular area while this critical public safety project is under construction.

10. What is Valley Water doing to expedite the project?

Valley Water is sponsoring a legislation in the State Legislature to facilitate the speedy and expert construction of the Anderson Dam project. Assembly Bill 3005, authored by Assembly member Robert Rivas, would accomplish the following objectives:

1) Authorize "best value" selection of the construction contractor, instead of a required selection of the lowest bidder, and require a skilled and trained workforce for the project.
2) Provide an expedited judicial review of challenges to state-required environmental documents.
3) Require expedited processing of permits by state agencies.

We are also in regular communication with our congressional delegation and the federal regulatory agencies, including meeting together quarterly in Washington, D.C., to help ensure that progress is being made and discuss how to move the project forward as quickly as possible.

11. What is the Fish and Aquatic Habitat Collaborative Effort (FAHCE, pronounced "face")?

On July 12, 1996, Guadalupe-Coyote Resource Conservation District (GCRCD) filed a complaint with the State Water Resources Control Board alleging that Valley Water's exercise of its local water rights in Coyote Creek, Guadalupe River and Stevens Creek was not providing adequate flows for the protection of fisheries and other aquatic resources. Subsequently, Valley Water entered into an agreement in 1997 with the GCRCD, NMFS, USFWS, CDFW and other interested parties, collectively referred to as the "Initialing Parties", to provide a framework for the coordinated development of restoration and conservation measures to be implemented within regional creeks, including Coyote Creek, to benefit steelhead and other sensitive species.

As a result of six years of active scientific studies and data collection, the Initialing Parties developed an agreement that all parties initialed on May 27, 2003. This agreement, called the Fish and Aquatic Habitat Collaborative Effort (FAHCE) Settlement Agreement, provides for the management of water flows for fish and completion of certain habitat restoration projects for various creeks, including Coyote Creek, to provide long-term protection and benefit for aquatic species. These restoration projects are known as FAHCE measures. Staff from state and federal agencies were integrally involved in reviewing the data and studies, and development of the proposed FAHCE measures.

12. Why is Valley Water merging the Anderson Dam Seismic Retrofit Project with FAHCE?

Since water released from Anderson Reservoir flows into Coyote Creek, the Anderson Dam Project and FAHCE share responsibilities and concerns in addressing the impacts to Coyote Creek fisheries resulting from Valley Water's projects and operations. The FAHCE measures will likely constitute the conservation measures for endangered fish and their habitat necessary to avoid, minimize and potentially mitigate impacts to those environmental resources from ongoing operations of Anderson Dam. Since the two projects are complementary, it makes sense to proceed with a coordinated effort. This will help us avoid doing work twice, thus saving money, and it will help streamline both projects.

Merging the two projects is also expected to speed up the timeline for both. The FAHCE measures for Coyote Creek will provide avoidance, minimization and potential mitigation for the post-retrofit operation of Anderson Dam. By including Coyote Creek FAHCE measures in the Anderson Dam Project Environmental Impact Report (EIR) and removing them from the FAHCE EIR, Valley Water won't have to perform duplicative analysis of those measures in two separate EIRs, which reduces redundancy and eliminates the chance for inconsistencies. Hence, this will likely result in a shorter environmental process for Coyote Creek FAHCE measures and Anderson Dam Project's timeline will benefit as well.

13. What is the Coyote Creek Flood Protection Project and does the FERC order impact it?

The Coyote Creek Flood Protection Project is a project focused on reducing the community's risk of flooding and would protect the community against a flood of the magnitude of those we saw in February 2017,

approximately a 20-year to 25-year flood. The project is currently in the planning phase and staff is developing alternatives to meet this flood protection goal. The latest FERC order does not impact the flood protection project.

14. What can I do to help move this project forward?

Valley Water welcomes your support as this critical project moves forward with life safety, water supply, and environmental benefits. Please contact your state legislators to urge their support of Assembly Bill 3005, the Expedited Dam Safety for Silicon Valley Act.

You can give your support by signing up to receive progress updates. For more information, please contact Tony Mercado at (408) 630-2342 or visit us at https://www.valleywater.org/anderson-dam-project.