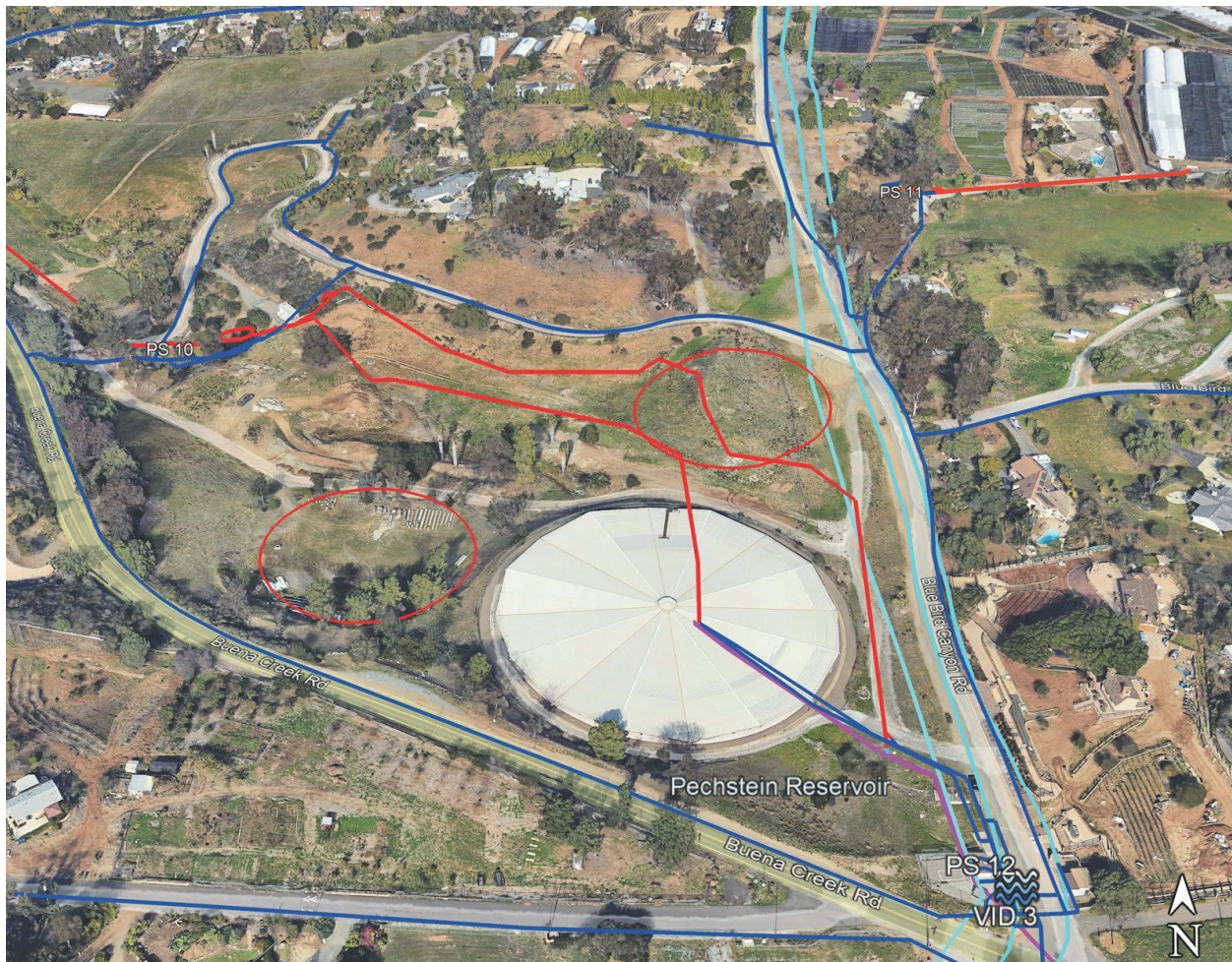




REQUEST FOR PROPOSAL

PECHSTEIN AND PECHSTEIN II RESERVOIR PLANNING AND DESIGN PROJECT



PROPOSALS DUE: December 12, 2024, 2:00 p.m.

VISTA IRRIGATION DISTRICT
1391 ENGINEER STREET
VISTA, CA 92081

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1. REQUEST FOR PROPOSAL REQUIREMENTS

Vista irrigation District (District) is seeking proposals from qualified engineering consulting firms for preparation of the District's Pechstein and Pechstein II Reservoir Planning and Design Project (Project). This Project will require the selected firm to perform a comprehensive planning study, obtain appropriate approvals and permits (including environmental), and design a reservoir and appurtenant facilities for construction.

Telephone inquiries, individual meetings and site visits with District staff are encouraged to define details of the project and may be scheduled upon request. Any existing pertinent District documents that might be useful in the preparation of the firm's proposal will be made available for review during the Request for Proposal (RFP) phase. The firm shall comply with all provisions of California laws dealing with prevailing wages, apprentices, and hours of work.

