

Frequently Asked Questions (FAQ)

Coyote Creek Flood Protection Project: Montague Expressway to Tully Road

(May 2020)

Overview

This Coyote Creek Flood Protection Project (Coyote Creek project) will provide developed solutions to protect Coyote Creek communities from Montague Expressway to Tully Road up to the level of the February 2017 flood, which was one of the highest flow events since Anderson Dam was constructed in 1950.

The problem definition report was completed this spring. The report represents the first step in the planning phase, which includes a description of the current condition and need for the project. The planning process and selection of preferred alternatives is being finalized in preparation for the design phase, which began spring 2020.

Public meetings were held in May, June, and November of 2019. Questions from those meetings were combined and summarized to develop the content of this comprehensive FAQ document. Please note that many of the questions were addressed during those public presentations and video recordings of them are available to view at www.valleywater.org/coyote-creek along with project information and meeting materials.

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Project Description and Elements

1. What area(s) will the Coyote Creek project protect, and up to what level of flooding?

The Coyote Creek Flood Protection Project is located between Montague Expressway and Tully Road. The goal of this project is to reduce the risk of flooding for homes, schools, businesses and transportation corridors to the level of flooding that happened on February 2017, which was the highest flow measured in Coyote Creek since 1950, an approximate 20-year event. A 20-year flood event means that flooding has an approximate one in twenty chance, or 5% chance, of happening in any given year. This project is currently in the final stages of planning, with the recommended alternatives to meet this flood protection goal being completed.

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2. How do you know that the flood walls, levees or other protections are going to address the area's flood concerns and lessen the risk of future flooding?

Coyote Creek is a natural creek with sections that have different capacities to carry storm water. Hydraulic models and calculations are used to estimate, as close as possible, the timing, volume, and height of water flow within the various sections of the creek channel. Some risk remains with modeling and calibrating a natural creek. The modeling and calculations are based on detailed survey data of the creek channel's topography and features including high water marks from the February 2017 event, gauge data, structures in the creek and its levees. The proposed height and location of flood walls is partly based on the results of the February 2017 calibrated model and calculations. Other considerations include individual resident input during public meetings as well as interviews and site visits with property owners, trail access and aesthetics, available physical space, and environmental limitations.

3. How will berms, barriers or floodwalls be designed to not only work to provide flood protection but also be aesthetically pleasing while still fitting in with the neighborhood character?

Neighborhood aesthetics and the overall look and feel of an area are important criteria for the final design of berms, barriers, floodwalls or other flood risk reduction elements. To the extent that the design of these can be made attractive, or unobtrusive, they will be. Public meetings will continue to be held during the design phase of the project to ensure public input is included in the aesthetic elements of this project. Elements of coloring, artwork, material choice, molded patterns on flood walls and the use of combinations of fill and walls to achieve height, are options under consideration

Project Communications and Public Safety

4. How will Valley Water and the City of San José keep residents informed of flood threats?

Valley Water and the City of San José implemented a [Joint Creek Emergency Action Plan](#) (EAP) in November 2017, outlining strategies and actions for agency coordination during potential flooding along waterways in San José. The EAP provides guidance on how Valley Water and the city would coordinate, communicate, and make decisions during storm and flood events in addition to establishing methods of classifying flood emergency operational and severity levels. The EAP is available on Valley Water's [website](#). Communicating in various languages, using online platforms and other communication tools to communicate are also outlined in the EAP.

The preparedness levels described below match those used by the National Weather Service for specific levels of a flood threat. All public communication will include current status level and provide actions for people to take at each level.

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Preparedness	No storms are forecast within the next 72 hours. Stream depths are below 50% of flood stage. Reservoirs are not spilling
Flood Monitoring	Storms are forecasted. Stream depths are at 50% to 70% of flood stage. This condition is fluctuating and requires monitoring and being alert for potential flooding and possible evacuation notification.
Flood Watch	Storms have occurred. Stream depths may reach flood stage in 24 to 72 hours. Prepare for possible evacuation notice.
Flood Warning	Flooding is imminent, generally within 24 hours or is occurring.

