



**SPECIAL NOTICE REGARDING
CORONAVIRUS DISEASE 2019 (COVID-19)
AND PARTICIPATION IN PUBLIC MEETINGS**

On March 4, 2020, Governor Newsom declared a State of Emergency resulting from the threat of COVID-19. Governor Newsom issued Executive Order N-25-20 (3-12-20) and Executive Order N-29-20 (3-17-20) which temporarily suspend portions of the Brown Act relative to conducting public meetings. Subsequent thereto, Governor Newsom issued Executive Order N-33-20 (3-19-20) ordering all individuals to stay at home or at their place of residence. Accordingly, it has been determined that all Board and Workshop meetings of the San Bernardino Valley Municipal Water District will be held pursuant to the Brown Act and will be conducted via teleconference. There will be no public access to the meeting venue.

**BOARD OF DIRECTORS WORKSHOP - ENGINEERING
TUESDAY, MAY 12, 2020 – 2:00 P.M.**

PUBLIC PARTICIPATION

Public participation is welcome and encouraged. You may participate in the May 12, 2020, meeting of the San Bernardino Valley Municipal Water District online and by telephone as follows:

**Dial-in Info: 877 853 5247 US Toll-free
Meeting ID: 753 841 573**

<https://us02web.zoom.us/j/753841573>

If you are unable to participate online or by telephone, you may also submit your comments and questions in writing for the District's consideration by sending them to comments@sbrvmwd.com with the subject line "Public Comment Item #" (insert the agenda item number relevant to your comment) or "Public Comment Non-Agenda Item". Submit your written comments by 6:00 p.m. on Monday, May 11, 2020. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record.

IMPORTANT PRIVACY NOTE: Participation in the meeting via the Zoom app is strongly encouraged. Please keep in mind: (1) This is a public meeting; as such, the virtual meeting information is published on the World Wide Web and available to everyone. (2) Should you participate remotely via telephone, your telephone number will be your "identifier" during the meeting and available to all meeting participants. Participation in the meeting via the Zoom app is strongly encouraged; there is no way to protect your privacy if you elect to call in to the meeting. The Zoom app is a free download.



SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
380 E. Vanderbilt Way, San Bernardino, CA 92408

BOARD OF DIRECTORS WORKSHOP - ENGINEERING

AGENDA

2:00 PM Tuesday, May 12, 2020

CALL TO ORDER -

Chairperson: Director Kielhold

Vice-Chair: Director Hayes

1. INTRODUCTIONS

2. PUBLIC COMMENT - *Any person may address the Board on matters within its jurisdiction.*

3. SUMMARY OF PREVIOUS MEETING

- 3.1. April 14, 2020, Meeting (Page 3)
[Summary Notes BOD Workshop - Engineering 041420](#)

4. DISCUSSION ITEMS

- 4.1. Consider Engineering Design Services for Solar Panels on Valley District's Administration Building (Page 5)
[Staff Memo - Consider Engineering Design Services for Solar Panels on District's Administration Building](#)
[Vision Civil Engineering Proposal](#)
[Proposed Roof Layout](#)
- 4.2. Consider Evaluation of Options for Small Hydropower Plant Divesture by Southern California Edison (Page 12)
[Staff Memo - Consider Evaluation of Options for Small Hydropower Plant Divesture by SCE](#)
[White Paper - SCE Small Hydro Divesture by NLine Energy](#)
- 4.3. Update on the Citrus Reservoir Floating Cover System Project (Page 20)
[Staff Memo - Citrus Reservoir and Pump Station Project Update](#)
- 4.4. Update on City of Yucaipa Stormwater Recharge Basins (Page 22)

Staff Memo - Update on City of Yucaipa Stormwater Recharge Basins

5. **FUTURE BUSINESS**

6. **ADJOURNMENT**

PLEASE NOTE:

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection in the District's office located at 380 E. Vanderbilt Way, San Bernardino, during normal business hours. Also, such documents are available on the District's website at www.sbvmd.com subject to staff's ability to post the documents before the meeting. The District recognizes its obligation to provide equal access to those individuals with disabilities. Please contact Lillian Hernandez at (909) 387-9214 two working days prior to the meeting with any special requests for reasonable accommodation.



DATE: May 12, 2020
TO: Board of Directors' Workshop - Engineering
FROM: Staff
SUBJECT: Summary of April 14, 2020 Board of Directors' Workshop - Engineering

The Board of Directors held a Workshop on April 14, 2020. Director Kielhold chaired the meeting via teleconference and Directors Harrison, Navarro, Longville, and Hayes participated in the Workshop supported by Heather Dyer, Bob Tincher, Wen Huang, Cindy Saks, Brent Adair, Kristeen Farlow, Aaron Jones, Melissa Zoba, and Mike Esquer of staff. The following agenda items were discussed:

3.1 Summary of Previous Meeting on March 10, 2020. The summary notes of the March 10, 2020, meeting were accepted.

4.1 Update on State Water Project and Sites Reservoir Project. Bob Tincher provided an update on the State Water Project and the Sites Reservoir Project. Information included the results of a Value Planning effort recently completed on the Sites Reservoir and the selection of a new Executive Director to lead the Sites Authority. He also provided an update on the negotiations for an agreement-in-principle for the Delta Conveyance Facility that will provide the foundation for an agreement.

Action Item: Receive and file.

4.2 Consider Scope Enhancement with NLine Energy for Engineering Design Services – Cactus Connector Pipeline. Staff provided background information regarding the development of the Cactus Connector Pipeline, which will facilitate delivery of State Water

Project (SWP) water from the Lytle Creek Turnout and West Valley Water District's (WVWD) Roemer Hydroelectric Station to the Cactus Basins for recharge. A scope enhancement to the existing contract with NLine Energy for engineering and design services, pertaining to the Cactus Connector Pipeline, in the amount of \$14,564 to complete the design work to extend the pipeline from Bohnert Ave to W Cheshire St, was recommended for consideration.