Proposal packages must be received at the District's office prior to 2:00 p.m., Thursday, December 12, 2024. Each proposal package shall include: five hard copies and one digital (PDF) copy of the proposal and one hard copy and one digital (PDF) copy of the fee estimate. The fee estimate shall be in a separate sealed envelope.

All inquiries regarding this RFP and delivery of proposals should be directed to Greg Keppler, Engineering Project Manager, at (760) 597-3136 or gkeppler@vidwater.org.

Proposals will be reviewed by District staff for responsiveness, understanding of the work, proposed Project approach, scope of work, relevant experience, past performance if applicable, Project team and schedule. Failure to submit information in accordance with the RFP requirements and procedures may be cause for disqualification. The District reserves the right to waive minor proposal deviations or omissions at its sole discretion. The firms deemed most qualified may be invited to participate in a presentation and interview. If invoked, the firm's team at the interview shall include, as a minimum, the Project manager and the individual proposed to have the most hourly involvement. The successful firm chosen will be invited to negotiate a final contract price and scope of work. In the event a successful contract cannot be negotiated, the District shall have the option to contact the second ranked firm to negotiate a contract. The selected firm will be required to enter into the District's Agreement for Services (see attached) and provide insurance certificates and endorsements as stipulated in the Agreement.

The District reserves the right to eliminate any portion of the requested services from the scope of work.

The proposal shall be limited to 35 pages on 8 ½ x 11 paper (excluding any appendices, which may use 11 x 17 paper for exhibits). The proposal shall be developed with at least the following sections with labeled tabs for easy reference:

- Understanding of the Project
- Relevant Experience and Contacts
- Approach to the Project
- Scope of Work
- Proposed Team and Organizational Chart
- Schedule of Work
- Appendix (if needed)

The following format shall be used for an in-depth proposal development. These items are intended as minimum guidelines only. Additional categories deemed to be necessary for a complete proposal and scope of work may be added following these sections.

Understanding of the Project: The proposal shall contain a detailed explanation of the Project as viewed by the proposal author; do not simply restate the contents of the RFP. The information offered should be a concise presentation of the consultant's knowledge of the area and understanding of the technical needs of the Project. The proposal shall be responsive to the needs of the detailed scope of services of the RFP.

Relevant Experience and Contacts: This section shall include a complete listing of similar projects located in California performed by the proposed team members. Each project description shall include the scope of work, date completed, fee and current contact information, including current phone number, for each reference of whom questions can be asked about the project. Similar projects and expertise in San Diego County governmental agencies and related facilities should be highlighted, although projects requiring similar skills and expertise will also be considered.

Project Approach: The proposal shall contain a description of the logistics necessary to accomplish the work including place of work for major Project phases, conceptual organization of major phases, use of sub-consultants, and meetings. If the consultant has ideas for an alternate approach to achieve the Project objectives in a more cost effective or comprehensive manner, the consultant should include those ideas in this section.

Scope of Work: The proposal shall contain enough detail to demonstrate that a strategy has been developed to accomplish the work in an efficient and timely manner. The detailed scope of work should be developed in conjunction with the schedule of work to provide phasing requirements, milestones and decision points that will affect the progress of the work.

Project Team: The Project team shall be listed by name of person from the Project Manager through the Project Engineer and any other individual, organization, or sub-consultant having more than five percent hourly involvement. Each team member's relevant experience with similar projects and level of responsibility shall be provided.

Schedule of Work: The proposal shall contain a Project schedule showing elements of work corresponding to the detailed Scope of Work for all tasks. The elements of work shall comprise the y-axis of the table. The x-axis shall comprise a timeline for completion of each element of work. Milestones and decision points shall be identified on the timeline where necessary.

Appendix: Exhibits and other pertinent information, as needed, shall be included in an Appendix at the back of the proposal.

Fee Estimate: The fee estimate shall be provided in a separate sealed envelope in the proposal package. The fee estimate will not be used in the initial evaluation of the proposals. A detailed fee estimate shall be provided for all tasks of the Project.

The detailed fee estimate should correspond to the Scope of Work. The elements of work shall comprise the y-axis of the table. The names or initials of individual team members or discipline shall comprise the x-axis of the table. Hourly involvement by each team member should be listed for each element of work. The hours should be extended by individual billing rate for each work element. Expenses and other costs should be shown for each task. Each task should be subtotaled. The total cost of all tasks shall be the proposed fee for the Project.