Valley Water and the City of San José shared the EAP with the public during a series of winter resource fairs in October 2017 that targeted neighborhoods impacted by the Coyote Creek flood. Attendees learned about emergency preparedness; observed sandbagging demonstrations; visited Valley Water’s [Flood Watch page](#) for information on water levels at both Anderson Reservoir and Coyote Creek; and were invited to vote on their preferred methods for notification in an emergency, as well as to sign up for AlertSCC, the emergency alert system managed by the County of Santa Clara.

A recommendation resulting from the public input process that helped to develop the EAP was the installation of more gauges along Coyote Creek. The gauges are painted, attached to bridges, or are placed on free-standing stakes with markings that show the height of the water relative to the level of concern at that specific location. You can view the stream gauge in your neighborhood to assess the water level at <https://gis.valleywater.org/SCVWDFloodWatch/>.

Public Benefits

5. What actions have been taken, or will be implemented, to mitigate the risk of flooding?

To mitigate the risk of flooding, Valley Water has accomplished the following to help mitigate the risk of flooding:

- Repaired ~150 feet of damaged levee near the Golden Wheel mobile home community.
- Installed 400 feet of sheet pile floodwall and a 500-foot-long earthen berm (like a levee) in the Rock Springs area.
- In partnership with the City of San José, removed approximately 15 acres of invasive vegetation and removed approximately thirty blockages of piled-up debris to improve wildlife habitat and channel capacity to carry stormwater flows.
- Established a Memorandum of Understanding (MOU) with the U.S. Army Corps of Engineers to develop Coyote Creek flood risk reduction feasibility study.
- Valley Water’s Board of Directors and the City of San José’s City Council have approved a joint creek Emergency Action Plan, containing strategies for agency coordination during potential flooding events.
- Valley Water staff repaired existing flood gauges and installed several new gauges at various bridge locations on Coyote Creek.

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Recently, Valley Water partnered with 13 other Bay Area agencies to deploy the X-Band Radar system. The radar offers information on where and how rainfall will affect creek flows. The system also provides improved data for weather forecasting, which will assist water managers, reservoir operators, wastewater plant managers, flood, and emergency responders to make operational and safety decisions during extreme weather events. The first of three radars in the X-Band Radar system is located at the Penitencia Water Treatment Plant in San José.

To help mitigate the risk of flooding in the future, Valley Water is developing solutions to protect Coyote Creek communities from Montague Expressway to Tully Road up to the level of the February 2017 flood. The planning process and selection of preferred alternatives for the Coyote Creek project are being finalized in preparation for the design phase.

6. How does the project address any changes to the areas identified as at risk of flooding?

The areas at risk of flooding have not changed or moved as a result of the Coyote Flood Protection Project, which seeks to address the areas flooded in February 2017. However, Valley Water's Board of Directors extended the length of the Coyote Creek Flood Protection Project to include the sections of creek from Highway 280 to Tully Road. Areas of flooding in an event greater than the February 2017, flood will remain subject to flooding after completion of this proposed project.

7. Which parts of the creek does Valley Water maintain, and what can be done to maintain the other sections of Coyote Creek that are not under Valley Water's jurisdiction?

Valley Water owns or has access to maintain approximately 275 miles of the 800 miles of the creeks and rivers in urbanized areas of Santa Clara County. The remaining stretches of creeks are owned by Santa Clara County, private entities, cities in which the creeks are located, and other public agencies. Most of the Valley Water-owned property along Coyote Creek are located north of Montague Expressway. Valley Water will develop a maintenance plan for the areas of creek that are improved under this project and where Valley Water has land rights to do maintenance.