Action Item: Forward the item (estimated cost of \$14,564) to the full Board for consideration.

4.3 Consider Procurements of Fixed Cone Valves for the Santa Ana Low Turnout Project.

Staff provided background information and proposed improvements for the Santa Ana Low Turnout Project (Project). This Project was discussed at the Board Workshop and Board Meetings in January 2018. Following the discussion with the Board, Staff was directed to execute a consulting contract for electrical engineering services and procurements of butterfly valves, flow meters, and a programmable logic control (PLC) panel for the Project. The electrical design is nearly complete and the requested procurements have been made. In addition to the tasks above, Staff recommended that the Board consider procurement of three (3) fixed cone valves in the amount of \$321,215 with Orbinox. At the conclusion of the discussion, those Board Members in attendance directed Staff to forward the proposed procurement to the next Board of Directors' Meeting for consideration.

Action Item: Forward the procurements of fixed cone valves with Orbinox in the amount of \$321,215 to the full Board for consideration.

5. Future Business:

None discussed.

Staff Recommendation

Receive and File



DATE: May 12, 2020

TO: Board of Directors' Workshop - Engineering

FROM: Wen Huang, Chief Engineer
Aaron Jones, Associate Engineer

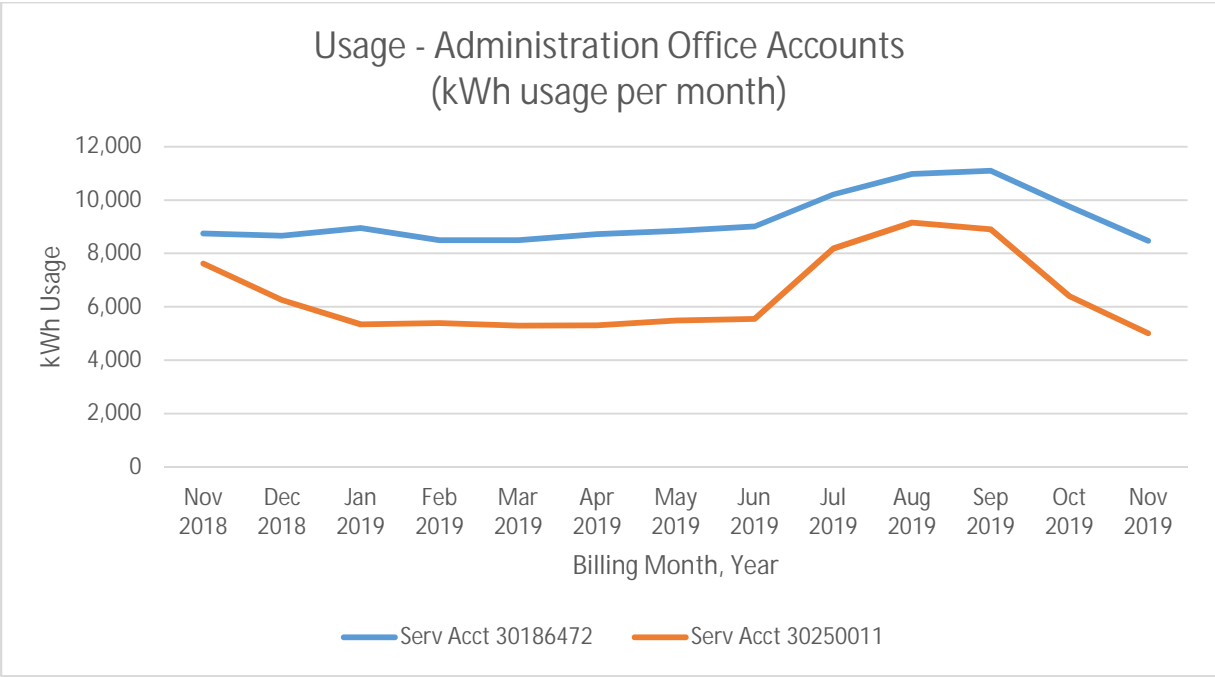
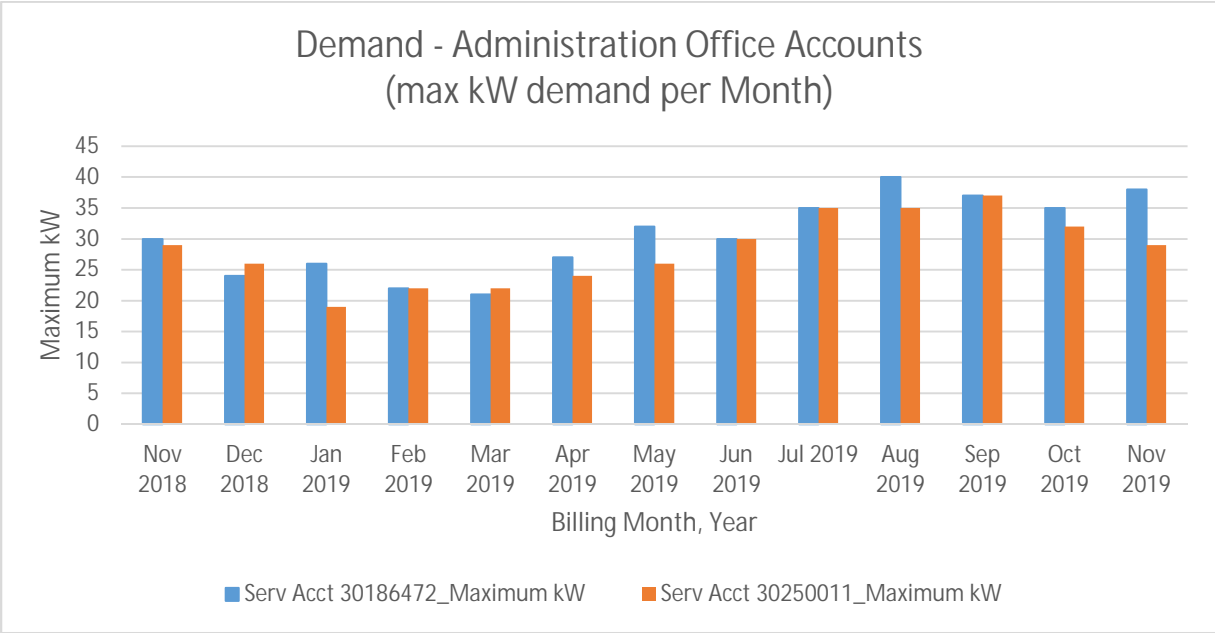
SUBJECT: Consider Engineering Design Services for Solar Panels on Valley District's Administration Building

