LAS VIRGENES - TRIUNFO
JOINT POWERS AUTHORITY
AGENDA

4232 Las Virgenes Road, Calabasas, CA 91302

Members of the public wishing to address the Las Virgenes-Triunfo Joint Powers Authority (JPA) Board of Directors are advised that a statement of Public Comment Protocols is available from the Clerk of the Board. Prior to speaking, each speaker is asked to review these protocols, complete a speakers' card, and hand it to the Clerk of the Board. Speakers will be recognized in the order the cards are received.

The Public Comments agenda item is presented to allow the public to address the Board on matters not on the agenda. The public may also present comments on matters on the agenda; speakers for agendized items will be recognized at the time the item is called up for discussion.

Materials prepared by the JPA in connection with the subject matter on the agenda are available for public inspection at 4232 Las Virgenes Road, Calabasas, CA 91302. Materials prepared by the JPA and distributed to the Board during this meeting are available for public inspection at the meeting or as soon thereafter as possible. Materials presented to the Board by the public will be maintained as part of the records of these proceedings and are available upon request to the Clerk of the Board.

5:00 PM August 5, 2019

PLEDGE OF ALLEGIANCE

1 CALL TO ORDER AND ROLL CALL

2 APPROVAL OF AGENDA

3 PUBLIC COMMENTS

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

4 CONSENT CALENDAR

Matters listed under the Consent Calendar are considered to be routine, non-controversial and normally approved with one motion. If discussion is requested by a member of the Board on any Consent Calendar item, or if a member of the public wishes to comment on

an item, that item will be removed from the Consent Calendar for separate action.

A Minutes: Regular Meeting of July 1, 2019 (Pg. 4)

Approve.

5 ILLUSTRATIVE AND/OR VERBAL PRESENTATION AGENDA ITEMS

A Pure Water Project Las Virgenes-Triunfo: Update

B Federal Legislative Briefing by Ana Schwab, Best Best & Krieger LLP (Pg. 9)

6 ACTION ITEMS

A State and Federal Legislative and Regulatory Advocacy: Contract Renewal (Pg. 32)

Authorize the Administering Agent/General Manager to execute a one-year renewal of the professional services agreement with Best Best & Krieger LLP, in the amount of $155,000, for state and federal legislative and regulatory advocacy services.

B Pure Water Demonstration Garden: CEQA Determination and Call for Bids (Pg. 35)

Find that the work is categorically exempt from the California Environmental Quality Act and authorize the issuance of a Call for Bids for the Pure Water Demonstration Garden.

C Las Virgenes-Triunfo Pure Water Project: Award of Regional Brine Management Study and Authorization to Execute Multi-Agency Cooperative Funding Agreement (Pg. 40)

Accept the proposal from Woodard & Curran; and authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $210,945, and a multi-agency cooperative funding agreement with the City of Thousand Oaks, Camrosa Water District and Calleguas Municipal Water District to reimburse the JPA, in the aggregate amount of $142,946, for the regional brine management study.

7 BOARD COMMENTS

8 ADMINISTERING AGENT/GENERAL MANAGER REPORT

9 FUTURE AGENDA ITEMS

10 INFORMATION ITEMS

A State Legislative Update (Pg. 105)

11 PUBLIC COMMENTS

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

12 CLOSED SESSION

13 ADJOURNMENT

Pursuant to Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and applicable federal rules and regulations, requests for a disability-related modification or accommodation, including auxiliary aids or services, in order to attend or participate in a meeting, should be made to the Executive Assistant/Clerk of the Board in advance of the meeting to ensure availability of the requested service or accommodation. Notices, agendas, and public documents related to the Board meetings can be made available in appropriate alternative format upon request.

LAS VIRGENES – TRIUNFO
JOINT POWERS AUTHORITY
MINUTES
REGULAR MEETING

5:00 PM July 1, 2019

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance to the Flag was led by Mark Norris.

1. CALL TO ORDER AND ROLL CALL

The meeting was called to order at **5:00 p.m.** by Vice Chair Lewitt in the Board Room at Las Virgenes Municipal Water District headquarters at 4232 Las Virgenes Road in Calabasas, California. Josie Guzman, Clerk of the Board, conducted the roll call.

Present: Directors Caspary, Lewitt, Lo-Hill, Pan, Polan, Renger, Shapiro, Tjulander, Wall
Absent: Director Orkney

2. APPROVAL OF AGENDA

Director Caspary moved to approve the agenda. Motion seconded by Director Renger. Motion carried by the following vote:

AYES: Caspary, Lewitt, Lo-Hill, Pan, Polan, Renger, Shapiro, Tjulander, Wall
NOES: None
ABSTAIN: None
ABSENT: Orkney

3. PUBLIC COMMENTS

None.

4. CONSENT CALENDAR

A Minutes: Regular Meeting of June 3, 2019

Director Renger moved to approve the Consent Calendar. Motion seconded by Director Polan. Motion carried by the following vote:

AYES: Caspary, Lewitt, Lo-Hill, Pan, Polan, Renger, Shapiro, Tjulander, Wall
NOES: None
ABSTAIN: None
ABSENT: Orkney

5. ILLUSTRATIVE AND/OR VERBAL PRESENTATION AGENDA ITEMS

A Pure Water Project Las Virgenes-Triunfo: Update

Acting Administering Agent/Acting General Manager Joe McDermott reported that filming was underway for the Pure Water Demonstration Project orientation video. He also reported that staff submitted a grant application for the WaterSMART Title XVI WIIN Water Reclamation and Reuse Program, which could provide up to $3 to $4 million in funding to offset the cost of preliminary design and environmental studies for the project. He stated that a request for proposals for the preliminary design and environmental studies would be issued by the end of the year. He also reported that the pre-purchased equipment for the Pure Water Demonstration Project would be delivered by early August.

6. ACTION ITEMS

A Pure Water Demonstration Project: Construction Award

Award a construction contract to Pacific Hydrotech Corporation, in the amount of $2,087,300, and reject the remaining bid for the Pure Water Demonstration Project.

Acting Administering Agent/Acting General Manager Joe McDermott presented the report. He noted an amendment to the recommendation to include an additional appropriation in the amount of $263,363.

Director Renger moved to approve Item 6A as amended to include an additional appropriation in the amount of $263,363. Motion seconded by Director Tjulander.

A discussion ensued regarding the Engineer's Estimate, whether unanticipated tariffs might affect material pricing, and whether the contractor might request additional funds due to potential tariffs. John Zhao, Principal Engineer, stated that the low bidder provided a firm bid for the project. He also stated that staff would confirm that the potential for tariffs were taken into consideration in the bid.

Acting Administering Agent/Acting General Manager Joe McDermott reviewed the estimated $3.2 million project cost, which would be offset by $2.1 million in grant funding. He noted that the estimated cost to Las Virgenes Municipal Water District would be approximately $1.8 million and the estimated cost to Triunfo Water and Sanitation District would be approximately $776,000 when including contingencies and other incidental costs such as general and administrative (G&A) costs that

were not included in the $3.2 million estimate. He stated that staff would provide an all-inclusive and updated estimate at the next meeting in August.

Motion carried by the following vote:

AYES: Caspary, Lewitt, Lo-Hill, Pan, Polan, Renger, Shapiro, Tjulander, Wall
NOES: None
ABSTAIN: None
ABSENT: Orkney

B Pure Water Demonstration Garden: Feedback on Conceptual Plans

Provide feedback on the conceptual plans for the Pure Water Demonstration Garden.

Tom Rau and Marilee Kuhlmann, representing Urban Water Group, provided a PowerPoint presentation showing examples of medium, low and very low water-use plantings; storm water harvesting; rain gardens; permeable pavements; and drip irrigation and smart controllers to inspire homeowners to reduce outdoor water use.

Acting Administering Agent/Acting General Manager Joe McDermott noted that staff was planning to compile a bid package that would allow the Board to decide, after receiving bid prices, the extent of improvements to be made. He stated that a decision would not need to be made until the October meeting when the award would tentatively be made to a contractor. He also stated that it would be difficult to accurately estimate the cost of the work given current market conditions.