For the other areas of the creek not under the jurisdiction of Valley Water, it is understood that creek maintenance by an individual property owner that is not associated with a government agency can be difficult and costly. Valley Water is in the early stages of exploring joint maintenance programs for individual property owners to participate in managing areas of the creek that are not under Valley Water jurisdiction.

Coordination: Valley Water and City of San José

8. How will this project integrate public access to the parks and protection of infrastructure into project designs?

Valley Water works in close communication and coordination with the City of San José's Parks, Recreation and Neighborhood Services (PRNS) Department. Public access and protection of infrastructure is important to neighborhood vitality. Although Valley Water is not building trails or parks as part of this project, we are working closely with the city and neighborhood representatives to ensure that potential parks and infrastructure considerations are integrated into project designs.

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Valley Water and PRNS meet monthly to update each other and coordinate efforts with the goal of developing solutions that: 1) sustain recreational success, 2) minimize visual barriers, 3) deliver “win-win” proposals to enhance parks, and 4) set maintenance goals and expectations. In early 2020, Valley Water and PRNS presented to San José Parks Advocates group about the project alternatives under evaluation and to obtain input specific to parks and trails.

9. How could Valley Water and the City of San José work to expand upstream flood plains or detention areas, and prevent future development in floodplains?

The Coyote Creek Flood Protection project team has analyzed various scenarios utilizing land around Coyote Valley. Early analyses have not revealed an upstream floodplain or detention solution that provides a significant level of flood protection above what the landscape already provides (see table below for more information). This project needs to proceed to reduce flood risks to the communities impacted by the 2017 flood. Valley Water will continue to explore water detention options where they are feasible. Valley Water is not a land use agency so any restrictions that may limit floodplain development would be developed by the City of San José. Constructing the Coyote Creek Flood Protection Project by the scheduled timeline is a priority for Valley Water.

Options explored	Discovered and unavoidable challenges
Creating storage by building berms around large parcels of land. Using an approximately 96-acre area adjacent to the creek, downstream water levels dropped by approximately one foot.	This drop-in water surface elevation is not enough to eliminate flood risk to the downstream communities. The proposed project is still needed to provide flood protection.
Staff explored the ability to flood the entire Coyote Valley to reduce the Anderson Dam peak.	The areas needed for water detention typically flood days before the Anderson Peak comes through. This is mainly due to continuous rainfall and local water flows from Fisher and Coyote Creek. The added flood protection for areas downstream is limited and unreliable at best.
Creating detention basins during high flow events (upstream floodplains).	A main constraint found on the use of these lands include a very high groundwater table. As a result, excavating a detention basin is not feasible and may not be effective at high flow events.

10. How does this flood protection project relate to the BART extension project?

In the Berryessa area, Valley Water is coordinating closely with all relevant agencies to ensure land use designs and flood prevention are integrated. Because the BART extension underground tunnel will be installed far below Coyote Creek, Valley Water’s Coyote Creek flood protection elements will not impact the BART extension project.

Anderson Dam: Operation, Public Safety and Seismic Retrofit Project

11. What is being done to repair Anderson Dam and remains to be completed in order to retrofit this aging infrastructure?

The Anderson Dam Seismic Retrofit Project (ADSRP) was initiated after a Seismic Stability Evaluation determined that the dam could become unstable in the Maximum Credible Earthquake (MCE), i.e. the largest earthquake anticipated on the nearby Calaveras and Coyote Creek faults. The ADSRP will retrofit the existing dam such that it would be able to withstand the MCE. Additionally the ADSRP will address other public health and safety issues at the dam to bring the dam up to current safety standards, including increasing the spillway capacity to avoid overtopping the dam embankment during large storm events, and increasing the size of the outlet to more quickly draw down the reservoir in an emergency.

To accomplish the above goals, the project will specifically include the following at Anderson Dam:

- Removal of most of the existing dam and all liquefiable material underneath the dam, and reconstructing the embankment in approximately the same footprint; and
- Removing and replacing the spillway to bring it up to modern design standards and increase capacity; and,
- Replacing the outlet works with two new larger outlet works to provide redundancy and operational flexibility to draw down the reservoir in the event of an emergency.