In 2018 Strategic Resource Advisors (SRA) was contracted to explore renewable energy opportunities that would provide energy cost-savings and greater rate certainty for the District. One of SRA's recommendations was for Valley District to consider installing solar panels on the Administration Building (the Administrative offices account for about 22% of the District's energy usage). In order to implement this recommendation, Staff has been working with Vision Civil Engineering (located in Yucaipa, CA) to develop a scope of services for engineering and design of solar panels on the Administration Building. It is estimated that the payback period for the solar panel system is between 8.5 years and 13 years with the anticipated equipment life of 20 to 25 years. Staff recommends that the scope and fee for \$7,800 with Vision Civil Engineering (attached) be forwarded to a future Board of Directors' meeting for consideration.

Background:

SRA evaluated opportunities for renewable energy like solar and hydroelectric to reduce Valley District's energy costs. The results of their study show that by implementing solar on the Administration Building, Valley District could offset portions of its energy costs, demand charges and the delivery service charges for the accounts associated with the Administration Building.

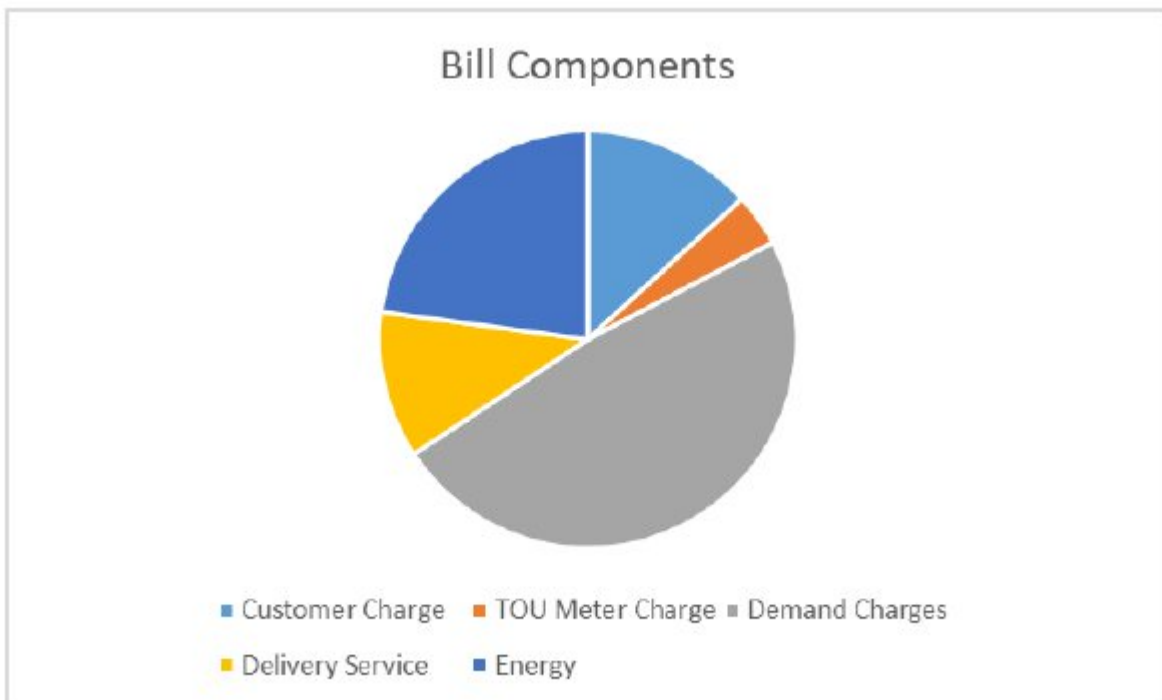
All of Valley District's accounts are on a time-of-use (TOU) rate with SCE. This means that the rate paid for the electricity is dependent upon the time of the day and the season in which electricity is consumed. For example, Valley District has two accounts associated with the Administration Building, Service Accounts 30186472 and 30250011. From the graphs below, it is obvious that actual demand and usage varies significantly by season.



In order to offset the usage and demand components of the District’s Administration Building energy charges, Vision Civil Engineering has proposed a roof solar panel layout. Based on their preliminary analysis, it is expected that approximately 153 panels of the 60-cell type modules can be accommodated on top of the roof. The 60-cell modules enable us to get the maximum coverage and production. In addition, based on this proposed layout, the system should have a capacity of 48 kW (peak) and produce approximately 80,500 kWh annually to offset the total annual usage of 190,911 kWh (from November 2018 - October 2019) on the two Administration

Building accounts, or reduce approximately 42% of the current usage/energy consumption costs.

In addition to the savings on the energy consumption uses, the solar system can also reduce the demand charges by SCE. The actual savings can vary depending on load management. SCE looks at the peak demand throughout the billing cycle and wherever the peak load occurs during that 30 day-period is what they use to figure the demand charge per kW. Reducing this demand peak resulting from the solar system will further increase cost savings. As a part of the installation of the solar panels, the installing contractor will be tasked to conduct an energy audit to optimize the peak demands and therefore reduce the associated demand charges, which currently account for about 50% of the District's Administration Building energy bill (see chart below). Optimization of the peak demands, coupled with the solar system, will greatly reduce the District's overall energy bill for the Administration Building.



Based upon the analysis performed by SRA and the preliminary design concept developed by Vision Civil Engineering, the estimated payback period for a 48 kW solar system would be from 8.5 to 13 years, depending on the future rate increases by SCE. The anticipated life of the solar equipment is 20-25 years. The total estimated installation cost for the proposed 48 kW solar system is between \$130,000 and \$150,000.