2. PROJECT DESCRIPTION

The purpose of the Project is to generate a master plan of the entire Pechstein Reservoir site to accommodate a new Pechstein II Reservoir while retaining the existing Pechstein reservoir. Master planning the Pechstein site affords the District an opportunity to efficiently plan and construct several anticipated capital improvement projects over the next decade or more. Near-term projects include construction of Pechstein II, replacing the existing Pechstein Reservoir roof, improving the yard piping connecting the proposed Pechstein II Reservoir, the existing Pechstein Reservoir, existing pump stations (PS) 10 and 12 as well as a new San Diego County Water Authority (Water Authority) second aqueduct treated water connection for the District's VID 3 turnout, improving site drainage, operations and maintenance, and security. Longer term projects may include planning for a future Vista Flume (Flume) replacement terminus connection, replacement and consolidation of PS 10 and PS 12 and other pump station improvements including the necessary electrical upgrades and backup power generation, yard piping layout and connections to accommodate future improvements in the District's transmission and distribution system near the Pechstein site as well as efficient material and equipment storage possibilities for District forces.

Currently, the existing Pechstein Reservoir roof is beyond its useful life and needs replacement. Moreover, Pechstein Reservoir provides nearly 50 percent of all the District's storage for its main service area and cannot be taken out of service for an extended period. Therefore, before the existing Pechstein Reservoir can be taken offline and have its roof replaced, additional storage is required to maintain the District's continuity of operations. In addition, the existing Pechstein Reservoir does not provide the District with the desired operational flexibility and redundancy for the site, nor does it meet the ultimate storage requirements listed in the District's 2017 Water Master Plan.

It is estimated that the new Pechstein II Reservoir will have a capacity of up to 10 million gallons (MG) contingent upon an appropriate balance between economies of scale, results of the space planning analysis, water quality modeling (water quality analysis will play a vital role in determining the appropriate size of the Pechstein II Reservoir, particularly when both reservoirs are operating under low demand conditions), operational storage needs while Pechstein Reservoir's roof is being replaced and location for all the necessary improvements. The new reservoir shall meet all applicable current codes and standards. In addition, the District's PS 10 is at or near the end of its useful life. Both PS 10 and PS 12 are not optimized for current and planned operations in the future; therefore, planning analysis will be required to improve their future pumping regimes and consolidate their capabilities.

The District desires to develop a diverse funding portfolio to pay for several large capital intensive programs over the next several years. One of the funding mechanisms the District wishes to attain as part of its financial strategy is grant funding. Construction of the Pechstein II Reservoir is one of the large programs the District has identified as being eligible for existing grant funding opportunities; ensuring that the scope of its construction is developed in such a way where it remains eligible for local, state, and federal funding is imperative.

The process to finalize the Project also requires addressing potential environmental impacts. Because the District is proposing an expansion in capacity of the existing reservoir site, it is anticipated the proposed improvements would not qualify for an exemption under the California Environmental Quality Act (CEQA). The Consultant shall prepare the appropriate level of environmental analysis and documentation for CEQA prior to approval of the Project by the District's Board of Directors.

3. BACKGROUND AND OVERVIEW

3.1. DISTRICT BACKGROUND

The District was formed in 1923 pursuant to Section 20500, et. seq., of the California Water Code and provides water to the City of Vista as well as portions of San Marcos, Oceanside, Escondido and unincorporated areas of the County of San Diego. The District service area is approximately 21,150 acres with 87% of the area currently developed with a service population of approximately 132,000 and 29,000 potable water service connections. The District's treated water transmission and distribution system consists of approximately 429 miles of 4-inch to 42-inch pipelines, 12 storage tanks, 15 pressure zones and 7 pump stations.

The District obtains its water from Lake Henshaw, which it owns, and from imported and desalinated supplies furnished by the Metropolitan Water District and/or the Water Authority. Current supply to the District is from six connections to the Water Authority's aqueduct system and a treatment and conveyance system from the District's local surface and groundwater supply located at Lake Henshaw. Lake Henshaw water is conveyed via the San Luis Rey River to the Escondido Canal to Lake Wolford and then sent to the Escondido-Vista Water Treatment Plant (EVWTP) located at Lake Dixon.

The EVWTP, operated by the City of Escondido (Escondido), is jointly owned by the District (20 percent) and Escondido (80 percent). Water treated at EVWTP is conveyed to the District via the Vista Flume, which delivers the EVWTP finished water to the District's 20 MG Pechstein Reservoir that feeds the District's main service area.

3.2. PROJECT BACKGROUND

3.2.1. Existing Pechstein Reservoir

Pechstein Reservoir is located in the County of San Diego along Buena Creek Road in unincorporated Vista. The original Pechstein Reservoir was an open surface impoundment with an earthen dam constructed in a natural canyon (Blue Bird Canyon). It is believed that due to the clean water act and surface water regulations pertaining to drinking water standards, the original Pechstein Reservoir was demolished and the existing 20 MG Pechstein Reservoir was built in its place as part of the District's Filtered Water Storage Project of 1976. A contract change order was issued during its construction, which graded another pad adjacent to the 20 MG Pechstein Reservoir to accommodate up to an additional 10 MG reservoir in the future.