12. How long will it take to complete the Anderson Dam Seismic Retrofit Project (ADSRP) as currently planned?

Valley Water will construct this 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.

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.

The two stages are summarized as follows:

Stage 1: Valley Water will begin to draw down Anderson Reservoir on October 1, 2020. Once the reservoir is lowered to the required elevation, construction will begin in early 2021 with the building of a large diversion tunnel and outlet. This new diversion tunnel and outlet will enable Valley Water to draw down the reservoir reliably and quickly, thereby providing greater control over the water levels and increasing public safety. This stage is scheduled to be completed in December 2023.

Stage 2: Following the completion of Stage 1, Valley Water will start to construct additional tunneling and piping to facilitate optimal long-term reservoir operations. Additionally, the existing earthen embankment and spillway will be removed, and a more robust earthen embankment and spillway will be constructed in the same location. Stage 2 is anticipated to be completed by the end of 2030.

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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.

13. What did the Federal Regulatory Energy Commission (FERC) direct Valley Water do to with Anderson Dam and the Anderson Dam Seismic Retrofit Project (ADSRP)?

FERC directed that the operating level of the reservoir be immediately lowered to an elevation of 565 feet (or approximately 35% of capacity) as of February 20, 2020. Additionally, prior to the start of the rainy season, October 1, 2020, Valley Water must develop and execute plans to begin safely lowering and draining the reservoir to deadpool (elevation 488 feet). Finally, FERC also directed Valley Water to expedite design and construction of the low-level outlet tunnel as soon as possible and continue to expeditiously complete the design and acquire the permits for the remainder of the ADSRP.

The project to design and construct the low-level water release outlet tunnel located at the base of Anderson Dam is called the Anderson Dam Tunnel Project. The project will install a larger outlet tunnel to increase the amount and speed that water is released from approximately 450 cubic feet per second (CFS) to up to 2500 cfs (a combination of the new and existing outlets). The larger outlet tunnel will allow Valley Water to release flows more rapidly from the reservoir, allowing it to be kept at a safe level. Flood control measures will be completed prior to greater releases being sent downstream. The FERC compliance flood mitigation measures related to the Coyote Creek Flood Protection project will need to be completed before completing the outlet tunnel work and opening the new outlet to allow significantly higher releases (see question 19).

14. How is Anderson Dam/Reservoir being managed until the Anderson Dam Seismic Retrofit Project (ADSRP) is complete?

Valley Water has developed a dewatering plan to comply with the FERC Order. Once the new outlet is constructed and flood control measures implemented, Valley Water will operate the new outlet in a manner designed to keep the water level in reservoir low, in compliance with FERC's order, while also attempting to mitigate against flood risks.

15. Does the Coyote Creek project need to be completed before work on the Anderson Dam Seismic Retrofit Project (ADSRP) is started? Once Anderson Dam is rebuilt, will that address all the Coyote Creek flood risks?

This project will begin during Stage 1 of the overall retrofit project, and flood control measures must be finalized before the new outlet tunnel releases much higher flows through the dam. The Coyote Creek Flood Protection Project will provide a level of flood protection while the dam is being reconstructed. It is critical for the construction of the Coyote Creek Flood Protection Project to begin as soon as possible.

In response to the second question, the completion of ADSRP will not address all of Coyote Creek's flood risks. While the communities downstream of the dam will be safer from the risk of catastrophic flooding due to dam failure, reconstruction of the dam by itself would not change the flooding frequency of downstream areas due to typical winter overflow. However, the new dam outlet suggested as a part

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of the retrofit project is expected to provide incidental flood protection in addition to the primary objective of allowing for more safe and flexible dam operations and water releases while achieving water supply objectives.