Fiscal Impact:

The cost to design a solar system on the Administration Building is \$7,800 and is included in the approved General Fund Budget for FY 2019-20.

The cost to install solar panels on the Administration Building is estimated of up to \$150,000 and will be included in the proposed General Fund Budget for FY 2020-21 for consideration by the Board. Staff will propose a contract for installation at a future meeting for Board consideration.

Staff Recommendation:

Direct staff to forward a contract for design of Solar Panels on the Administration Building with Vision Civil Engineering with the associated fees of \$7,800 to an upcoming Board of Directors meeting.

Attachments:

1. Proposal from Vision Civil Engineering
2. Proposed Roof Layout



San Bernardino Valley Municipal Water District
Administration Offices Solar

VISION CIVIL ENGINEERING AGREES TO PERFORM THE FOLLOWING SCOPE OF SERVICES:

Task 1:

Prepare construction plans for the solar system. Review and supplement Specifications as needed.

Construction plans include all project information, a site plan, a line drawing, and all details and calculations needed to adequately describe the proposed work to be completed. Structural or electrical calculations that must be signed by a registered professional engineer are not included in Task 1. Since the installation contractor may have not been chosen at this time and the plans may be used to acquire bids, the plans will be designed using Longi Solar modules, SolarEdge inverters and Ironridge racking and attachments to the existing roof. The installation contractor may request material substitutions for equivalent products.

Changes to the plans for material substitutions after the installing contractor has been selected are included in this task. Any plan check comments received from the AHJ (Agency Having Jurisdiction) will be resolved as a part of this task at no additional charge so that a permit can be pulled based on the construction plans provided.

SBVMWD standard specifications will be reviewed as they pertain to this specific project and any technical specifications that need to be included to ensure that an accurate and complete bid is received from the potential installation contractor will be recommended/provided.

Task 2:

Process construction plans for permit issuance through AHJ. Obtain permits.

Task 2 includes time, mileage and incidentals for processing and permits. Permits can be pulled in the name of a California licensed contractor with either a C10 or C46 designation. A letter of authorization from the licensed contractor allowing VCE to pull the permit on his behalf is required. Any AHJ plan check or permit fees are not included in this task and must be paid directly by the Client or the installing contractor.

Task 3:

Complete structural calculations and prepare a structural report.

Sign and stamp plans and report as a California registered professional engineer.

Task 4:

Process Interconnection Application and acquire PTO.

This task includes filing the appropriate applications to receive utility approval and coordinating with the utility purveyor to secure Permission to Operate once the project is installed and has received a final inspection sign-off from the AHJ.



Task 5:

Any project management, construction management, coordination between contractors or suppliers, meetings or processing time not specifically addressed above are included in Task 5. Incidentals (prints, copies, disks, etc) are billed as they are received from the reprographics company.

CLIENT AGREES TO COMPENSATE VISION CIVIL ENGINEERING FOR SUCH SERVICES AS FOLLOWS:

Task 1:

\$3000.00

Task 2:

\$2200.00

Task 3:

\$1800.00

Task 4:

\$300.00

Task 5:

Time at \$100.00/hr, not to exceed \$500. Time will be billed in 15-minute increments.

Total: \$7800.00

Payment Schedule:

\$3300 due when Task 1 is ready for submittal to the City

Remainder to be billed per work progress

Reimbursement for fees (if any) due 2 weeks after date of payment to AHJ or Utility.

PRICE DOES NOT INCLUDE ANY GOVERNMENT AGENCY PLAN CHECK OR PERMIT FEES.

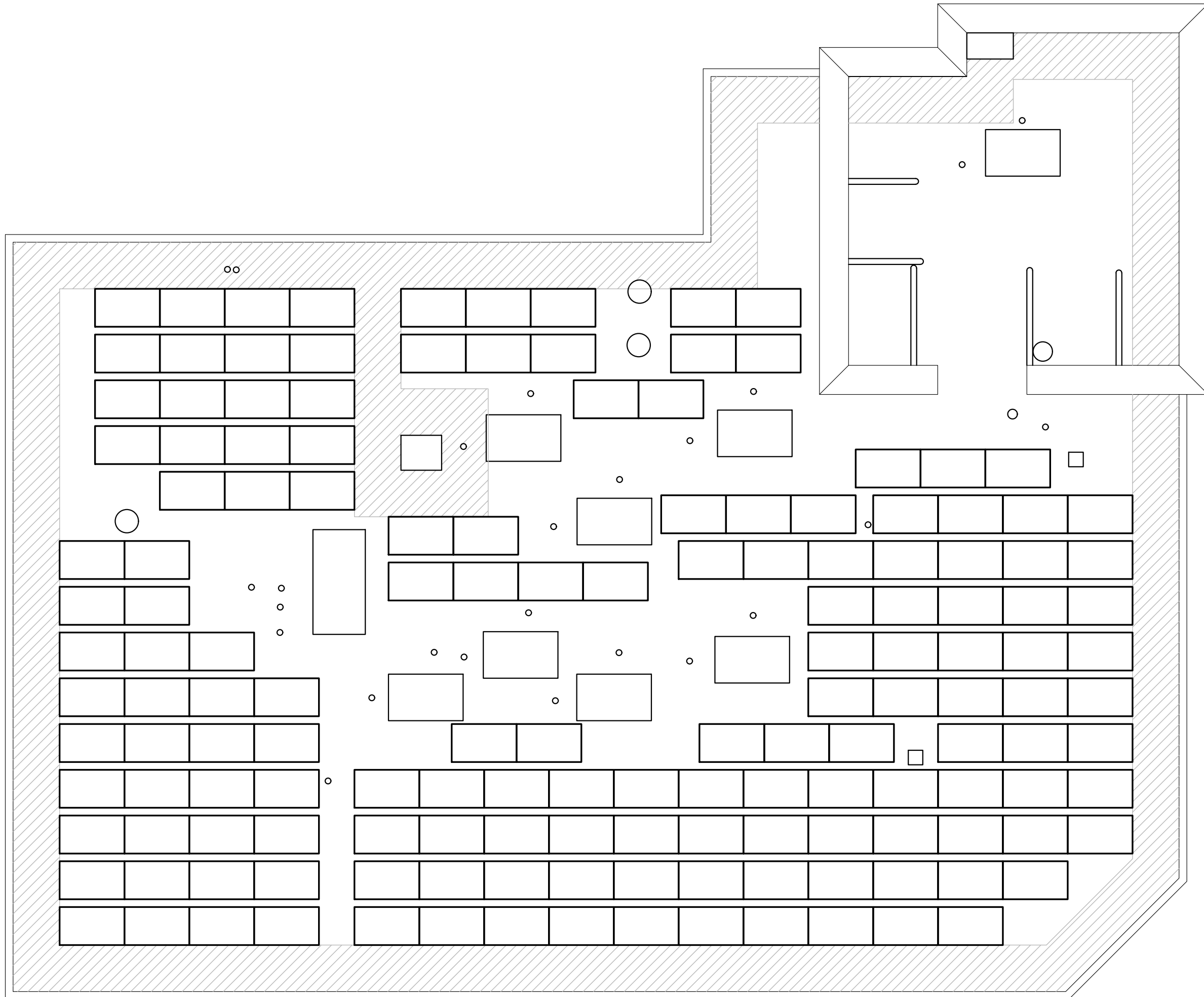
THE UNDERSIGNED PARTIES HAVE ACCEPTED, MADE AND EXECUTED THE AGREEMENT UPON THE TERMS ABOVE AND THE PROVISIONS TO THE AGREEMENT INCLUDED BELOW.

