



Santa Clara Valley Water District

File No.: 20-0161

Agenda Date: 2/4/2020
Item No.: 2.1.

BOARD AGENDA MEMORANDUM

SUBJECT:

Receive Information and Discuss Status of the Anderson Dam Seismic Retrofit Project and the Function of the Dam Facility as it Relates to Santa Clara Valley Water District's (Valley Water) Water Supply, Incidental Flood Protection, and Downstream Flood Protection Improvements along Coyote Creek; and Authorize the Chief Executive Officer to Negotiate and Execute an Agreement with Horizon Water and Environment, LLC for Environmental Planning and Permitting Services.

RECOMMENDATION:

- A. Receive information and discuss status of the Anderson Dam Seismic Retrofit Project and the function of the dam facility as it relates to:
 - i. Valley Water's Water Supply Master Plan and Resiliency Portfolio;
 - ii. Environmental studies underway and requested on Coyote Creek;
 - iii. Incidental flood protection benefits for Coyote Valley; and
 - iv. Downstream flood protection improvements along Coyote Creek; and
- B. Authorize the Chief Executive Officer to negotiate and execute an Agreement with Horizon Water and Environment, LLC., for Environmental Planning and Permitting Services for the Anderson Dam Seismic Retrofit Project for an amount not-to-exceed \$4,500,000.

SUMMARY:

Background

Anderson Dam Seismic Retrofit Project

The Anderson Dam Seismic Retrofit (ADSR) Project will correct dam seismic deficiencies and address the impacts of the operation of Anderson Reservoir on the beneficial uses of Coyote Creek, including restoration of fisheries, wildlife, water quality, and water supply. The ADSR Project will require an extensive environmental compliance process, including evaluation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and several regulatory permits.

Several factors have expanded the scope of the ADSR Project compared to what was originally envisioned:

- The Federal Energy Regulatory Commission (FERC) has determined that operation of Anderson Reservoir will need to be addressed as part of the environmental consultation and project approval.
- National Marine Fisheries Service (NMFS) has determined that potential impacts related to operation of the dam after completion of the construction must also be considered and has requested numerous additional studies to inform federal Endangered Species Act Section 7 consultation.
- With the integration of post-retrofit operations, the Fish and Aquatic Habitat Collaborative Effort (FAHCE) flow measures will also be included as part of the project, including the associated water rights changes in Coyote Creek.
- As a part of the project evolution, FERC, California Department of Water Resources Division of Safety of Dams, and the independent Board of Consultants have requested additional geotechnical investigations and analysis to design the spillway, in-reservoir stockpiles, outlet works, and embankment reconstruction to improve the overall constructability of the proposed project.

Subsequently, technical, management, and executive management staff participated in an all-day workshop on September 27, 2019 with key Valley Water consultants (including dam design, legal, and fisheries experts) to share potential ideas and propose solutions in the following areas:

1. Identify clear project goals in the areas of public safety, water supply, environmental enhancement, and financial sustainability for the Board's consideration;
2. Identify alternative ADSR Project designs which best meet the identified proposed project goals; and
3. Identify measures to be taken before, during and after construction to support fisheries health.

As a result, the following project goals were adopted by the Board on October 22, 2019:

1. **Public Safety:** Expediently complete the project to safeguard against loss of life and reduce property damage due to earthquake and/or subsidence.
2. **Water Supply:** Ensure a resilient water system to benefit the community's access to safe, clean, and reliable water while supporting a healthy groundwater basin.
3. **Environmental Enhancements:** Protect the creek habitat during construction and provide improved habitat after construction.
4. **Financial Sustainability:** Use resources prudently to build a reliable, long lasting project for the community.

Water Supply

Anderson Reservoir is part of a complex system physically connected with Coyote Reservoir, imported water supplies, and the raw water delivery system. The Anderson system is a key component of both the annual water supply portfolio and Valley Water's reliable operation. Along with imported water, Anderson Reservoir is a source of water for Valley Water surface water treatment plants that provide treated water throughout North County and provides raw water to other groundwater recharge facilities. It provides local storage within the valley, as opposed to Central Valley Project (CVP) water that is remotely stored in San Luis Reservoir. In addition, Anderson

Reservoir storage is used as an emergency/backup supply to CVP imported water and to address water quality issues with imported CVP supplies.

The total storage capacity of Anderson and Coyote reservoirs, without seismic restrictions, is 111,819 acre-feet (AF), larger than all the other Valley Water surface reservoirs combined. In addition to being a local water supply, the large capacity of the two reservoirs allows Valley Water to carry water over from one year to the next to help guard against the impacts of dry years.

The Anderson-Coyote system also has Valley Water’s largest water rights totaling 115,840 AF, over half of Valley Water’s local water rights. Releases from Anderson Reservoir help Valley Water with exercising its water rights. Not only the releases support the water treatment plants and recharge the aquifers in the Coyote Valley, Santa Clara Plain, and Llagas Subbasin, but they support the environment in Coyote Creek throughout the year. In particular, during the warmer months of the year, Anderson Reservoir provides a cold water pool needed for environmental flows into Coyote Creek required under FAHCE.