The Board provided the following feedback:

- Consider plantings on the slope facing Las Virgenes Road while taking erosion into consideration.
- Include ocotillo plants and a range of flowers that bloom throughout the year.
- Consider issuing two separate bids: one for hardscape and another for plantings and irrigation.
- Consider issuing a bid package with the essential components and secondary components.
- Provide information on annual cost for long-term maintenance of the facility.
- Provide maintenance instructions for proper pruning, weeding, trash pickup, and irrigation.
- Consider having staff involved with irrigation.
- Consider a docent program to provide tours of the Demonstration Garden.
- Consider using community volunteers for garden maintenance.
- Consider using the same type of rain barrel as used by the Metropolitan Water District of Southern California for its rain barrel give-away program.

- Provide QR codes on plant signage rather than brochures and flyers so that visitors can readily download information onto their phones.
- Consider using recycled material for the garden signs

7. BOARD COMMENTS

None.

8. ADMINISTERING AGENT/GENERAL MANAGER REPORT

Acting Administering Agent/Acting General Manager Joe McDermott stated that the District offices would be closed on July 4th in observance of Independence Day, and would reopen on July 5th. He noted that the Quarterly Wastewater Tour would be held on August 17th, with Directors Pan and Renger serving as the hosts.

9. FUTURE AGENDA ITEMS

None.

10. INFORMATION ITEMS

A State and Federal Legislative Update

Acting Administering Agent/Acting General Manager Joe McDermott reported that Governor Gavin Newsom approved the 2019-20 California State Budget, which did not include a water tax. He noted that the budget included a safe drinking water solution that would be funded by $100 million from the Greenhouse Gas Reduction Fund and $30 million from the General Fund. He also noted that SB 200 (Monning) would provide instructions for appropriating the funds. He also reported that Senator Dianne Feinstein introduced the Drought Resiliency and Water Supply Infrastructure Act. He noted that this bill would extend funding under the WIIN Act, including $100 million for water recycling projects. He noted that the Pure Water Project Las Virgenes-Triunfo would be eligible for these funds. He responded to a question regarding AB 1220 (Garcia) relating to representation under the Metropolitan Water District Act by stating that this proposed legislation likely applies to Central Basin Municipal Water District, and it should not impact the Las Virgenes – Triunfo Joint Powers Authority.

11. PUBLIC COMMENTS

None.

12. ADJOURNMENT

Seeing no further business to come before the Board, the meeting was duly adjourned at **6:17 p.m**.

Janna Orkney, Chair

ATTEST:

Jay Lewitt, Vice Chair

BEST BEST & KRIEGER
ATTORNEYS AT LAW

To: Las Virgenes – Triunfo JPA Board of Directors
From: John Freshman and Ana Schwab
Date: July 21, 2019
RE: Federal Report

Federal Budget and Appropriations

House Speaker Nancy Pelosi and President Trump have been going back and forth in public over a deal for spending cuts and a move to raise the debt ceiling. The White House has asked for $150 billion in spending cuts, which Speaker Pelosi has outright refused. Under the Budget Control Act, $126 billion in automatic cuts will take place by the end of the calendar year if the budget caps are not raised. The question of lowering defense funds is typically a sticking point for Republicans, however, House Armed Services Ranking Member has indicated that he would prefer a slightly lower defense budget rather than waiting a long period for a larger number. The House and the Senate seem agreed to raise the debt ceiling for two years, the ultimate question is what will the budget numbers be, as the vote for one will be dependent on the vote for the other. If an agreement on the budget and the debit ceiling cannot take place before the House

The House and Senate are about to recess for the month of August and the Senate has yet to take up any of the appropriations bills. Senate Majority Leader McConnell has called on the committee to pass the bills out of committee but has not yet set a time for the whole Senate to vote on the bills. The current fiscal year ends on September 30. The goal is to raise the budget caps for non-defense programs for two years, a number that has not been raised since 2011.

Even if the House, Senate and the White House are able to come up with a budget deal and a debt ceiling deal, it is likely that Congress will still need to pass a Continuing Resolution for appropriations to avoid a shutdown on October 1, 2019. A Continuing Resolution would fund the agencies at their current levels until regular-order appropriations can be passed and signed into law.

PFAS

The House of Representatives recently passed the National Defense Authorization Act. This bill authorizes programs and lays out the budget for the Department of Defense and related areas. When the House passed their version of the bill earlier this month, they included a number of amendments that address the ongoing PFAS debate. A number of the amendments were directed only towards the Department of Defense, while a number of other amendments were for everyone. The amendments include the following:

- Requiring the EPA to designate all PFAAS substances as hazardous substances under Section 102(a) of CERCLA within one year;

- Requiring the EPA to add PFAS to its list of toxic pollutants under the Clean Water Act, and to public effluent and pretreatment standards;
- Provide $5 million for a Centers for Disease Control and Prevention nationwide PFAS study;
- End the use of fluorine firefighting foam by 2025;
- Prohibit the use of PFAS in meals-ready-to-eat packaging starting in 2021;
- Require the Department of Defense to work with states in mitigating PFAS contamination;
- Require the Government Accountability Office to conduct studies on PFAS contamination in and around military bases;
- Authorize $5 million to a five-year study by the U.S. Geological Survey to monitor PFAS contamination nationwide;
- Require DOD to dispose of PFAS in a way that prevents the chemicals from escaping into the air; and
- Require DOD to share information on PFAS monitoring data with municipalities and municipal drinking water utilities located adjacent to military installations.

The Senate passed their version of the National Defense Authorization Act at the end of June, but their version did not contain the amendments that the House included. However, their version did contain some PFAS amendments, including the below:

- Directs EPA to issue a national primary drinking water regulation for PFAS under the Safe Drinking Water Act within 2 years;
- Directs EPA to add PFAS to the list of unregulated contaminants to be monitored under the Safe Drinking Water Act, to require public water systems serving more than 10,000 people to monitor for PFAS, and subject to appropriations, require monitoring at smaller public water systems;
- Directs EPA to publish interim guidance on destruction and disposal of materials containing PFAS;
- Adds PFAS releases over certain thresholds to the Toxics Release Inventory under the Community Right-to-Know Act;
- Authorizes $100 million per year for Drinking Water State Revolving Funds to address emerging contaminants, with a focus on PFAS;
- Prohibits DOD from using firefighting foam with more than 1 part per billion of PFAS starting in 2023;
- Requires DOD to enter into cooperative agreements with states for PFAS investigations and remedial actions from military installations; and
- Directs USGS to conduct nationwide sampling for PFAS, and authorizes $10 million per year for this work.

During the Conference of the National Defense Authorization Act, it is likely that a number of the House amendments will not remain. Additionally, the White House has threatened a veto of the bill if a number of the amendments directing the Department of Defense to address PFAS remain, due to the White House's concern of the cost this will have on the Department. If there are amendments of concern that passed we can work to address those with the Conference Committee.

The National Defense Authorization will not be the last time that PFAS is addressed in the House and the Senate. This week two House committees will address the ongoing issue of PFAS.

EPA

EPA Administrator Wheeler has been a long-time proponent of transferring power back to the states. However, he has made it clear that not all of the power can be transferred to the states, as he believess "States don't always do the appropriate thing, either." One of the states that causes concern to the Administrator is California and the on-going environmental issues that the state has raised with the administration.

Since coming into office in 2018, President Trump's administration has been focused on giving power back to the states and removing all of the power and offices form Washington, D.C. Specifically, relocating offices, where appropriate, back to the states.

Bureau of Reclamation

The Bureau of Reclamation has scheduled three public meetings s and has a review period open for comments on the draft environmental impact statement analyzing potential effects associated with long-term water operations for the Central Valley Project and state Water Project. The goal of the Bureau is to optimize water delivery while protecting threatened and endangered species. Included in the proposed actions are temperature management at Shasta Dam, habitat and salinity measures in the Delta, and management of Fish entrainment related to water exprots from the Sacramento and San Joaquin Delta.

The draft environmental impact statement is available here <https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=39181>. Submit written comments to sha-mpr-bdo@usbr.gov<mailto:sha-mpr-bdo@usbr.gov> by close of business August 26.