The current Pechstein Reservoir is a conventional pre-stressed concrete design that is partially buried. However, the roof structural system is constructed from wood glulam timbers and rafters, which is covered with corrugated metal, and supported by reinforced concrete columns. Regular maintenance on the reservoir is performed by District staff. Roof repairs and maintenance issues have been a continual effort since the early 1990s.

More recently, several studies have focused on Pechstein Reservoir due to its importance in the District's daily operations and distribution system. The 2017 Water Master Plan ranked the Pechstein Reservoir as a top priority for further evaluation based the condition of the exterior and interior of the roof structure. Subsequently, the Pechstein Reservoir Structural Evaluation and Repair Study was completed in September 2018. It further evaluated the condition of the tank and roof and found that the reservoir tank structure itself was generally in sound condition and not in need of any major seismic retrofits as long as the roof was replaced with a new, lightweight aluminum dome roof. The roof itself was confirmed to be in poor condition with several of the large glulam support beams needing immediate attention. Due to the operational constraints of the existing reservoir and plans to construct Pechstein II, the District completed near-term structural repairs to the beams in 2022 with the intent to replace the roof within five to seven years.

3.2.2. The Vista Flume

The Vista Flume (Flume) is an 11.25 mile conduit originally constructed in 1926 that is comprised of both unpressurized channel and pressurized siphon facilities. The Flume is the District's only means of receiving local and imported water treated at the EVWTP and becomes the primary supply of all water to the District during planned 10-day shutdowns along the Water Authority's second aqueduct.

A Water Supply Planning Study (WSPS) and a hydraulic technical memorandum (TM 6), which is part of a larger ongoing Flume Replacement Alignment Study (FRAS), were completed in March 2020 and October 2024, respectively. Both the WSPS and FRAS concluded that at nearly 100 years old, the Flume has exceeded its usable service life, is largely unsuitable for reuse, and needs to be retired. Replacement of the entire Flume was found to be the least costly long-term water supply option for the District. As it relates to replacing the Flume, in March 2024 the District's Board of Directors made the decision to:

- Complete the FRAS and prepare the Recommended Alignment Report;
- Inform the Division of Drinking Water (DDW) of the District's intent to completely replace the Flume;
- Complete preparation of FRAS CEQA supporting documents;
- Work with the District's municipal advisor to develop the funding strategy for replacing the Flume;
- Develop an RFP for the final design of the Flume Replacement Project; and
- Use the planning, environmental, and financial documents prepared in the above steps as supporting documentation to pursue a diverse funding portfolio for the Flume's replacement.

3.2.3. Existing Hydraulics and Reservoir Operation

Pechstein Reservoir functions as the main delivery hub of treated water into the District's system (refer to Figure 1 and Figure 2, respectively, for a general overview of the Pechstein site and the District's local water and distribution system). Treated water coming from the EVWTP is conveyed through the Flume to the reservoir with the flow regulated at the EVWTP and metered via a venturi meter before entering the Flume. There are several delivery points along the Flume prior to arriving at Pechstein Reservoir. They include the District's Boot and Bennet service areas as well as a connection to the Rincon Del Diablo Municipal Water District and the District's VID 12 treated water connection to the Water Authority's first aqueduct.

Just outside the Pechstein site, Flume water deliveries are again monitored through a weir structure at the MW siphon. Under normal operating conditions, Pechstein Reservoir's water level fluctuates with demands in the 837/810 zone, which then feeds a majority of the District's demand in the lower pressure zones to the west. When Pechstein Reservoir is taken out of service for cleaning or minor maintenance, a 24-inch bypass pipeline is used to supply the lower zones. The 810 and 837 zones are operated as a single pressure zone or as separate pressure zones at the District's discretion. The zones are separated by a valve that can be closed remotely to isolate the two systems. When the 837/810 zones are isolated, the 5.4 MG H Reservoir is the primary feed for the 810 zone. Combined, the 810 and 837 zone is the largest zone spatially, extending from the San Luis Rey River at the northern boundary of the District all the way to the southern boundary of the District, south of 78 freeway.

The District also has the 984/976 pressure zones which are largely fed from the Pechstein site as well. The 984 and 976 zones operate as a single pressure zone, and the actual hydraulic grade depends on demands in the service areas of the HB and HP Reservoirs, respectively. This combined zone is supplied water primarily from a combination of the Flume via PS 10 and PS 12 and the District's VID 3 connection to the Water Authority's second aqueduct. PS 10 and PS 12 reside within the Pechstein Reservoir property. PS 10, located northwest of Pechstein Reservoir, feeds the 984/976 zones from the 837 zone downstream of Pechstein Reservoir and can either pump directly from the Pechstein Reservoir or from Pechstein Reservoir's bypass pipeline. PS 12 is located on the southeast side Pechstein Reservoir and pumps directly from the MW siphon section of the Flume, just upstream of the monitoring weir for Pechstein Reservoir (the weir backs up water in the siphon and provides suction to the pump station).