These benefits have already been reduced by the seismic restrictions placed on Anderson and Coyote dams, which limit their storage capacity to 51,766 AF and 11,843 AF, respectively, or a combined storage of 63,609 AF, which is about 57% of the unrestricted storage.

Alternate Water Supply Sources

The Valley Water Board approved the Water Supply Master Plan 2040 (Master Plan) at the November 20, 2019 Board meeting. The Master Plan provides an investment strategy that will provide a reliable, clean water supply for current and future generations. The investment strategy in the Master Plan is the “ensure sustainability strategy”, which includes securing existing supplies, investing in additional conservation and reuse, and optimizing the existing system. To achieve the “ensure sustainability strategy,” the Master Plan recommends several projects that provide new water and/or new conveyance and storage infrastructure (Table 1). The Master Plan also recommends projects that maintain existing infrastructure, such as the ADSR Project.

The water supply benefit of a retrofitted Anderson Dam is approximately 44,000 AF per year, as presented at the May 20, 2019 Water Storage Committee meeting. However, there are uncertainties in the future demands, existing supplies and infrastructure, and recommended projects (e.g., project yield, implementation timing and feasibility, etc.). To address this uncertainty, the Master Plan prescribes the development of an annual Monitoring and Assessment Plan (MAP). The MAP report to the Board will update the status of demands, supplies, and projects and programs in the Master Plan and whether changes are needed to the planned investment strategy or recommended projects, such as the ADSR Project. If changes to or decisions about the Master Plan, Master Plan projects, or other projects appear needed, staff will develop recommendations for the Board based on how decisions would affect the level of service, costs and water rates, risk management, and relationships between projects.

Table 1. Master Plan Projects from the November 20, 2019 Board Meeting

Project	Average Annual Yield (AFY) ¹	Valley Water Lifecycle Costs ⁴	Unit Cost (AF)	Risk
Delta Conveyance Project	41,000	\$630 million	\$600	High/ Extreme
Additional Conservation & Stormwater Projects	11,000	\$100 million	\$400	Medium
Potable Reuse	19,000	\$1.2 billion	\$2,000	Medium
Pacheco Reservoir Expansion ²	6,000 ³	\$340 million ⁵	\$2,000	Medium
Transfer-Bethany Pipeline ²	3,500	\$78 million	\$700	Medium
South County Recharge	2,000	\$20 million	\$400	Medium

¹The amount of project yield that is usable by Valley Water depends on the portfolio of water supply projects that Valley Water ultimately implements and the outcome of ongoing regulatory processes.

²Assumes Prop. 1 Water Storage Investment Program funding. Cost would be roughly double without the funding.

³Based on Prop. 1 Water Storage Investment Program (WSIP) application.

⁴Valley Water lifecycle (100 year) costs are presented in 2018 present value dollars.

⁵Assumes Prop. 1 and WIIN funding, WIFIA loan, and partner agencies pay 20% of the project.

Update on Project’s Planning Efforts

Action on Anderson Dam is subject to FERC’s environmental procedures. Valley Water must consult with the relevant federal and state resource agencies, including the US Fish and Wildlife Service, National Marine Fisheries Service (NMFS), US Environmental Protection Agency, California Department of Fish and Wildlife, State Water Resources Control Board, State Office of Historic Preservation, and Santa Clara Valley Habitat Agency. To meet expedited implementation of the proposed project, final environmental authorizations and permits will be needed by spring 2022.

Recognizing the project urgency, federal resource agencies have expressed alignment in meeting permitting timelines to allow start of construction in 2022. To meet this goal, Valley Water delivered a complete project description for agency review in December 2019. Valley Water continues to hold monthly environmental and permit coordination meetings with FERC and bimonthly interagency meetings with all agency stakeholders. Effective November 2019, Valley Water has initiated monthly fisheries technical workgroups to collaboratively resolve issues relating to federally and state listed species and their designated critical habitat.

At this time, the critical path for resource agency permitting is preparation of a draft biological assessment by November 2020 for submittal to NMFS to begin formal Section 7 consultation for purpose of obtaining a biological opinion. NMFS has requested Valley Water’s development of new modeling tools and additional studies to complete its Section 7 review. Valley Water has amassed

over 20 years' worth of scientific data pertaining to Coyote Creek and fish habitat, and many of these studies suggested by NMFS would be multi-year and located in the upper watershed outside the project extent. Staff will continue to utilize the monthly technical workgroup meetings, supported by active engagement by federal resource agency executive leadership, to resolve issues of concern and reach agreement on necessary permit terms and conditions.