LAS VIRGENES-TRIUNFO - HIGH PRIORITY LEGISLATION IN THE 116TH CONGRESS THROUGH JULY 23, 2019

LEGISLATION	SUMMARY	STATUS	POSITION
H.R. 34 Energy and Water Research Integration Act of 2019	To ensure consideration of water intensity in the Department of Energy's energy research, development, and demonstration programs to help guarantee efficient, reliable, and sustainable delivery of energy and clean water resources.	Introduced by Rep Eddie Bernice Johnson (D-TX) – January 3, 2019 Passed out of the House Science, Space, and Technology Committee - May 1, 2019 – awaiting floor vote	
S. 40 Bureau of Reclamation Transparency Act	To require the Secretary of the Interior to submit to Congress a report on the efforts of the Bureau of Reclamation to manage its infrastructure assets.	Introduced by Sen. John Barrasso (R-WY) – January 8, 2019	
S. 47 Natural Resources Management Act	This bill sets forth provisions regarding various programs, projects, activities, and studies for the management and conservation of natural resources on federal lands. Specifically, the bill addresses, among other matters • land conveyances, exchanges, acquisitions, withdrawals, and transfers; • national parks, monuments, memorials, wilderness areas, wild and scenic rivers, historic and heritage sites, and other conservation and recreation areas; • wildlife conservation; • helium extraction; small miner waivers of claim maintenance fees; • wildland fire operations; the release of certain federal reversionary land interests; • boundary adjustments; the Denali National Park and Preserve natural gas pipeline; • fees for medical services in units of the National Park System; • funding for the Land and Water Conservation Fund; • recreational activities on federal or nonfederal lands; • a national volcano early warning and monitoring system; federal reclamation projects; and search-and recovery-missions. In addition, the bill reauthorizes the National Cooperative Geologic Mapping Program	Introduced by Sen. Lisa Murkowski (R-AK) – January 8, 2019 Signed into law on March 12, 2019	

Legislation	Summary	Status	Position
H.R. 357 Sacramento-San Joaquin Delta National Heritage Area Act	To establish the Sacramento-San Joaquin Delta National Heritage Area. The boundaries of the Heritage Area shall be in the counties of Contra Costa, Sacramento, San Joaquin, Solano, and Yolo in the State of California, as generally depicted on the map entitled "Sacramento-San Joaquin Delta National Heritage Area Proposed Boundary", numbered T27/105,030, and dated October 2012.	Introduced by Rep. John Garamendi (D-CA) – January 9, 2019 Signed into law on March 12, 2019 as part of S. 47 – Natural Resources Management Act	
H.R. 535 PFAS Action Act of 2019	This bill requires the Environmental Protection Agency to designate all perfluoroalkyl and polyfluoroalkyl substances as hazardous substances within one year of enactment of this bill.	Introduced by Rep. Debbie Dingell (D-MI) – January 14, 2019	
H.R. 579 To prohibit the conditioning of any permit, lease, or other use agreement on the transfer of any water right to the United States by the Secretaries of the Interior and Agriculture, and for other purposes.	To prohibit the conditioning of any permit, lease, or other use agreement on the transfer of any water right to the United States by the Secretaries of the Interior and Agriculture, and for other purposes.	Introduced by Rep. Scott Tipton (R-CO) – January 15, 2019	
H.R. 664 To protect the right of individuals to bear arms at water resources development projects administered by the Secretary of the Army, and for other purposes	To protect the right of individuals to bear arms at water resources development projects administered by the Secretary of the Army, and for other purposes	Introduced by Rep. Bob Gibbs (D-OH) – January 17, 2019	

Legislation	Summary	Status	Position
H.R. 667 To repeal the Waters of the United States rule and amend the Federal Water Pollution Control Act definition of navigable waters, and for other purposes.	To repeal the Waters of the United States rule and amend the Federal Water Pollution Control Act	Introduced by Rep. Jamie Herrera Beutler (R-WA) – January 17, 2019	
H.R. 658 National Infrastructure Development Bank Act of 2019	To facilitate efficient investments and financing of infrastructure projects and new job creation through the establishment of a National Infrastructure Development Bank, and for other purposes. Highlighting environmental infrastructure projects which include drinking water, waste water treatment facility, and stormwater management system.	Introduced by Rep. Rosa DeLauro (D-CT) – January 17, 2019	
H.R. 807 Water and Agriculture Tax Reform Act of 2019	To amend the Internal Revenue Code of 1986 to facilitate water leasing and water transfers to promote conservation and efficiency.	Introduced by Rep. Ken Buck (R-CO) – January 28, 2019	

Legislation	Summary	Status	Position
H.R. 843 To amend the Federal Water Pollution Control Act to clarify when the Administrator of the Environmental Protection Agency has the authority to prohibit the specification of a defined area, or deny or restrict the use of a defined area for specification, as a disposal site under section 404 of such Act, and for other purposes.	To amend the Federal Water Pollution Control Act to clarify when the Administrator of the Environmental Protection Agency has the authority to prohibit the specification of a defined area, or deny or restrict the use of a defined area for specification, as a disposal site under section 404 of such Act, and for other purposes.	Introduced by Rep. Bob Gibbs (R-OH) – January 29, 2019	
H.R. 855 STRONG Act	To minimize the economic and social costs resulting from losses of life, property, well-being, business activity, and economic growth associated with extreme weather events by ensuring that the United States is more resilient to the impacts of extreme weather events in the short- and long-term, and for other purposes. Key sectors shall include water management, including supply and treatment; infrastructure, including natural and built forms of water and wastewater services;	Introduced by Rep. Scott Peters (D-CA) – January 29, 2019	

Legislation	Summary	Status	Position
S. 308 A bill to direct the Secretary of the Interior to convey certain Federal lands in San Bernardino County, California, to the San Bernardino Valley Water Conservation District, and to accept in return certain non-Federal lands, and for other purposes	This bill directs the Department of the Interior to conduct a land exchange upon request by the San Bernadino Valley Water Conservation District in California. Specifically, Interior must (1) convey to the district in 327 acres of identified federal land administered by the Bureau of Land Management and any portion of an identified federal parcel necessary to equalize the values of the lands exchanged, and (2) accept in exchange 310 acres of district land and any portion of an identified nonfederal parcel necessary to equalize the values of the lands exchanged.	Introduced by Sen. Dianne Feinstein (D-CA) – January 31, 2019	
S. 361 Water and Agriculture Tax Reform Act of 2019	This bill permits tax-exempt mutual ditch or irrigation companies to earn income from dispositions of certain property and stock interests without affecting their tax-exempt status, but requires that such income be used to pay the costs of operations, maintenance, and capital improvements of such a company. The bill also establishes a rule regarding the organizational governance of mutual ditch or irrigation companies. Where state law provides that such a company may be organized in a manner that permits voting on a basis that is pro rata to share ownership on corporate governance matters, the tax-exempt status of the mutual ditch or irrigation company must be determined without taking into account whether its member shareholders have one vote on corporate governance matters per share held in the corporation.	Introduced by Sen. Cory Gardner (R-CO) – February 6, 2019	

Legislation	Summary	Status	Position
H.R. 1067 To direct the Secretary of the Interior to convey certain Federal lands in San Bernardino County, California, to the San Bernardino Valley Water Conservation District, and to accept in return certain non-Federal lands, and for other purposes.	To direct the Secretary of the Interior to convey certain Federal lands in San Bernardino County, California, to the San Bernardino Valley Water Conservation District, and to accept in return certain non-Federal lands, and for other purposes.	Introduced by Rep. Pete Aguilar (D-CA) – February 7, 2019	
S. 376 A bill to amend the Federal Water Pollution Control Act to clarify the definition of navigable waters, and for other purposes.	A bill to amend the Federal Water Pollution Control Act to clarify the definition of navigable waters, and for other purposes.	Introduced by Sen. Rand Paul (R-KY) – February 7, 2019	
H.R. 1137 To amend the Water Resources Development Act of 1986 to repeal the authority relating to reprogramming during national emergencies.	To amend the Water Resources Development Act of 1986 to repeal the authority relating to reprogramming during national emergencies.	Introduced by Rep. John Garamendi (D-CA) – February 11, 2019	