The District's VID 3 turnout is located directly across the street (Bluebird Canyon Road) from PS 12 and supplies flow by gravity into the 984/976 zones. The hydraulic grade line at VID 3 varies depending on Water Authority system demands but is generally around 1010 feet (note, given the limited hydraulic grade provided by this connection relative to the 984 zone, the District is considering a new pipeline in the future to the nearby HB Reservoir to increase available deliveries). When active, VID 3 is regulated by a Water Authority flow control valve to meet District demands. VID 3 can also backfeed the Pechstein Reservoir and its bypass pipeline via the HP-Relief regulator vault located next to PS 12.

The VID 3 building also houses a calcium hypochlorination system (400 lbs. per day) that can supply free chlorine to the Flume or VID 3. The chlorination system can be used to "boost-chlorinate" either the Flume or VID 3 connection to combine with any free available ammonia to increase the chloramine residual. Additionally, it can be used to free chlorinate the Flume if the EVWTP lost the ability to feed ammonia and could only supply free residual treated water.

The 4.5 MG HB Reservoir provides the primary storage for the 984 zone. The 984 zone borders and feeds several zones including 837, 900 and 1070. The AB pipeline and pressure reducing station (PRS) provide a connection from the 984 zone to the 837 zone. The 900 zone is served from two PRSs, D1 and HL16. Additionally, water is conveyed from the 984 zone to the 1070 zone via PS 11 located near the Pechstein Reservoir site as well. The 1070 zone is a small pressure zone which serves five customers.

The 4.7 MG HP Reservoir is supplied from the 984 zone and provides storage for the 976 zone. There are four connections to the 810 zone via PRSs including H, HPR, HN14, and HL. PS 9 located at H Reservoir provides a backup supply to the 976 zone from the 810 zone. Also, the newly completed 2.9 MG E Reservoir and Pump Station can provide additional redundancy with the ability to pump to the 984/976 zones from the 752 zone. Both the 810 and 752 zones can be supplied from the District's northern VID 11 treated water connection to the Water Authority's North County Distribution Pipeline.

3.2.4. New Pechstein II Reservoir and Pump Station Needs

The District is planning to add Pechstein II Reservoir with a capacity up to 10 MG to improve redundancy, operational flexibility, and to maintain operational continuity during the replacement of the Pechstein Reservoir roof. In addition, a future pump station, which is envisioned to include the consolidation of the District's PS 10 and PS 12, is needed. As part of future PS improvements planned at the Pechstein site, a new electrical service and backup generator for unplanned power outages will be vital.

Several future capital projects on or around the Pechstein site are planned (refer to the District's Master Plan). Pipeline connections for those future system improvement projects, a Flume replacement terminus connection to a proposed pressure sustaining valve vault at the Pechstein site (refer to TM 6), and a planned new VID 3 connection (by the Water Authority) are proposed. New yard piping that accommodates connections to the existing Pechstein Reservoir, the proposed Pechstein II Reservoir, the existing PS 10 and PS 12, a future consolidated PS 10 and PS 12, the proposed new VID 3 Water Authority connection, the Flume replacement connection, and other notable system improvements described in the District's Master Plan are needed.

4. SCOPE OF WORK

The following items should be a framework for the scope of work to be used in proposal formation for the Project. The District understands this RFP may be inadequate to fully describe the work envisioned. Therefore, the District will be relying on the consultant to provide modifications or amplification to the scope of work described herein based on their professional expertise in this subject area. The consultant is encouraged to incorporate items deemed necessary to meet the needs of the District in completion of the Project, including attending the necessary meetings with the District and other stakeholders, gather and review information, develop concepts and results as necessary, receive input, and gain approvals where required.

4.1. DATA COLLECTION AND BASEMAPPING

Obtain and review all available and pertinent reports, studies, data, and mapping relevant to the Project including but not limited to the following:

- Previous reports and planning documents.
- Record drawings, geotechnical reports, records of survey, pump curves/capacities, title reports, jurisdictional land-use documents, and proposed developments or capital projects within the influence of the Pechstein and Pechstein II Reservoir Planning and Design Project.
- Geographical information system (GIS) data and mapping.
- Existing hydraulic models.
- Supervisory control and data acquisition (SCADA) settings and controls.

- District Standards.

Provide topological and base mapping survey of the Pechstein site and appropriate surroundings and confirm property boundaries, easements, and right-of-way limits through title search, record research and other means.