16. In addition to working with regulatory agencies, what is Valley Water doing to expedite the Anderson Dam Seismic Retrofit Project with Assembly Bill 3005?

Valley Water is taking aggressive steps to expedite the project at the state and federal levels. At the state level, Valley Water has sponsored Assembly Bill 3005 (R. Rivas), the Expedited Dam Safety for Silicon Valley Act, that would enact changes in law in order to facilitate the speedy and expert construction of the Anderson Dam project. The bill would authorize the safest and best overall value selection of the construction contractor, as well as require expedited processing of state permits for the project. At the federal level, Valley Water is working closely with the Santa Clara County congressional delegation and the federal regulatory agencies involved on the project to address any conflicts or challenges and ensure that the project moves forward as expeditiously as possible. This includes attending quarterly meetings with the Members of Congress and the regulators to monitor progress, as well as holding regular check-ins with the regulators in the region. Valley Water also is pursuing federal legislative opportunities for dam safety and infrastructure that could provide funding and support for the Anderson Dam project.

Project Implementation

17. Will Valley Water need to acquire property to build floodwalls or otherwise make particular properties at risk of flooding safe?

In some situations, Valley Water will need to acquire private property or easements for use of a section of private property to build project elements like floodwalls. In addition, for certain properties that cannot be made safe from flooding (e.g., are located in the natural creek channel), Valley Water may need to acquire such properties.

18. What are the critical steps in this project, what is the timeline, and how is the work funded?

These are the critical steps to this project and their approximate schedule:

- 1) Design and Permitting: Summer 2020 – December 2021
- 2) Construction: FERC compliance flood mitigation measures anticipated completion by the end of 2023
Post-compliance flood measures anticipated completion by the end of 2025

The above timeline is dependent on selection of project alternatives that are outside the creek's channel and approvals from state and federal regulatory agencies. Due to the anticipated completion of the Anderson Dam Tunnel Project, it is critical for the FERC compliance flood mitigation measures to be completed by the end date.

The Coyote Creek Flood Protection Project was originally funded by the countywide Clean, Safe Creeks and Natural Flood Protection Plan parcel tax passed by voters in November 2000. In November 2012, the project was transitioned to the Safe, Clean Water and Natural Flood Protection Program

(SCW). The 15-year SCW Program makes it possible to protect homes, schools and businesses from flooding.