Legislation	Summary	Status	Position
H.R. 1162 Water Recycling Investment and Improvement Act	To extend the authorization of the Bureau of reclamation's Title XVI competitive grants program, and increases the authorized funding levels from $50 million to $500 million. Further the legislation expands the geographic scope of the program by removing a requirement that projects be located in sustained drought or disaster areas, makes the program truly competitive by removing a requirement that Congress sign off on each selected project, and modernizes the individual program funding cap from $20 million to $30 million.	Introduced by Rep. Grace Napolitano (D-CA) – Introduced February 13, 2019 Subcommittee Hearing Held in the House – June 13, 2019	*Support*
H.R. 1334 Outdoor Recreation Legacy Partnership Grant Program Act	To provide grants for projects to acquire land and water for parks and other outdoor recreation purposes and to develop new or renovate existing outdoor recreation facilities.	Introduced by Rep. Nanette Barragan (D-CA) – February 25, 2019	
H.R. 1331 Local Water Protection Act	This bill reauthorizes through FY2024 grants to states for (1) programs that manage and control pollution added from nonpoint sources to navigable waters, and (2) groundwater quality protection activities to advance state implementation of such programs. Water pollution from nonpoint sources is caused by precipitation picking up pollution as it moves over or through the ground.	Introduced by Rep. Annie Craig (D-MN) – February 25, 2019 Passed the House on April 8, 2019	
H.R. 1429 Drinking Water Infrastructure for Job Creation Act	Making supplemental appropriations, of $7,500,000,000, for fiscal year 2019 for the Drinking Water State Revolving Funds, and for other purposes.	Introduced by Rep. Maxine Waters (D-CA) – February 28,2019	
S. 611 Water Affordability, Transparency, Equity, and Reliability Act of 2019	To establish a trust fund, of $34,850,000,000, to provide for adequate funding for water and sewer infrastructure, and for other purposes.	Introduced by Sen. Bernie Sanders (I-VT) – February 28, 2019	

Legislation	Summary	Status	Position
S. 638 PFAS Action Act of 2019	To require the Administrator of the Environmental Protection Agency to designate per- and polyfluoroalkyl substances as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and for other purposes.	Introduced by Sen. Tom Carper (D-DE) – February 28, 2019	
H.R. 1417 Water Affordability, Transparency, Equity, and Reliability Act of 2019	To establish a trust fund, of $34,850,000,000, to provide for adequate funding for water and sewer infrastructure, and for other purposes.	Introduced by Rep. Brenda Lawrence (D-MI) – March 1, 2019	*Support*
H.R. 1497 Water Quality Protection and Job Creation Act of 2019	To amend the Federal Water Pollution Control Act to reauthorize certain water pollution control programs, and for other purposes. The legislation would authorize $120,000,000 for each of fiscal years 2020 through 2024."	Introduced by Rep. Pete DeFazio (D-OR) – March 6, 2019	
H.R. 1621 Water Supply Permitting Coordination Act	To authorize the Secretary of the Interior to coordinate Federal and State permitting processes related to the construction of new surface water storage projects on lands under the jurisdiction of the Secretary of the Interior and the Secretary of Agriculture and to designate the Bureau of Reclamation as the lead agency for permit processing, and for other purposes. Qualifying projects include new surface water storage projects on lands administered by DOI or USDA.	Introduced by Rep. Tom McClintock (R-CA) – March 7, 2019	
H.R. 1764 To amend the Federal Water Pollution Control Act with respect to permitting terms, and for other purposes.	To extend the NPDES permit period from 5 years to 10 years.	Introduced by Rep. John Garamendi (D-CA) – March 14, 2019	*Support (with condition of needing Napolitano's support on the bill as well)*
H.R. 1976 PFAS Detection Act of 2019	To require the Director of the United States Geological Survey to perform a nationwide survey of perfluorinated compounds, and for other purposes.	Introduced by Rep. Daniel Kildee (D-MI) – March 28, 2019 Subcommittee Hearing Held in the House – June 13, 2019	

Legislation	Summary	Status	Position
S. 950 PFAS Detection Act of 2019	To require the Director of the United States Geological Survey to perform a nationwide survey of perfluorinated compounds, and for other purposes.	Introduced by Sen. Debbie Stabenow (D-MI) – March 28,2019	
H.R. 2030 Colorado River Drought Contingency Plan Authorization Act	This bill requires the Department of the Interior to carry out the Colorado River Drought Contingency Plan which was submitted to Congress on March 19, 2019, by Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. Interior must execute the plan without delay and operate applicable Colorado River System reservoirs accordingly.	Introduced by Rep. Raul Grijalva (D-AZ) – April 2, 2019 Signed into law on April 16, 2019	
S. 1057 Colorado River Drought Contingency Plan Authorization Act	This bill requires the Department of the Interior to carry out the Colorado River Drought Contingency Plan which was submitted to Congress on March 19, 2019, by Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming. Interior must execute the plan without delay and operate applicable Colorado River System reservoirs accordingly	Introduced by Sen. Martha McSally (R-AZ) – April 8, 2019 Passed the Senate on April 9, 2019	
S. 1087 Water Quality Certification Improvement Act of 2019	To amend the Federal Water Pollution Control Act to make changes with respect to water quality certification, and for other purposes.	Introduced by Sen. John Barrasso (R-WY) – April 9, 2019	
H.R. 2215 San Gabriel Mountains Foothills and Rivers Protections Act	The legislation would designate over 30,000 acres of protected wilderness and 45.5 miles of protected rivers and expand the San Gabriel Mountains National Monument, establish a National Recreation Area along the foothills and the San Gabriel Corridor. The bill would expand the borders of the monument to include the western Angeles National Forest	Introduced by Rep. Judy Chu (D-CA) – April 10, 2019 Subcommittee hearing held in the house – July 10, 2019	
S. 1109 San Gabriel Mountains Foothills and Rivers Protection Act	The legislation would designate over 30,000 acres of protected wilderness and 45.5 miles of protected rivers and expand the San Gabriel Mountains National Monument, establish a National Recreation Area along the foothills and the San Gabriel Corridor. The bill would expand the borders of the monument to include the western Angeles National Forest	Introduced by Sen. Kamala Harris (D-CA) – April 10, 2019	

Legislation	Summary	Status	Position
H.R. 2205 Water Quality Certification Improvement Act of 2019	To amend the Federal Water Pollution Control Act to make changes with respect to water quality certification, and for other purposes.	Introduced by Rep. David McKinley (R-WV) – April 11, 2019	
H.R. 2287 Federal Regulatory Certainty for Water Act	This bill nullifies the Clean Water Rule that was issued on May 27, 2015, by the Environmental Protection Agency and the U.S. Army Corps of Engineers. The rule describes the scope of the Clean Water Act. Under this bill, the Clean Water Act applies to waters of the United States that are (1) navigable-in-fact; or (2) permanent or continuously flowing bodies of water that form geographical features commonly known as streams, oceans, rivers, and lakes that are connected to waters that are navigable-in-fact. Under this bill, the Act does not apply to (1) waters that do not physically abut those waters of the United States through an actual and continuous surface water connection; (2) man-made or natural structures or channels through which water flows intermittently or ephemerally; or (3) wetlands (including playa lakes, prairie potholes, wet meadows, wet prairies, and vernal pools) that lack that continuous surface water connection. The aggregation of wetlands or waters may not be used to determine whether the wetlands or waters are navigable waters.	Introduced by Rep. Mac Thornberry (R-TX) – April 11, 2019	
H.R. 2313 Water Conservation Rebate Tax Parity Act	This bill expands the tax exclusion for energy conservation subsidies provided by public utilities to include certain subsidies for water conservation or efficiency measures and storm water management measures. The bill excludes from gross income subsidies provided (directly or indirectly) (1) by a public utility to a customer, or by a state or local government to a resident of such state or locality, for the purchase or installation of any water conservation or efficiency measure; and (2) by a storm water management provider to a customer, or by a state or local government to a resident of such state or locality, for the purchase or installation of any storm water management measure.	Introduced by Rep. Jared Huffman (D-CA) – April 12, 2019	