4.2. SITE MASTER PLAN

The consultant shall conduct a thorough planning effort to identify all the near-term and long-term capital projects and detail how they fit into a complete master plan for the Pechstein site. The District is envisioning the Site Master Plan to be a stand-alone comprehensive document as part of the planning efforts for the Project. It shall identify and propose alternatives for facilities, show proposed locations, sizes, and detail schematically how each Project element works, should be phased, valved for operational flexibility, and connects to the planned near-term and long-term system improvements on and around the Pechstein site including but not limited to:

- New Pechstein II Reservoir
- Existing and consolidated PS 10 and PS 12
- Yard piping configuration and layout, including existing and proposed yard piping pipeline connections and extensions offsite (both near-term and long-term) including:
 - New 36-inch diameter Flume entering the site from the east along Buena Creek Road terminating in a pressure sustaining valve connection(s) to the reservoirs. Include operational provisions to backfeed the Flume from VID 3 (Refer to TM 6).
 - New VID 3 location and piping connections to the 984 zone and reservoirs (requires coordination with Water Authority).
 - New pipeline to HB Reservoir.
 - New secondary Pechstein transmission feed to 837 zone, routed through property and headed west along Buena Creek Road.
- Site access
- Proposed out buildings, vaults, and structures
- Site storage facilities
- Preliminary grading and drainage facilities
- Enhanced site security limits

Hydraulic modeling and analysis of the existing and proposed system configurations (both near-term and long-term) shall be conducted for water quality, flows/maximum velocities, future pump station capacity requirements, pressure and transients. The District is envisioning a consolidated pump station that can pump up to 4,000-4,500 gallons per minute. However, the ultimate planned pumping capacity will entail balancing current and future demands with the costs of systemwide upgrades that a larger pump station potentially places on the system.

Recommended improvements shall conform with American Water Works Association, California Water Resources Control Board – Division of Drinking Water and District standards and operating procedures. At a minimum, pumping regimes, station sizing and configurations considered for the future PS 10 and PS 12 consolidation shall be able to meet both open and closed system operation (i.e., use of variable frequency drives) to maximize operational flexibility. Both traditional and skid-mounted vertical turbine layouts should be reviewed.

Deliverables: draft and final Site Master Plan report (MS Word and PDF, CAD, and five hard copies).

4.3. PREDESIGN

Once all near-term and long-term planning elements have been identified, sized, detailed, sufficiently modeled and integrated into the Site Master Plan, the consultant shall prepare a Pre-design Report to better refine and detail the near-term Pechstein II Reservoir construction Project. The pre-design report shall consider but not necessarily be limited to identifying, evaluating, and providing for the following:

4.3.1. General

- General staging and lay down areas as well as handling and hauling of demolition debris resulting from the Pechstein Reservoir roof replacement. The Pechstein Reservoir Roof Replacement Project is not to be a part of the Pechstein II Reservoir Construction Project. However, as part of this task or CEQA, the consultant shall evaluate environmental requirements, impacts, and necessary surveys needed resulting from the demolition of the Pechstein Reservoir roof and determine whether these activities are considered part of the Pechstein II Reservoir Project as it relates to CEQA.
- Depending on the findings and consultant recommendations of this task, a programmatic approach to CEQA may be necessary in order to provide coverage under CEQA and to facilitate construction of several of the near-term Pechstein site improvements identified during the planning efforts (refer to the CEQA task below).
- Identify and understand impacts to operations and provide the ability to maintain service and minimize service interruptions during the construction of the Pechstein II Reservoir and associated appurtenances. Work with Operations staff to identify, specify, and develop an alternate supply plan, especially during the improved yard piping construction to maintain service to the 837 and 984 zones as well as other zones potentially impacted resulting from construction moratoriums due to District operations or Water Authority shutdowns. Coordinate this task with outside jurisdictions, and other major milestone requirements.
- Perform Pechstein II Reservoir sizing optimization and refinement for adequate supply redundancy (e.g., when Pechstein Reservoir is shut-down for roof replacement) and water quality (e.g., during low-winter demand periods and both reservoirs are online). Provide value engineering including performing tank type analysis to maximize storage capacity up to 10 MG and minimize maintenance/life cycle costs for the overall Project. Refine space planning including preliminary layouts of the tank, existing pump stations,

yard piping and connections, tank overflow/drain piping, grading and drainage, earth retaining structures, other jurisdictional requirements, etc., to optimize the space planning and site access, and minimize capital and construction costs.