DATE: _____

CLIENT: SBVMWD

BY: _____

JENNIFER KEMME, PE
VISION CIVIL ENGINEERING



153 LONGI LR6-60HBD



DATE: May 12, 2020

TO: Board of Directors' Workshop - Engineering

FROM: Heather Dyer, General Manager
Wen Huang, Chief Engineer

SUBJECT: Consider Evaluation of Options for Small Hydropower Plant Divesture by Southern California Edison

Through recent communications between Southern California Edison (SCE) and the local water users on Mill Creek and Santa Ana River, Staff became aware of SCE's planned divesture of certain small hydropower projects. This memorandum provides a background on the projects, as well as recent discussions with SCE and other stakeholders, to include opportunities, risks, and recommended milestones. A plan is currently being evaluated to engage SCE as a local consortium of water users that have a direct and material interest in the water infrastructure supporting these hydropower projects. Staff recommends that the Board of Directors direct staff to continue to work with the consortium to complete the evaluation and bring recommendations back to the Board of Directors for consideration in future workshops.

Background

Many of local water retail agencies in Valley District's service area maintain consumptive water rights in the watersheds that feed the SCE powerhouses. These interests are affected at times, either positively or negatively, by the manner in which SCE maintains the water infrastructure leading to their powerhouses. Over the years, there likely have been hundreds of thousands of acre-feet that were not delivered to downstream water users due to outages and maintenance issues of the SCE water delivery infrastructure. In order to enhance the water supply reliability, staff of multiple water agencies, including the City of Redlands, Yucaipa Valley Water District, East Valley Water District, Bear Valley Mutual Water Company, San Bernardino Valley Water Conservation District, and Valley District, recently reached out to SCE and expressed our interests in working collaboratively to minimize the system

downtimes and thereby increase the water supply reliability for the local agencies. Through these communications, Staff became aware of SCE's planned divestiture of certain small hydropower projects.

Based on a number of factors including the abundance of low-cost natural gas, solar PV and energy storage adoption, and other market signals, many of California's Investor-Owned Utilities (IOU), such as SCE, are divesting of uneconomical generation assets. Given the historically-low generation rates mandated by the California Public Utilities Commission (CPUC) for IOU assets, the hydropower annual revenue does not justify any proposed investment in these assets. As a result, SCE is considering a divestiture of their "underperforming" small hydro assets, which could include the Mill Creek, Santa Ana River, and Lytle Creek facilities. Based on engagement with SCE Generation staff, it is expected that SCE will announce their divestiture plans in July 2020.

The planned divestiture offers an opportunity for water users to assume control of these assets, make improvements, and benefit from increased and reliable surface water deliveries and avoidance of past water quality issues. In addition to the potential enhancements to water supply reliability, this proposal may help Valley District streamline the Santa Ana Sucker Translocation projects, many of which requires close coordination with SCE operations. Many water agencies may have a contractual right or the first right of refusal to the SCE powerhouses based on previous agreements or arrangements, which will be thoroughly researched.

Staff of the abovementioned water agencies, subject to approval of their respective governing boards, are interested in forming a "consortium" to research our options and subsequently negotiate with SCE as one coordinated voice. More specifically, the consortium is interested in conducting: 1) legal research on prior agreements and arrangements with SCE related to the powerhouses; 2) technical analysis of the water infrastructure and powerhouses, including repairs, rehab, and retrofit steps prioritization, to form an opinion on project costs; and 3) financial and funding structures and a macro-level overview of all assets in order to create the basis for a negotiation with SCE. Additionally, NLine Energy, an energy consultant that has been working for Valley District, has been contacted and provided the attached White Paper to provide background and recommendations for the consortium to consider (attached).

A budgetary amount of \$25,000 has been requested from each of the water agencies. With the concurrence by the Board, this work will be initiated immediately under the General Manager's authority.

Fiscal Impact

Fiscal impact for conducting the technical review of options is \$25,000. Although this evaluation was not specifically identified in the approved FY19-20 General Fund Budget, there are funds available under Line Item No. 6360, Consultants for the study. The overall fiscal impact is unknown at the time and will be evaluated once the study is concluded and brought back for consideration by the Board at future meetings.