Legislation	Summary	Status	Position
H.Res. 324 Recognizing the importance of the United States-Israel economic relationship and encouraging new areas of cooperation	(1) affirms that the United States-Israel economic partnership has achieved great tangible and intangible benefits to both countries and is a foundational component of the strong alliance; (2) recognizes that science and technology innovation present promising new frontiers for United States-Israel economic cooperation, particularly in light of widespread drought, cybersecurity attacks, and other major challenges impacting the United States; (3) encourages the President to regularize and expand existing forums of economic dialogue with Israel and foster both public and private sector participation; and (4) expresses support for the President to explore new agreements with Israel, including in the fields of energy, water, agriculture, medicine, neurotechnology, and cybersecurity.	Introduced by Rep. Ted Lieu (D-CA) – April 18, 2019	
H.R. 2377 Protect Drinking Water from PFAS Act of 2019	This bill requires the Environmental Protection Agency (EPA) to address the level of perfluoroalkyl and polyfluoroalkyl substances (PFAS) in drinking water. Specifically, the EPA must publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for total PFAS. PFAS are man-made chemicals that may lead to adverse human health effects.	Introduced by Rep. Brendan Boyle (D-PA) – April 29, 2019	
S. 1251 Safe Drinking Water Assistance Act of 2019	A bill to improve and coordinate interagency Federal actions and provide assistance to States for responding to public health challenges posed by emerging contaminants, and for other purposes.	Introduced by Se. Jeanne Shaheen (D-NH) – April 30, 2019	
S. 1245 All-of-the-Above Federal Building Energy Conservation Act of 2019	A bill to improve energy performance in Federal buildings, including water usage.	Introduced by Sen. John Hoeven (R-ND) – April 30, 2019 Passed the Senate Committee on Energy & Natural Resources – July 16, 2019	
H.R. 2462 Flood Mapping Modernization and Homeowner Empowerment Pilot Program Act of 2019	To establish a pilot program to enhance the mapping of urban flooding and associated property damage and the availability of such mapped data to homeowners, businesses, and localities to help understand and mitigate the risk of such flooding, and for other purposes.	Introduced by Rep. Mike Quigley (D-IL) – May 2, 2019	

Legislation	Summary	Status	Position
S. 1276 Flood Mapping Modernization and Homeowner Empowerment Pilot Program Act of 2019	To establish a pilot program to enhance the mapping of urban flooding and associated property damage and the availability of such mapped data to homeowners, businesses, and localities to help understand and mitigate the risk of such flooding, and for other purposes.	Introduced by Sen. Dick Durbin (D-IL) – May 2, 2019	
H.R. 2458 Water Infrastructure Sustainability and Efficiency Act	To amend the Federal Water Pollution Control Act to require a certain percentage of funds appropriated for revolving fund capitalization grants be used for green projects, and for other purposes.	Introduced by Rep. Debbie Mucarsel-Powell (D-FL) – May 2, 2019	
H.R. 2473 Securing Access for the central Valley and Enhancing (SAVE) Water Resources Act	To promote water supply reliability and improved water management for rural communities, the State of California, and the Nation, and for other purposes.	Introduced by Rep. Josh Harder (D-CA) – May 2, 2019 Subcommittee on Water, Oceans, and Wildlife hearing held – June 13, 2019	
H.R. 2470 Clean Water Infrastructure Resilience and Sustainability Act	To direct the Administrator of the Environmental Protection Agency to establish a program to make grants to eligible entities to increase the resilience of publicly owned treatment works to natural disasters.	Introduced by Rep. Salud Carbajal (D-CA) – May 3, 2019	
H.R. 2533 Providing Financial Assistance for Safe Drinking Water Act	To assist community water systems affected by PFAS contamination, and for other purposes.	Introduced by Rep. Frank Pallone (D-NJ) – May 7, 2019	

Legislation	Summary	Status	Position
H.R. 2566 To require the Administrator of the Environmental Protection Agency to revise the Safer Choice Standard to provide for a Safer Choice label for pots, pans, and cooking utensils that do not contain PFAS, and for other purposes.	To require the Administrator of the Environmental Protection Agency to revise the Safer Choice Standard to provide for a Safer Choice label for pots, pans, and cooking utensils that do not contain PFAS, and for other purposes.	Introduced by Rep. Darren Soto (D-FL) – May 7, 2019	
H.R. 2577 PFAS Right-To-Know Act	To amend the Emergency Planning and Community Right-To-Know Act of 1986 to include per- and polyfluoroalkyl substances on the Toxics Release Inventory, and for other purposes.	Introduced by Rep. Antonio Delgado (D-NY) - May 8, 2019	
S. 1372 PFAS Accountability Act	To encourage Federal agencies to expeditiously enter into or amend cooperative agreements with States for removal and remedial actions to address PFAS contamination in drinking, surface, and ground water and land surface and subsurface strata, and for other purposes.	Introduced by Sen. Debbie Stabenow (D-MI) – May 8, 2019	
H.R. 2626 PFAS Accountability Act of 2019	To encourage Federal agencies to expeditiously enter into or amend cooperative agreements with States for removal and remedial actions to address PFAS contamination in drinking, surface, and ground water and land surface and subsurface strata, and for other purposes.	Introduced by Rep. Dan Kildee (D-MI) – May 9, 2019 Passed out of Subcommittee on Water Resources and Environment Discharge (of the House Natural Resources Committee) – June 26, 2019	

Legislation	Summary	Status	Position
H.R. 2570 PFAS User Fee Act of 2019	To ensure that polluters pay ongoing water treatment costs associated with contamination from perfluoroalkyl and polyfluoroalkyl substances, and for other purposes.	Introduced Rep. Harley Rouda (D-CA) – May 9, 2019	
H.R. 2665 Smart Energy and Water Efficiency Act of 2019	To direct the Secretary of Energy to establish a smart energy and water efficiency program, and for other purposes.	Introduced Rep. Jerry McNerney (D-CA) – May 13, 2019 Passed out of Subcommittee on Energy (of House Energy and Commerce Committee) – May 16, 2019	
H.R. 2705 Water Infrastructure Trust Fund Act of 2019	To establish a Water Infrastructure Trust Fund through the Treasury Department - 50% of the fund shall be available to the EPA for capitalization grants under §601 of the Federal Water Pollution Control Act and 50% of the fund shall be available to the EPA for capitalization grants under §1452 under the Safe Drinking Water Act.	Introduced by Rep. Earl Blumenauer (D-OR) – May 14, 2019	
S. 1473 Protect Drinking Water from PFAS Act of 2019	To amend the Safe Drinking Water Act to require the Administrator of the Environmental Protection Agency to set maximum contaminant levels for certain chemicals, and for other purposes.	Introduced by Kirsten Gillibrand (D-NY) – May 15, 2019	
H.R. 2800 PFAS Monitoring Act of 2019	To amend the Safe Drinking Water Act to require continued and expanded monitoring of perfluoroalkyl and polyfluoroalkyl substances in drinking water, and for other purposes.	Introduced by Rep. Elissa Slotkin (D-MI) – May 16, 2019	

Legislation	Summary	Status	Position
S. 1507 PFAS Release Disclosure Act	To include certain perfluoroalkyl and polyfluoroalkyl substances in the toxics release inventory, and for other purposes.	Introduced by Sen. Shelley Moore Capito (R-WV) – May 16, 2019 Passed the Senate Committee on Environment and Public Works and placed on the Senate Calendar for a full vote – June 19, 2019	
H.R. 2776 Stop Sewage Overflow Act	To make certain municipalities eligible for grants under the Federal Water Pollution Control Act. Grant cost shares would be applicable as follows: • Not less than 55 percent for municipalities the affected residents of which pay, on average, 2.0 percent or less of their household income for sewer service. • Not less than 60 percent for municipalities the affected residents of which pay, on average, more than 2.0 percent, but not more than 2.5 percent, of their household income for sewer service. • Not less than 65 percent for municipalities the affected residents of which pay, on average, more than 2.5 percent, but not more than 3.0 percent, of their household income for sewer service. • Not less than 70 percent for municipalities the affected residents of which pay, on average, more than 3.0 percent, but not more than 3.5 percent, of their household income for sewer service. • Not less than 75 percent for municipalities the affected residents of which pay, on average, more than 3.5 percent of their household income for sewer service.	Introduced by Rep. Lori Traham (D-MA) – May 16, 2019	