- Analyze and recommend discharge locations to accommodate the existing Flume operations, a future Flume replacement terminus and new inlet/outlet flow capabilities of the Pechstein II Reservoir and existing Pechstein Reservoir.
- Assess geotechnical conditions and perform appropriate geotechnical and geophysical investigations.
- Establish hydraulic, geotechnical, civil, architectural, mechanical, structural, electrical/SCADA/instrumentation needs, criteria, and requirements, which would include a basis for the design and list of anticipated technical specification requirements, etc.
- Assess site security deficiencies and recommend improvements and requirements.
- Generate a required permitting, approval, and coordination plan including but not limited to grading requirements, permits and stormwater requirements, power supply improvements and timing requirements, California State Water Resources Control Board review and approval, and other jurisdictional permits and requirements for the Project.
- Preliminary engineer's construction cost estimate.

4.3.2. Environmental Assessment

Provide the District with the best CEQA option. For the purposes of scoping the Project, the District is requesting two options be evaluated. Both options shall include the required scope and fee from the consultant. The consultant shall assume:

- Option 1 – Initial Study (IS)/Mitigated Negative Declaration (MND). The first option would entail a standalone IS/MND for the Pechstein II construction Project.
- Option 2 – Environmental Impact Report (EIR). The second option would entail a programmatic EIR for the site for all near-term and long-term projects listed in the Site Master Plan including the Pechstein II construction Project.

After all the near-term and long-term Project elements are confirmed, the consultant shall recommend the most appropriate CEQA course of action in the Predesign Report. A task order for the scope and fee options provided in the proposal will be issued near the end of the predesign efforts or at the beginning of the final design phase to conduct the recommended CEQA option.

4.3.3. Modeling/SCADA Records Review

The consultant shall model Pechstein and Pechstein II reservoirs for water quality, mixing and age based on tank sizing and yard piping configurations, identify ways to balance hydraulics between Pechstein and Pechstein II reservoirs to ensure the water age and quality remains consistent in both tanks, and summarize the differences and system improvements required for

the existing pump station operation of PS 10 and PS 12 and the proposed future consolidated pump station including system head curves for preliminary pump sizing and selection of the proposed consolidated pump station, including both near term and long term plan improvements, and the potential need for offsite improvements. The District maintains a model of the existing water distribution system using Infowater software that is available for use to assist with portions of this task; however, computational fluid dynamics (3D hydraulic modeling) software shall be utilized as necessary for more robust analyses.

Review the location and characteristics of existing regulating valves, offsite pump stations, aqueduct connections, and reservoirs which may be affected by the proposed Project. Review operational control information. Prepare for and attend meetings with Operations staff and Project Manager to verify data (valve pressure and flow settings, pump curves, etc.) and determine operational adjustment procedures and/or normal valve settings for winter/summer operations. Review the Pechstein Reservoir operating levels and reservoir operating levels within the sphere of influence of Pechstein Reservoir with recorded data and/or operations personnel.

Compare model results from improved and existing scenarios. Recommend modifications, or improvements needed to existing facilities to accommodate a future pump station, new Pechstein II Reservoir, and connections to the affected pressure zones.

4.3.4. Preliminary Design Report

The preliminary design report shall thoroughly describe and detail all the facilities and improvements needed for the Pechstein II Reservoir construction Project (approximately 30% design), which will become the basis of the Pechstein II Reservoir final design. The consultant shall include development of the design in plan view and show elevations of the preferred Project options, including:

- Overall site plan;
- The preferred tank type, size (dimensions), location and capacity;
- Existing pump stations and future pump station size (dimensions and location), capacity, and preliminary layout;
- Existing piping and required piping modification and improvements including yard piping, tank overflow/drain piping, and other onsite and offsite improvements and connection details needed as part of the construction Project, as well as connection details needed as part of future construction projects;
- Grading plan including designation of any sensitive areas and mitigation, temporary lay down areas, permanent storage areas, drainage improvements, proposed landscaping and landscaping pallet, site access, and security; and
- 3D rendering(s) of the preferred Project particularly from potentially sensitive view corridors.

Deliverables: draft and final Predesign Report (MS Word and PDF, CAD, and five hard copies).

FINAL DESIGN

Once the Predesign is finalized and accepted by the District, a Notice to Proceed (NTP) will be issued for final design of the Project. The final design shall incorporate decisions and recommendations of the final and accepted predesign report. Final design documents shall include but not necessarily be limited to 75%, 100%, final design submittals of:

- Demolition plans, CEQA requirements and mitigation, phasing plans, and operational requirements while reservoir is in and out of service.
- New Pechstein II Reservoir, grading, civil, architectural, mechanical, structural, electrical/SCADA/instrumentation requirements, etc.
- Technical specifications and list of required construction submittals.
- Engineer's construction estimates at 75%, 100% and final submittals.
- Bid schedule, bid item descriptions, measurement and payment requirements.
- Estimated construction schedule including identifying reservoir in service and out of service dates, construction moratoriums due to District operations or Water Authority shutdowns, coordination with outside jurisdictions, and other major milestones.
- Draft and Final 75% submittal shall include well developed plans including plan view, profiles with proper stationing, elevations, and conflicts identified, elevations of structures, cross sections, pertinent notes with requirements, details with proper cross referencing, and written verification of internal constructability review. Specifications shall be well established and tailored specifically to the Project, incorporating District standard specifications and drawings where appropriate. Draft 75% submittal shall also be routed to other agencies as necessary for coordination and to receive Project approvals. District acceptance of the Final 75% submittal is required prior to commencement of the 100% submittal. Reasonable revisions may be needed for advancement to the 100% submittal, including but not limited to constructability, aesthetics and permitting requirements. Implementation of the quality assurance plan and validation of proper quality control is required.
- Draft and Final 100% submittal shall include finished plans, profiles, elevations, sections, pertinent notes with requirements, and details with proper cross-referencing. Specifications shall be complete. Only minor clarifications and corrections should be needed at this point. Draft 100% submittal shall also be routed to other agencies as necessary for coordination and to receive Project approvals. District acceptance of the Final 100% submittal is required prior to commencement of the Final Construction Bid Documents submittal. Implementation of the quality assurance plan and validation of proper quality control is required. After 100% comments have been incorporated, a check set of plans and specifications shall be submitted and reviewed by the District to ensure all comments have been addressed prior to finalizing Construction Bid Documents.
- Final 75% and 100% submittals shall incorporate all District and outside agency

comments. Provide a comment and response log indicating how/where the comment was addressed, etc.

Deliverables:

- Draft and final submittals of 75%, 100% designs (digital [pdf and CAD] and five hard copies on 24" x36").
- Final submittal for Construction Bid Documents (digital [pdf and CAD] and hard copies including Mylars).

4.4. BID PHASE SUPPORT SERVICES

Provide support services during the bidding phase to assist with responding to questions, preparing addenda, and holding a pre-bid meeting.

The District will request a scope and fee for construction phase services after final design is completed. It is anticipated a contract amendment will be issued with the construction contract award.

4.5. FINAL CEQA DETERMINATION

Based on recommendations from the Predesign Report, prepare, attend, and conduct necessary meetings, documents, site specific surveys, assessments, and determine Project specific requirements including addenda, Assembly Bill 52 notifications, as required. The consultant shall act on behalf of the District to be the primary point of contact for filing the appropriate documents, paying all fees (to be reimbursed by the District), developing the distribution list of stakeholders and issuing all necessary notifications, and providing responses to all inquiries related to CEQA.

4.6. PROJECT MANAGEMENT, QUALITY CONTROL, AND MEETINGS

Prepare a detailed Project design schedule outlining all tasks and milestones.

Provide Project Management, Quality Assurance and Quality Control throughout the course of the Project to ensure fulfillment of the Project scope, schedule and budget.

In addition to the specific meetings identified above, plan and prepare for the following meetings, at a minimum; kickoff meeting, monthly progress meetings, site visits, Predesign Report development meeting, draft Predesign comment review meeting, three Board of Directors meetings (including at least two consultant led presentations), 75% design review meeting, and 100% design review meeting. Additional meetings may be required, as needed.

5. TENTATIVE PROJECT SCHEDULE

The following dates and timeframes are anticipated during the planning and design phase. The dates

beyond the design phase completion date are District goals for the Project.

Milestone	Date
RFP Issued	October 29, 2024
Mandatory Preproposal Meeting	November 13, 2024
Proposals Due	December 12, 2024
Interviews (if needed)	January 7, 2025
Consultant Selected	January 9, 2025
Project Awarded by the Board	February 5, 2025
Project Kickoff Meeting	March 3, 2025
Pechstein Site/Pechstein II Planning Complete Design Kickoff	March 23, 2026
CEQA Complete	December 3, 2026
Design Complete	September 9, 2027
Notice Inviting Bids for Construction Issued	Late September 2027
Bid Opening	Early November 2027
Construction Project Award by Board	Mid-January 2028
Preconstruction Meeting, NTP Issued and Construction Start	Early March 2028
Project Substantially Complete	Early 2030
Accept Work and File Notice of Completion	Late Spring 2030

6. DISTRICT PROVIDED MATERIALS

Digital copies for some reference materials below are available for download from District by request only.

- Pechstein Reservoir Site – Figure 1 (Attached)
- VID Water System Schematic – Figure 2 (Attached)
- 2017 Potable Water Master Plan (via web address below):
https://www.vidwater.org/files/b8a52bb4e/2017+Potable+Water+Master+Plan_2018-04-09_combined_35mb.pdf
- Flume Replacement Alignment Study TM 6 (Attached)
- Miscellaneous Pechstein Reservoir Plans and Reports (available for download from District by request only)
- Consultant Rating Form (Attached)

- Professional Services Agreement (Attached)

ATTACHMENTS