Staff Recommendation

Staff recommends that the Board of Directors direct staff to continue and complete the evaluation and bring recommendations back to the Board of Directors for consideration in future workshops.

Attachment

White Paper - Southern California Edison Small Hydropower Plant Divesture by NLine Energy, dated April 22, 2020.



April 22, 2020

Mr. Wen Huang, PE
Chief Engineer
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

Subject: Southern California Edison Small Hydropower Plant Divesture

Dear Wen –

I am following up on our discussion last week regarding Southern California Edison’s (SCE) planned divesture of certain small hydropower projects. This letter offers a background on the projects, as well as recent discussions with SCE and other stakeholders, to include opportunities, risks, and recommended milestones. Additionally, this letter will propose a plan to engage SCE as a consortium of water users that have a direct and material interest in the water infrastructure supporting these hydropower projects.

Background

SCE operates 36 hydroelectric powerhouses, using 79 generating units, accounting for 1,176 MW of generation capacity. SCE divides their hydropower assets into regions known as Big Creek and Eastern divisions. Within the Eastern division, a subdivision known as “East End” accounts for all of the hydropower assets within the San Bernardino region.

Within the East End subdivision, there are nine SCE hydropower plants totaling approximately 15 MWs of generation nameplate. Many of these plants are in excess of 100 years old and the Mill Creek No. 1 plant is noted as one of the first modern hydropower plants in the United States that has been in continuous operation.

All of these assets are California Renewable Portfolio Standard (RPS) certified and have the appropriate registrations with the Energy Information Administration and the Federal Energy Regulatory Commission (FERC). It is important to note that several of the East End hydropower plants precede the formation of FERC and are exempt from all FERC activities.

Table 1 provides an overview of these assets.

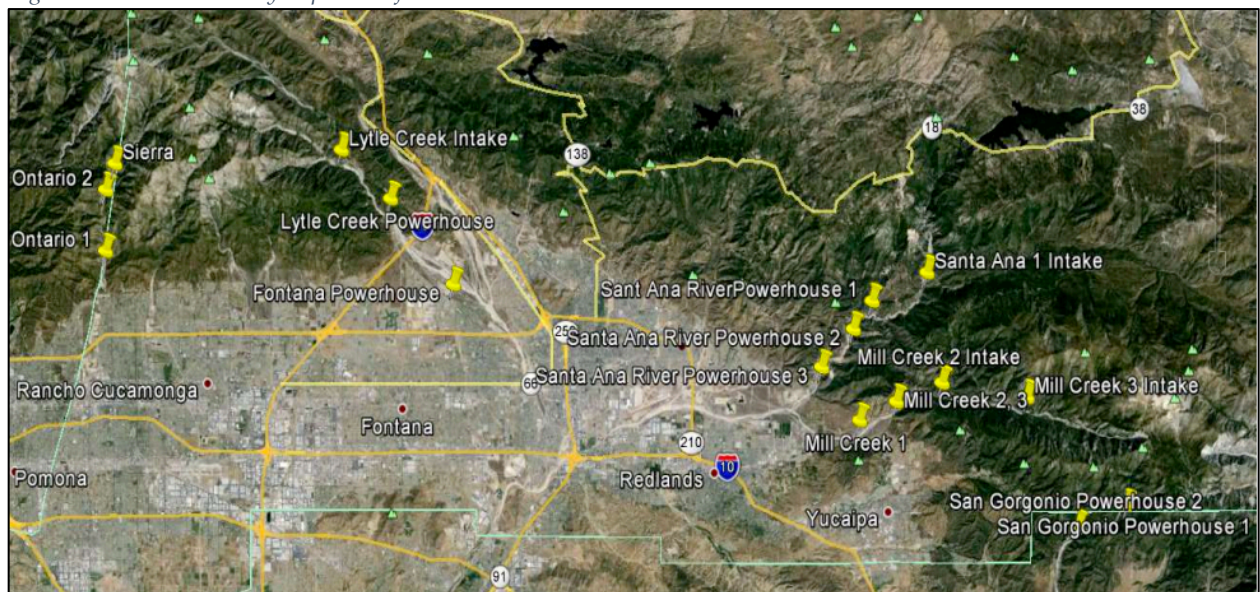


Table 1: SCE East End Hydropower Assets

<u>Plant Name</u>	<u>Commissioning Year</u>	<u>FERC status</u>	<u>EIA Plant ID</u>	<u>CEC RPS ID</u>	<u>Nameplate (kW)</u>	<u>2019 Generation (MWH)</u>
Mill Creek 1	1893	FERC Exempt	346	H0331	800	2,256
Mill Creek 2/ 3	1903	FERC license (P-1934)	7147	H0333	3,000	6,990
Santa Ana River 1/2	1899	FERC license (P-1933)	361	H0460	3,200	558
Santa Ana River 3	1999	FERC license (P-1933)	363	H0462	3,100	2,917
Lytle Creek	1904	FERC license (P-1932)	343	H0298	500	1,025
Fontana	1917	FERC Exempt	332	H0187	2,950	2,545
Ontario 1	1902	FERC Exempt	348	H0372	600	-
Ontario 2	1963	FERC Exempt	349	H0373	320	659
Sierra	1922	FERC Exempt	364	H0479	480	1,259
				Total	14,950	18,209

The powerhouses are located as far east as Mt. Baldy, through Rialto, and as far west as Angelus Oaks, Oak Glen, and San Gorgonio Mountain. Figure 1 provides an overview of the powerhouse and major infrastructure.

Figure 1: SCE East End Hydropower Infrastructure



Recent Developments

Based on a number of factors including the abundance of low-cost natural gas, solar PV and energy storage adoption, and other market signals, many of California’s Investor-Owned



Utilities are divesting of uneconomical generation assets. Pacific Gas and Electric (PG&E) announced the planned shutdown of the Diablo Canyon Nuclear Generating Station and recently divested of several small hydropower assets through direct negotiations with water districts¹ as well as private entities.