Legislation	Summary	Status	Position
S. 1570 Aquifer Recharge Flexibility Act	To provide flexibility to allow greater aquifer recharge. Eligible land, with respect to a Reclamation project, means land that is authorized to receive water under State law and shares a groundwater source with land located in the service area of the Reclamation project. .	Introduced by Sen. James Risch (R-ID) – May 21, 2019 Senate Committee on Energy and Natural Resources held a hearing on the bill on July 18, 2019	
H.R. 2871 Aquifer Recharge Flexibility Act	To provide flexibility to allow greater aquifer recharge. Eligible land, with respect to a Reclamation project, means land that is authorized to receive water under State law and shares a groundwater source with land located in the service area of the Reclamation project. .	Introduced by Rep. Russ Fulcher (R-ID) – May 21, 2019	
S. 1604 Local Water Protection Act	To amend the Federal Water Pollution Control Act to reauthorize certain programs relating to nonpoint source management – specifically authorization appropriations of $7,500,000 per year for FY2020 through FY2024	Introduced by Sen. Amy Klobuchar (D-MN) - May 22, 2019	
S. 1689 A bill to permit States to transfer certain funds from the clean water revolving fund of a State to the drinking water revolving fund of the State in certain circumstances, and for other purposes.	To permit States to transfer certain funds from the clean water revolving fund of a State to the drinking water revolving fund of the State in certain circumstances, and for other purposes.	Introduced by Sen. Cory Booker (D-NJ) – May 23, 2019 Passed out of Senate Committee on Environment and Public Works and placed on the Senate Calendar for a full vote – June 19, 2019	
S. Res. 213 A resolution designating the week of May 19 through May 25, 2019 as "National Public Works Week."	This resolution designates the week of May 19-May 25, 2019, as National Public Works Week.	Introduced by Sen. Jim Inhofe (R-OK) – May 23, 2019 Passed the Senate – May 23, 2019	

Legislation	Summary	Status	Position
H.R. 3195 Land and Water Conservation Fund Permanent Funding Act	To amend title 54, United States Code, to provide permanent, dedicated funding for the Land and Water Conservation Fund, and for other purposes.	Introduced by Rep. Jefferson Van Drew (D-NJ) – June 11, 2019 Passed out of House Natural Resources Committee – June 19, 2019.	
S. 1811 A bill to make technical corrections to the America's Water Infrastructure Act of 2018	To make technical corrections to the America's Water Infrastructure Act of 2018. Corrections include: • Extending the Non-Federal Implementation Pilot Program from five to ten years; and • Amending the local government reservoir permit review to remove the limitation of those only owned and operated by the Secretary.	Introduced by Sen. John Barrasso (R-WY) Passed the Senate – July 10, 2019	
S. 1857 Federal Energy and Water Management Performance Act of 2019	To amend the National Energy Conservation Policy Act to improve Federal energy and water performance requirements for Federal buildings and establish a Federal Energy Management Program. The program is to exist from 2020-2030. One area addressed is to improve water use efficiency and management, including stormwater management, at facilities of the agency by reducing agency potable water consumption intensity (as measure in galls per gross square food) by 54% by FY2030, relative to the water consumption of the agency in FY2007 and through reductions of 2% each fiscal year.	Introduced by Sen. Lisa Murkowski (R-AK) – June 13, 2019 Passed out of Committee on Energy and Natural Resources – July 16, 2019	
H.R. 3254 PIPE Act	To require the Administrator of the Environmental Protection Agency to establish a discretionary grant program for drinking water and wastewater infrastructure projects, and for other purposes. Priority of the grant program would be to help bring public water systems into compliance with the Safe Drinking Water Act or for publicly owned treatment works into compliance with the Federal Water Pollution Control Act. The federal cost share of projects under this program will not exceed 100%. The grants program is to be authorized for $500,000,000 a year for fiscal years 2020 through 2029.	Introduced by Rep. Antonio Delgado (D-NY)	

S. 1932 Drought Resiliency and Water Supply Infrastructure Act	To support water infrastructure in Reclamation states and for other purposes. The bill includes a 5-year, $100 million reauthorization of the Bureau of Reclamation's Title XVI Water Reclamation and Reuse competitive grant program, originally authorized in the 2016 Water Infrastructure Improvements for the Nation (WIIN) Act (Title XVI-WIIN). In addition to the key Title XVI-WIIN Competitive Grant Program, the legislation includes $60 million for desalination, additional funding for surface and groundwater storage, and a new low-interest loan program for the financing of a range of water infrastructure projects.	Introduced by Sen. Cory Gardner (R-CO) – June 20, 2019 Subcommittee Hearing Held in the Senate – July 18, 2019	
H.R. 3423 . National Green Bank Act of 2019	To amend title 31, United States Code, to provide for the issuance of Green Bonds and to establish the United States Green Bank, and for other purposes.	Introduced by Rep. Jim Himes (D-CT) – June 21, 2019	
H.R. 3521 Wastewater Infrastructure Workforce Investment Act	To amend the Federal Water Pollution Control Act with respect to wastewater infrastructure workforce development, and for other purposes. Amends the language from manpower to workforce. Gives the states the ability to reserve up to 1% of the sums allotted to the state under this section for the fiscal year to carry out workforce development, training, and retraining.	Introduced Rep. Greg Stanton (D-AZ) – June 26, 2019	
H.R. 3510 Water Resources Research Amendments Act	To amend the Water Resources Research Act of 1984 to reauthorize grants for and require applied water supply research regarding the water resources research and technology institutes established under that Act.	Introduced by Rep. Josh Harder (D-CA) – June 26, 2019	
S. 2044 Water Supply Infrastructure Rehabilitation and Utilization Act	To amend the Omnibus Public Land Management Act of 2009 to establish an Aging Infrastructure Account, to amend the Reclamation Safety of Dams Act of 1978 to provide additional funds under that Act, to establish a review of flood control rule curves pilot project within the Bureau of Reclamation, and for other purposes.	Introduced by Sen. Martha McSally (R-AZ) – June 27, 2019 Subcommittee Hearing Held in the Senate – July 18, 2019	

S. 2013 A bill to protect the right of individuals to bear arms at water resources development projects	To protect the right of individuals to bear arms at water resources development projects.	Introduced by SEn. Mike Crapo (R-ID) – June 27, 2019	
H.R. 3616 Clean Water Standards for PFAS Act of 2019	To require the Administrator of the Environmental Protection Agency to designate per- and polyfluoroalkyl substances as toxic pollutants under the Federal Water Pollution Control Act, and for other purposes.	Introduced by Rep. Chris Pappas (D-NH) – July 2, 2019	
S. 2056 Build America, Buy America Act	To ensure that certain Federal infrastructure programs require the use of materials produced in the United States, and for other purposes.	Introduced by Sen. Sherrod Brown (D-OH) – July 8, 2019	
H.R. 3723 Desalination Development Act	To promote desalination project development and drought resilience, and for other purposes.	Introduced by Rep. Mike Levin (D-CA) – July 11, 2019	
H.R. 3844 To amend the Federal Water Pollution Control Act to require all persons exercising substantial operational control over a concentrated animal feeding operation to jointly obtain a permit for certain discharges, and for other purposes.	*Text is not yet available.*	Introduced by Rep. Ro Khanna (D-CA) – July 18, 2019	

S. 2164 A bill to amend the Water Resources Research Act of 1984 to reauthorize grants for and require applied water supply research regarding the water resources research and technology institutes established under that Act.	*Text is not yet available.*	Introduced by Sen. Ben Cardin (D-MD) – July 18, 2019	

August 5, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: General Manager

Subject : State and Federal Legislative and Regulatory Advocacy: Contract Renewal

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SUMMARY:

On August 1, 2016, the JPA Board authorized the Administering Agent/General Manager to execute a one-year professional services agreement with Best Best & Krieger LLP, in the amount of $130,000, for state and federal legislative and regulatory advocacy services. The JPA Board subsequently renewed the agreement twice with a current term of September 1, 2018 through August 31, 2019. Under the agreement, John Freshman and Ana Schwab have represented the JPA well on federal affairs, and Syrus Devers has done the same at the state level.

For the proposed renewal, Mr. Freshman has requested an increase in the contract amount due to the cost of providing federal lobbying services. Staff recommends that the Board authorize a one-year renewal of the contract with Best Best & Krieger LLP, increasing the annual amount from $130,000 to $155,000, to allow continuation of the advocacy services.