19. Has the project timeline been updated to start work sooner?

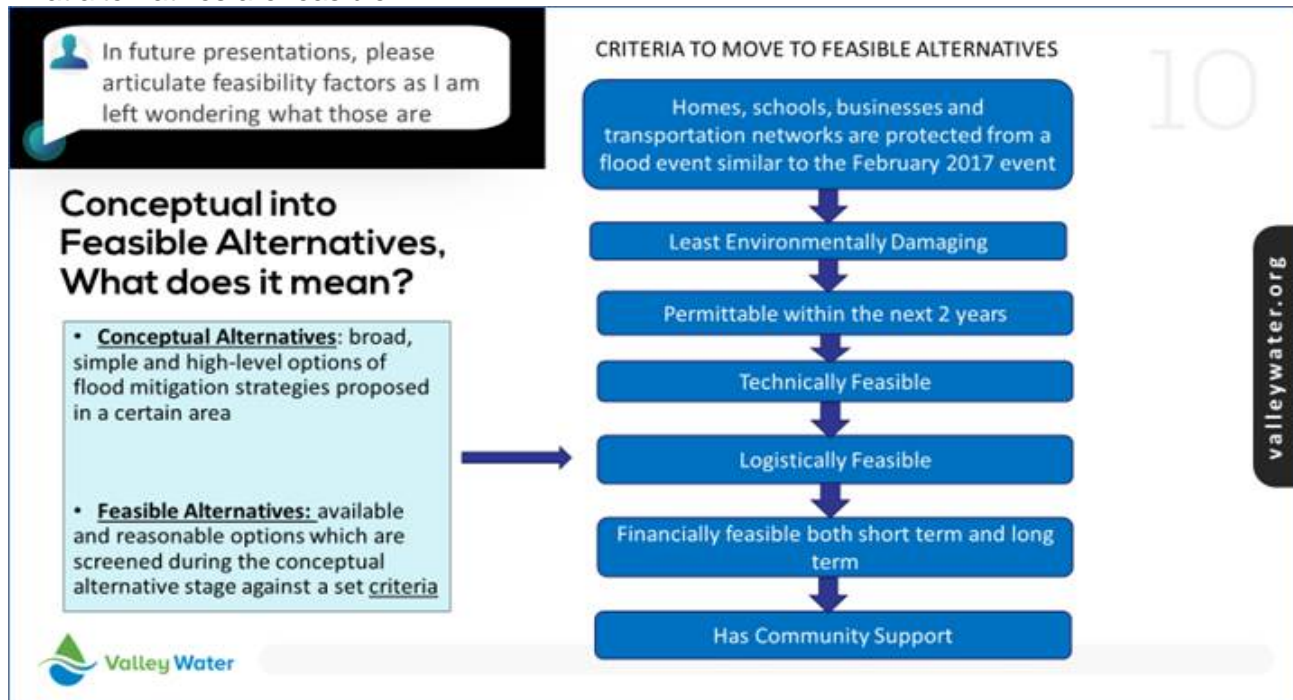
Yes. Due to the anticipated expedited completion of the Anderson Dam Tunnel Project, the Coyote Creek Flood Protection Project has been split into FERC compliance flood mitigation measures and post-compliance measures. The FERC compliance measures need to be completed by the end of 2023 and post-compliance measures by the end of 2025. The anticipated schedule is dependent on the work taking place outside the channel to avoid a longer regulatory review period and the issuance of state and federal regulatory agency permits to do this project.

20. Can Valley Water perform vegetation and stream channel maintenance on private property, or can Valley Water force creekside property owners to perform maintenance?

Valley Water understands that creek maintenance by individual property owners is rare and can also be difficult and costly. Valley Water has very limited authority to require property owners to perform creek maintenance. Valley Water is in the early stages of exploring ways to encourage or incentivize individual property owners to perform creek maintenance.

21. When evaluating project feasibility, what criteria does Valley Water use to define what is 'feasible'?

Once conceptual alternatives have been identified, the following criteria or 'filters' are applied to define what alternatives are feasible.



Environmental Stewardship

22. How does Valley Water protect and enhance habitat while also doing flood protection?

This project is being designed to require little to no stream-channel changes, leaving the stream habitat undisturbed. This also simplifies the regulatory compliance requirements for this project as the alternatives that are being considered are all outside the creek channel. Valley Water also has enhancement programs and projects targeting non-native and invasive vegetation and replacement with native vegetation. These habitat projects have a side benefit of reducing channel roughness and improving flood protection.

23. What is Valley Water doing about trash and other impacts to water quality in creeks?

Under a Memorandum of Understanding (MOA) with the City of San José, Valley Water and San José jointly clean homeless encampments along creeks and prioritize up to five trash rafts a year for removal. Valley Water also provides grants and partnership funds to nonprofit organizations and other agencies to clean creeks and do outreach and education to Santa Clara County residents to reduce littering. In addition, Valley Water and the City of San José have requirements to protect water quality as part of their Municipal Regional Stormwater Permit, which includes trash clean ups and implementing integrated pest management to reduce the use of pesticides.

Under Priority B of the 2012 voter approved SCW Program, funds were allocated to remove trash and to clean up large creekside encampments that contaminate waterways. Due to the demand to clean-up creeks, the total 15-year budget allocation for this priority was spent in two years. Valley Water is currently exploring extending this program to include a higher amount of funds allocated for creek cleanup efforts. Extension of this program is dependent on voter approval.