Starting in 2015 at the height of the drought, the IOUs conducted an evaluation of all their generation assets to find underperforming and/or O&M intensive sites that no longer met their strategic goals. Given the historically-low generation rates mandated by the California Public Utilities Commission (CPUC) for IOU assets, the hydropower annual revenue does not justify any proposed investment in these assets. As an example, the average annual generation rate for an SCE owned hydropower asset is \$0.035 to \$0.042-kWh based on CAISO day-ahead market rates including REC value. A non-IOU hydropower owner can earn between \$0.07 - \$0.11-kWh based on the same asset, but leveraging other California renewable energy pricing programs. The Local Government Renewable Energy System, Bill Credit Transfer (RES-BCT) program allows municipal agencies to form a Joint Powers Authority and credit their SCE accounts across the JPA.

In 2018, SCE reorganized their operations and support structure to have two depots that serve the majority of SCE's generating assets to include thermal, solar, wind, and hydro projects. Due to these consolidations, many of the Southern California hydropower plants lack proper maintenance.

Due to this lack of maintenance focus and inability to maintain water delivery related facilities, there have been numerous instances of water outages due to failures of diversions, screens, penstocks, and turbine/generators, which have not only decreased asset availability, but also created unplanned water delivery outages for the downstream consumptive water right holders.

Current State

SCE is considering a divestiture of their "underperforming" small hydro assets. There has been internal discussion since 2017 and in 2019 an internal study to determine the best course for the sale and/or transfer of these assets. Based on engagement with SCE Generation staff, we expect a July 2020 announcement of their plans.

NLine Energy has toured many of the SCE East End facilities. Many of the facilities are using existing penstocks, powerhouse and tailraces from when they were first commissioned. Over the years, there have been turbine, generator, and controls upgrades, but there is significant

¹ PG&E sells Narrows Hydroelectric Facility to Yuba Water Agency; www.waterworld.com; April 1, 2020



rehabilitation and retrofit required in order to improve generation reliability, but also the water infrastructure up and downstream of these powerhouses.

Opportunities

Many San Bernardino water districts maintain consumptive water rights to the watersheds that feed the SCE East End powerhouses and are affected either positively or negatively by the manner in which SCE maintains the water infrastructure leading to their powerhouse. Over the years, there likely has been hundreds of thousands of acre-feet that was not delivered to downstream water users due to outages and poor upkeep of the water delivery infrastructure.

The planned divestiture offers an opportunity for water rights holders to assume control of these assets, make improvements, and use increased and/or reliable surface water deliveries to decrease the reliance on aquifer / well water and/or imported water improving the health of the water basins and offering a more cost-effective water source. Additionally, we estimate a 20-35 percent increase in generation potential by a combination of repairing the powerhouses and water infrastructure offering a revenue line to pay for any capital improvement costs. Additionally, some of the San Bernardino area water agencies already own and operation hydropower assets, such as East Valley Water District, West Valley Water District, Fontana Water Company, and soon, San Bernardino Valley Municipal Water District.

Many water agencies may have a contractual right to the SCE powerhouse based on agreements that were signed by subordinate water agencies that were later assumed / merged into larger water agencies.

Additionally, there are hydropower focused funds that could offer the necessary capital to conduct analysis, sales, and repair of these facilities as part of a Public-Private Partnership, preserving water agency funds.

Finally, there are opportunities to develop new powerhouses at various points within the East End System that SCE has not explored. These include the SAR Headbreaker at Santa Ana River 3 and San Gorgonio projects.

Risks

Should SCE decide to conduct a Request for Proposals for the sale of these assets, the auction will be open to all, to include private developers. Should a private developer take ownership of these assets, they may not be operated in a manner which is in harmony with the expected water deliveries of the downstream users. Simply put, there is not alignment between the time to generate power and the time to deliver water in today's electrical grid and power markets



landscape. This scenario would offer no relief to the downstream water users for reliable water deliveries.

Recommended Action

There appears to be a natural “consortium” of municipal water users in the San Bernardino area that could form a working group (e.g. “The San Bernardino Water Users”) to negotiate with one coordinated voice.

In a best-case scenario, SCE elects to conduct sole source negotiations with the Water Users consortium based on either historic contractual obligation or SCE’s determination that working with the water utilities is the best course of action. In a lesser-desired scenario, SCE elects to issue an RFP.

In either case, analysis of the water infrastructure and powerhouses should be conducted at an early stage to qualify and quantify the current state, repairs / rehab / retrofit steps prioritization, an opinion on project costs; financial and funding structures and a macro-level overview of all assets in order to create the basis for a negotiation with SCE. An exclusive Memorandum of Agreement with SCE would afford a means to conduct diligence and bi-lateral negotiations, mitigating risk of third party offers, over a four to six-month period.

Milestones

Assuming SCE plans to announce their divesture plans in July 2020, here are recommended milestones:

- Late-April 2020 - Identify all municipal water users that possess consumptive water rights on affected watersheds and or historic contractual rights to SCE infrastructure on the SCE hydropower watersheds
- Early-May 2020 - Conduct an initial “San Bernardino Water Users” consortium virtual meeting to discuss this white paper and other topics.
- Late-May 2020 Assuming there is consensus, engage in a MOU or JPA amongst the water users
- Late May 2020 - Begin desktop diligence of the powerhouses and water infrastructure
- Early June 2020 - Initiate discussions with SCE
- July 2020 - Possible RFP
- TBD – Exclusive MOU with SCE
- TBD – Detailed Diligence Period
- TBD – Final Sale / Transaction



DATE: May 12, 2020

TO: Board of Directors' Workshop - Engineering

FROM: Wen Huang, Chief Engineer
Mike Esquer, Senior Project Manager
Brent Adair, Project Manager

SUBJECT: Update on the Citrus Reservoir Floating Cover System Project

The purpose of this memorandum is to provide an update on the Citrus Reservoir and Pump Station Project (Project). On December 17, 2019, the Board of Directors approved a budget of \$295,000 for the 2020 Annual Facility Maintenance and Repair Program, of which \$280,000 was budgeted for implementation of corrective measures for the floating cover system at the Citrus Reservoir. Staff will provide a presentation with photos and update the Project expenditures during the Workshop.