RECOMMENDATION(S):

Authorize the Administering Agent/General Manager to execute a one-year renewal of the professional services agreement with Best Best & Krieger LLP, in the amount of $155,000, for state and federal legislative and regulatory advocacy services.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

Sufficient funds are available in the adopted Fiscal Year 2019-20 JPA Budget for the services. The total cost of the work is not expected to exceed $155,000, which constitutes a $25,000 increase as compared to the prior term. Best Best & Krieger LLP has agreed to provide the services under the same terms as defined in the existing professional services agreement.

DISCUSSION:

The JPA Board authorized the Administering Agent/General Manager to execute a one-year professional services agreement with Best Best & Krieger LLP for state and federal legislative and regulatory advocacy services on August 1, 2016. The term of the contract was from August 1, 2016 through July 31, 2017. On November 6, 2017, the JPA Board approved renewing the agreement for the period of September 1, 2017 through August 31, 2018, and on August 6, 2018, the JPA Board approved renewing the agreement for the period of September 1, 2018 through August 31, 2019. The proposed contract renewal would be for the period of September 1, 2019 through August 31, 2020.

Since August 1, 2016, the annual cost of the services provided by Best Best & Krieger LLP has remained unchanged at $130,000. The amount consists of $5,000 per month for federal lobbying services, $5,000 per month for state lobbying services and a $10,000 annual allowance for reimbursement of actual travel and direct costs. John Freshman has requested that the Board consider an increase in the amount for federal lobbying services, from $5,000 to $7,500 per month, due to the cost of providing these services. Federal lobbying services are provided jointly by John Freshman who formulates the strategic approach and Ana Schwab who is the operational lead. With the assistance of Best Best & Krieger LLP, the JPA has substantially increased its profile on the federal level and positioned itself well to receive future funding for the Pure Water Project Las Virgenes-Triunfo.

To evaluate the requested increase in fee for federal lobbying services, staff contacted other water agencies to compare costs for these services. Although the fees vary depending on the level of service requested by each agency, the following summary provides a basis for comparison. The data shows that the median cost of federal lobbying services is $9,000 per month, which compares favorably to the requested increase to $7,500 per month.

Agency	Monthly Fee
Eastern Municipal Water District	$13,500
West Basin Municipal Water District	$13,250
Irvine Ranch Water District	$10,000
Western Municipal Water District	$9,000
North San Diego County Water Agency Coalition	$9,000
Municipal Water District of Orange County	$8,000
Inland Empire Utilities Agency	$8,000
Median	**$9,000**

Staff proposes renewal of the contract with Best Best & Krieger in the annual amount of $155,000, which includes $7,500 per month for federal lobbying services, $5,000 per month for state lobbying services and a $5,000 annual allowance for reimbursement of actual travel and direct costs. Historical costs for travel and direct costs have been low and, therefore, the allowance is proposed to be reduced from $10,000 to $5,000.

Prepared by: David W. Pedersen, Administering Agent/General Manager

August 5, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : Pure Water Demonstration Garden: CEQA Determination and Call for Bids

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SUMMARY:

A demonstration garden is proposed as an integral component of the upcoming Pure Water Demonstration Project and will provide a complementary experience to thousands of visitors who are expected to tour the facility for years to come. Conceptual plans were presented to the JPA Board for feedback on July 1, 2019. The Urban Water Group has completed the bidding documents for the proposed demonstration garden, incorporating feedback received from the JPA Board and staff. As a result, staff recommends issuance of a Call for Bids for the project.

RECOMMENDATION(S):

Find that the work is categorically exempt from the California Environmental Quality Act and authorize the issuance of a Call for Bids for the Pure Water Demonstration Garden.

FISCAL IMPACT:

No

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

There is no financial impact associated with the issuance of a Call for Bids.

DISCUSSION:

The design and bidding documents for the proposed demonstration garden are complete and ready for public bidding. Due to higher than expected construction costs from tight labor and construction market conditions, staff structured the bidding documents with optional, alternative items to provide the JPA Board with flexibility when considering an award of a construction contract for the work. Depending on the bid results, the JPA Board will have the option to award all of the elements or only those deemed most important and time-sensitive, while deferring other areas for consideration at a future date. Staff's goal is to have the

demonstration garden completed at approximately the same time as the remainder of the Pure Water Demonstration Project to complement the visitor experience such that the facility is ready for public visits and tours in March 2020.

The proposed bid schedule is as follows:

Call for Bids:	August 5, 2019
1st Advertisement:	August 8,2019
2nd Advertisement:	August 15, 2019
Pre-Bid Meeting:	August 21, 2019
Bid Opening:	September 18, 2019
Award of Contract:	October 7, 2019

The work is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to Section 15301(b) of the CEQA Guidelines, because it involves only minor alterations to an existing facility with no expansion of use. Attached is a Notice of Exemption that staff proposes to complete and file, pending Board approval of the CEQA determination.

Prepared by: Eric Schlageter, P.E., Senior Engineer

ATTACHMENTS:

Notice of Exemption
Call for Bids

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Los Angeles
12400 Imperial Highway
Norwalk, CA 90650

From: (Public Agency): Las Virgenes Municipal Water Di
4232 Las Virgenes Road
Calabasas, CA 91302
(Address)

Project Title: Pure Water Demonstration Garden

Project Applicant: Las Virgenes Municipal Water District

Project Location - Specific:

4232 Las Virgenes Road, Calabasas, CA

Project Location - City: Calabasas Project Location - County: Los Angeles

Description of Nature, Purpose and Beneficiaries of Project:
A demonstration garden is proposed as an important component of the Pure Water Demonstration Project and will provide a complementary experience to thousands of visitors who will tour the project for years to come

Name of Public Agency Approving Project: Las Virgenes Municpal Water District

Name of Person or Agency Carrying Out Project: Las Virgenes Municipal Water District

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: Existing Facilities: Section 15301(b)
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:
The work is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to Section 15301(b) of the CEQA Guidelines, because it involves only minor alterations to an existing facility with no expansion of use.

Lead Agency Contact Person: Eric Schlageter, P.E. Area Code/Telephone/Extension: 818-251-2142

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?. ☐ Yes ☒ No

Signature: Eric Schlageter Date: 8/5/2019 Title: Senior Engineer

☒ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

NOTICE INVITING SEALED PROPOSALS (BIDS)
Pure Water Demonstration Project Demonstration Garden

NOTICE IS HEREBY GIVEN that the Board of Directors of Las Virgenes – Triunfo Joint Powers Authority (JPA) invites and will receive sealed proposals (bids) up to the hour of 3:00PM on September 18, 2019, for furnishing the work described in the contract documents. Bids received after the time stated in the Call for Bids will not be accepted and will be returned, unopened, to the bidder. The time shall be determined by the time on the receptionist telephone console in our Headquarters lobby. Proposals will be publicly opened and read aloud at the office of the JPA, 4232 Las Virgenes Road, Calabasas, California 91302. Said bids shall conform to and be responsive to the Specifications and Contract Documents for said work as heretofore approved by the JPA.

A **mandatory** pre-bid tour will be conducted at 9:00AM on August 21, 2019. The meeting will begin at the JPA headquarters at 4232 Las Virgenes Road, Calabasas, CA 91302. Attendance at the pre-bid conference is a condition precedent to submittal of the bid and the JPA will not consider a bid from any bidder not represented at the pre-bid conference. Questions regarding the project may be directed to Eric Schlageter, P.E., at (818) 251-2142.

Sets of contract documents may be downloaded for free by going to http://www.LVMWD.com/Ebidboard and following the links to this project.

In order to be placed on the plan holder's list, contractors shall register for free as a document holder for this project on Ebidboard by going to www.LVMWD.com/Ebidboard and following the links to this project. Addendum notifications will be issued through Ebidboard.com, but may also be provided by calling the Project Manager. Although Ebidboard will fax and/or email all notifications to registered plan holders after the JPA uploads the information, Bidders are responsible for obtaining all addenda and updated contract documents.

Each bid must be on the JPA bid form and shall be sealed and filed with the secretary of the JPA at or before the time stated in the Notice.

No Contractor or Subcontractor may be listed on a bid proposal for a public works project submitted on or after March 1, 2015 unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. No Contractor or Subcontractor may be awarded a contract for public work on a public works project awarded on or after April 1, 2015 unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. Effective January 1, 2016, no Contractor or Subcontractor may perform on a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. This project is subject to compliance monitoring and enforcement by the DIR.