Coyote Creek Flood History

Flooding has occurred many times within the Coyote Creek Watershed, including flood events in 1911, 1917, 1931, 1958, 1969, 1982, 1983, 1997, 1998, and 2017. The largest flow recorded on Coyote Creek was 25,000 cubic feet per second in 1911, prior to construction of the current two water-supply reservoirs in the upper watershed. Since the construction of Anderson Dam in 1950, the worst flooding in the urbanized section of Coyote Creek occurred on February 21, 2017. Coyote Creek overtopped its banks at several locations between Montague Expressway and Tully Road. Businesses and hundreds of homes were inundated by creek waters for many hours. Highway 101 near Watson Park, as well as many local streets, were closed due to flooding, and thousands of residents had to be evacuated and sheltered.

Coyote Creek Flood Protection Project

The Coyote Creek Flood Protection Project (Coyote Creek Project), is located in the central portion of the Coyote Watershed on the mainstem of Coyote Creek, within the City of San José. The Coyote Creek Project was originally part of the Clean, Safe Creeks and Natural Flood Protection Plan, a 15-year special parcel tax approved by voters in November 2000. The Project was carried over into the new Safe, Clean Water program in 2012 with the same funding. The project's original purpose was to plan, design, and partially build a project to provide 1-percent flood protection to Coyote Creek from Montague Expressway to Highway 280. In June 2017, the Board of Directors modified the Project's extent upstream from Highway 280 to Tully Road. In addition to extending the project's reach, the proposed modifications changed the target flood protection level from a 1%, or 100-year, level flood event, to protection from a flood event equivalent to the February 21, 2017 flood (approximately a 20 to 25 year event).

Since then, a project team has been working on the project's planning study in an expedited manner. To this point, problem definition has been completed and conceptual alternatives were developed and communicated with the public in Spring of 2019. More recently, feasible alternatives have been developed and shared with the public in three meetings on November 6, 7, and 13 of last year. These feasible alternatives are being refined and analyzed further to develop a recommended project very early in 2020. To expedite permitting and subsequent construction, project elements that avoid environmental impacts and are focused outside the creek corridor are being developed. The current project schedule is for design, CEQA, and as needed permitting to be conducted in calendar years 2020 to 2021, followed by a three year construction period from 2022 to 2024.

Environmental Permitting Services Agreement

Due to the events that have greatly expanded the scope of the project and resulted in significant

changes to the project description, the existing planning consultant was not scoped for this additional work effort. Therefore, a new request for proposals was pursued for a new environmental consultant agreement based on the significant changes to the project description and environmental permitting parameters.

The new Consultant will take over the fundamental environmental review and permitting services from the existing consultant team. Staff has completed negotiations with the new Consultant to provide environmental planning and permitting services for the ADSR Project by performing the following four major tasks: Project Management Services, Environmental Services, Regulatory Compliance, and Supplemental Services.

The total not-to-exceed fee for this Agreement is \$4,500,000. The tasks and not-to-exceed additional fees are summarized in Table 2 below:

Table 2 - Summary of Tasks and Fees

Task	Description	Approximate Total NTE* Fees
1	Project Management	\$537,000
2	Environmental Services	\$1,700,000
3	Regulatory Compliance	\$913,000
4	Supplemental Services	\$1,350,000
Total Not-to-Exceed Fees		\$4,500,000

Proposed fees have been negotiated to account for additional efforts required to evaluate a much larger project than originally anticipated. Fees also take into consideration the increased complexity involved with addressing the extra studies, coordination, resource agency requirements, and water rights to accomplish the FAHCE measures for Coyote Creek. The EIR will include evaluation of proposed seismic retrofit activities and operations of the reservoir. Habitat restoration and non-flow measures for Coyote Creek under FAHCE are anticipated to be evaluated programmatically in the EIR. Regulatory compliance will include permitting services to satisfy federal, state, and local natural resource agency permitting requirements for construction and operation of new infrastructure. Supplemental services will be scoped to provide flexibility for additional project management, CEQA, NEPA, permitting, and mitigation development services to support supplemental requests from regulatory agencies. The Supplemental Services are also intended to provide flexibility to address changes to the project that may result from forthcoming decisions and design modifications.

FINANCIAL IMPACT:

Staff estimates a not-to-exceed fee of \$4,500,000 for the Agreement with Horizon Water and Environment, LLC., for Environmental Planning and Permitting Services for the ADSR Project. A budget adjustment will be required. Staff is planning to bring the budget adjustment to the Board in February 2020 along with the FY 2018-19 year-end closing budget adjustments, and the FY 2019-20

mid-year budget adjustments. The updated FY 2019-20 planned expenditures for the ADSR Project have been incorporated into the Preliminary FY 2021-25 Capital Improvement Program.

CEQA:

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect physical change in the environment.

ATTACHMENTS:

Attachment 1: PowerPoint

UNCLASSIFIED MANAGER:

Christopher Hakes, 408-630-3796