Background:

The reservoir has been in continuous service since June 2017. On November 6, 2018, the Board of Directors authorized procurement of the Rhombo Hexoshield floating cover system to comply with mitigation requirements for the Citrus Reservoir provided in the Wildlife Hazard Management Plan (WHMP) prepared and adopted by the California Department of Water Resources (DWR) as part of the East Branch Extension (EBX) Phase 2 Project. Since then, over 3.7 million balls out of a total of 7.5 million balls have been deployed in the reservoir. Based on the recent biological monitoring events, the floating cover, even at less than half completed, has been very effective deterring migratory birds from using the reservoir.

In November 2019, there was evidence that some of the rhomboidal shaped balls have developed holes, sunk and subsequently been pulled into the reservoir pumps. Since then, the Citrus Pump Station has been shut down for investigations. Through the collaboration with DWR staff, corrective measures have since been identified. On December 17, 2019, the Board approved a budget of \$280,000 related to the Project. Due to a relatively-low State Water Project allocation

so far for this year, deliveries to our customers on the east end of the District's service area and to San Geronio Pass Water Agency (SGPWA) have been successfully met through the Greenspot Pump Station without being impacted by the shutdown of the Citrus Pump Station.

Following the Board approval of the budget in December 2019, Valley District staff, in cooperation with DWR staff, has completely dewatered the reservoir using the Citrus Pump Station and rental dewatering pumps. Additionally, DWR staff has deployed a floating debris boom and net system designed to keep the rhomboidal balls from entering the Citrus Pump Station intake gallery, and completed the design of pump screens at each pump intake column to protect against any future intake of debris or balls that may plug up the pumps. Fabrication of the eight (8) pump screens was completed and delivered to the site in mid-April. Subsequent to satisfactory inspection and confirmation of no debris clogging up the pump intakes, installation of the pump screens has started in late April. It is expected that the planned work will be completed in the following weeks and the reservoir will be placed back in service before the end of May 2020, barring any unforeseen circumstances.

The detailed up-to-date Project cost, which will be shared with SGPWA (22.6%), will be presented during the Workshop. Upon completion of the Project, Staff will provide a follow-up update on the Project and associated final cost.

Staff Recommendation:

Receive and file.



DATE: May 12, 2020

TO: Board of Directors' Workshop – Engineering

FROM: Matthew Howard, Water Resources Senior Project Manager

SUBJECT: Update on City of Yucaipa Stormwater Recharge Basins

This item was discussed at the Engineering Workshop on January 14, 2020 and the Resources Workshop on February 13, 2020. Those Board members in attendance were supportive of the Projects and asked staff to investigate funding the Projects using the Local Resources Investment Program (LRIP) before placing the item on an upcoming Board of Directors' workshop agenda for further discussion and consideration. The Board created LRIP in 2018 which pays participants for every acre-foot of water they produce through a recycled water project and/or stormwater capture project for a period of 20 years.

Staff has been working with the City of Yucaipa (City) to establish and incorporate performance monitoring metrics at the Fremont Low Water Crossing and Wilson III Basins stormwater capture projects to ensure the reporting requirements under the LRIP are met. The performance measurement devices that will be installed at these basins include staff gauges that measure the amount of stormwater captured and recharged.

The City will submit separate LRIP applications for both the Fremont Low Water Crossing Basin and Wilson III Phase I Basin stormwater capture projects. The Fremont Low Water Crossing Basin application will request the traditional LRIP repayment approach and will not request any upfront lump sum funding as discussed at previous Workshops. The Wilson III Phase I Basin application will request a hybrid approach to the LRIP program, which would provide the City with upfront lump sum funding and will require an outline of planned performance measurement metrics. The planned performance metrics that the City is incorporating into the Wilson III Phase I project include staff gauges at the inlets and outlets of the Basin that will be used to calculate recharge, along with the ability to create a closed system to hold and recharge captured stormwater, similar to the Oak Glen Creek Basin system. The amount of upfront funding that the City will be requesting for the Wilson III Phase I Basin is \$1,843,850 which will be applied toward the recharge components of the Basin.

The City anticipates submitting the LRIP application for Wilson III Phase I Basin by May 15, 2020 and the LRIP application for Fremont Low Water Crossing shortly thereafter. Once the LRIP applications are received, staff will review and provide any comments to the City and an LRIP agreement will be drafted. The LRIP agreement will then be placed on an upcoming Regular Meeting of Board of Directors agenda for further discussion and consideration.

Background:

The City of Yucaipa (Yucaipa) is currently implementing their North Bench Water Resources Plan which includes several stormwater retention basins along Wilson Creek and Oak Glen Creek. The City of Yucaipa is providing Valley District with the opportunity to fund additional improvements that would result in additional stormwater recharge in these basins. In 2010, Valley District and Yucaipa partnered on a similar project in the Wildwood Creek area. For this project, Valley District paid \$590,000 of the costs which is projected to result in an estimated additional 400-600 acre-feet/year of stormwater recharge.

These Yucaipa Projects are a series of major capital improvement projects intended to improve the quality of life in the community. The Projects were identified in the City's first drainage master plan developed and adopted in 1993 shortly after City incorporation. The Projects intercept and detain runoff from the mountain watershed and urban lands from the Wilson Creek and Oak Glen Creek located upstream and to the east of the project.

The Fremont Low Water Crossing Basin Project is located along Fremont Street at Wilson Creek and the Wilson III Phase I Project is located near the confluence of Wilson Creek and Oak Glen Creek, both located in Yucaipa. The primary purpose of the Projects is to reduce downstream flooding along Wilson and Oak Glen Creek roadways, public infrastructure and private properties by slowing, or detaining, stormflow.

Fiscal Impact:

There is no fiscal impact at this time because this is a status update only.

Staff Recommendations:

Receive and File.

Attachments:

None.