All terms and conditions contained in the Specifications and Contract Documents shall become part of the contract. The Board of Directors of Las Virgenes – Triunfo Joint Powers Authority reserves the right to reject any and all bids and to waive any and all irregularities in any bid.

No bidder may withdraw his bid after the said time for bid openings until 60-days thereafter or until the JPA has made a final award to the successful bidder or has rejected all bids, whichever event first occurs.

The Board of Directors of the JPA reserves the right to select the schedule(s) under which the bids are to be compared and contract(s) awarded.

BY ORDER OF THE GOVERNING BODY OF
LAS VIRGENES – TRIUNFO JOINT POWERS
AUTHORITY

_____	_____
Dated	Janna Orkney, Chair Las Virgenes-Triunfo Joint Powers Authority

August 5, 2019 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject : Las Virgenes-Triunfo Pure Water Project: Award of Regional Brine Management Study and Authorization to Execute Multi-Agency Cooperative Funding Agreement

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SUMMARY:

The Las Virgenes-Triunfo Joint Powers Authority (JPA), City of Thousand Oaks, Camrosa Water District and Calleguas Municipal Water District seek to jointly investigate a regional solution for the conveyance, treatment and disposal of brine discharges in the Malibu and Calleguas Creek Watersheds. Collectively, the agencies recognize the potential mutual benefits of a regional brine management approach for discharges that will be generated from the Pure Water Project Las Virgenes-Triunfo and proposed local groundwater supply projects in the City of Thousand Oaks.

Staff circulated a Request for Proposals (RFP) for the preparation of a Regional Brine Management Study in February 2019. Proposals were received from Woodard & Curran, Kennedy Jenks, Stantec and Carollo. The proposals were reviewed by an evaluation committee consisting of representatives from each participating agency. Based on the proposed scope of work, project understanding, experience and fee proposals, staff recommends accepting the proposal from Woodard & Curran, in the amount of $210,945, including two optional tasks.

RECOMMENDATION(S):

Accept the proposal from Woodard & Curran; and authorize the Administering Agent/General Manager to execute a professional services agreement, in the amount of $210,945, and a multi-agency cooperative funding agreement with the City of Thousand Oaks, Camrosa Water District and Calleguas Municipal Water District to reimburse the JPA, in the aggregate amount of $142,946, for the regional brine management study.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

The net cost of the study for the JPA is $67,999, which consists of the total study cost of $210,945 less reimbursement from the participating agencies in the amount of $142,946. Sufficient funds are available in the adopted Fiscal Year 2019-20 JPA Budget for the work. No additional appropriation is required. The cost of the work will be allocated 70.6 percent to LVMWD and 29.4 percent to TWSD.

The following table summarizes the total cost of the study and contributions from each participating agency:

	Cost	Las Virgenes - Triunfo JPA	City of Thousand Oaks	Camrosa WD	Calleguas MWD
Base Price	$149,894.00	$37,473.50	$37,473.50	$37,473.50	$37,473.50
Option 2	$25,000.00	$12,500.00	$12,500.00		
Task 8	$36,051.00	$18,025.50	$18,025.50		
Total	**$210,945.00**	**$67,999.00**	**$67,999.00**	**$37,473.50**	**$37,473.50**

The base price of the study is proposed to be shared equally among the participating agencies. The two optional tasks (Option 2 and Task 8) are proposed to be split 50/50 between the JPA and the City of Thousand Oaks since this work is unrelated to the other participating agencies.

As proposed, the JPA would be the project lead and execute a Professional Services Agreement with Woodard & Curran. The JPA would invoice each participating agency based on a percentage of their respective cost share amounts as invoices are received from the consultant. Letters of commitment from each participating agency have been received, and a cooperative funding agreement among the parties, in a form approved by JPA Legal Counsel, would be executed by the Administering Agent/General Manager to affirm these commitments based on a mutual understanding of agreed upon terms.

DISCUSSION:

The JPA desires a sustainable and cost-effective brine disposal option for its Pure Water Project Las Virgenes Triunfo. Similarly, the City of Thousand Oaks seeks a sustainable and cost-effective brine disposal option for its proposed groundwater supply projects and assurance that discharge requirements for its Hill Canyon Treatment Plant (HCTP) would continue to be met if it were to receive brine discharges. Camrosa Water District desires to maintain and possibly improve the quality of HCTP effluent that it diverts downstream at the Conejo Creek Diversion Structure for agricultural purposes or for potential future direct delivery. Calleguas Municipal Water District wishes to support local water supply reliability projects by leveraging its investment in the Salinity Management Pipeline (SMP), while ensuring that discharges do not negatively affect the operation of the facility.

Proposals were received from Stantec, Carollo, Kennedy Jenks and Woodard & Curran with base prices (excluding optional tasks) in the amounts of $179,961, $171,794, $159,980 and $149,894, respectively. A proposal review committee consisting of representatives from each participating agency met to review and discuss the proposals. Based on the proposed scope of work, project understanding, experience, fee proposal and committee review, staff recommends accepting the proposal from Woodard & Curran, in the amount of $210,945.

Woodard & Curran's proposal is attached and includes the two optional tasks, totaling $61,051, that are both recommended for inclusion. The optional tasks consist of "Option 2: Evaluation of Effects of Brine Discharge on Hill Canyon Treatment Plant (HCTP) Treatment Processes," and "Task 8: Hydraulic Analysis of the City of Thousand Oaks existing wastewater collection system capacity to take on additional brine discharge."

Prepared by: Eric Schlageter, P.E., Senior Engineer

ATTACHMENTS:

Woodard & Curran Proposal
Fee Proposal
Optional Task 8 Proposal

Proposal for the

REGIONAL BRINE MANAGEMENT STUDY

March 25, 2019

PURE WATER PROJECT
LAS VIRGENES-TRIUNFO
Bringing Our Water Full Circle

CAMROSA WATER DISTRICT

CALLEGUAS MUNICIPAL WATER DISTRICT

City of Thousand Oaks

WOODARD & CURRAN

COMMITMENT & INTEGRITY
DRIVE RESULTS

888 South Figueroa #1700
Los Angeles California 90017
www.woodardcurran.com

T 213.223.9460

Via FedEx

March 25, 2019

Mr. David R. Lippman
Las Virgenes Municipal Water District
4232 Las Virgenes Road
Calabasas, CA 91302

Re: Proposal for Regional Brine Management Study

Dear Mr. Lippman:

Woodard & Curran is pleased to submit our proposal for the Regional Brine Management Study (Study). In preparing this proposal, we proactively met with you and your project partners to discuss everyone's goals and have tailored our submission accordingly. We came away from these meetings impressed by the group's unilateral desire to work together on a regional solution to brine management. The group's enthusiasm for the project was contagious and further motivated us to develop a creative and cost-effective regional solution. A successful outcome for the Study will be to identify a project concept that addresses both common, regional goals and the goals for each of the partners.

Woodard & Curran will work to identify a solution by first brainstorming concepts for the project, including the use of a mass balance/flow model (already developed as a "working version") to track the movement of water and water quality constituents throughout the various regional systems. This brainstorming step will be followed by the selection of the optimum treatment technology, the sizing of a treatment system, and the determination of the best location for project facilities. All of our analysis will be documented as a preliminary engineering concept, which will lay out the treatment and conveyance facilities required for a regional brine management project. And finally, throughout the course of this project, our team will conduct workshops with the project partners to present findings, get feedback, facilitate decision points, and report on progress toward the goals.

Woodard & Curran's Principal-in-Charge, Brian Dietrick, will have ultimate responsibility for this project and the JPA's overall satisfaction with Woodard & Curran's work. He will work in collaboration with the Project Manager, Matt Elsner, who will be involved in the day-to-day activities regarding project development and communications with the JPA's staff, technical decisions, and quality control and overall performance. They will communicate regularly with the JPA and the project team to ensure continuity of the project.

We are excited for this opportunity to work with the JPA and partners on this project and look forward to discussing our approach and qualifications with you. Please call me at 213.223.9476 if you have any questions.

Sincerely,

WOODARD & CURRAN

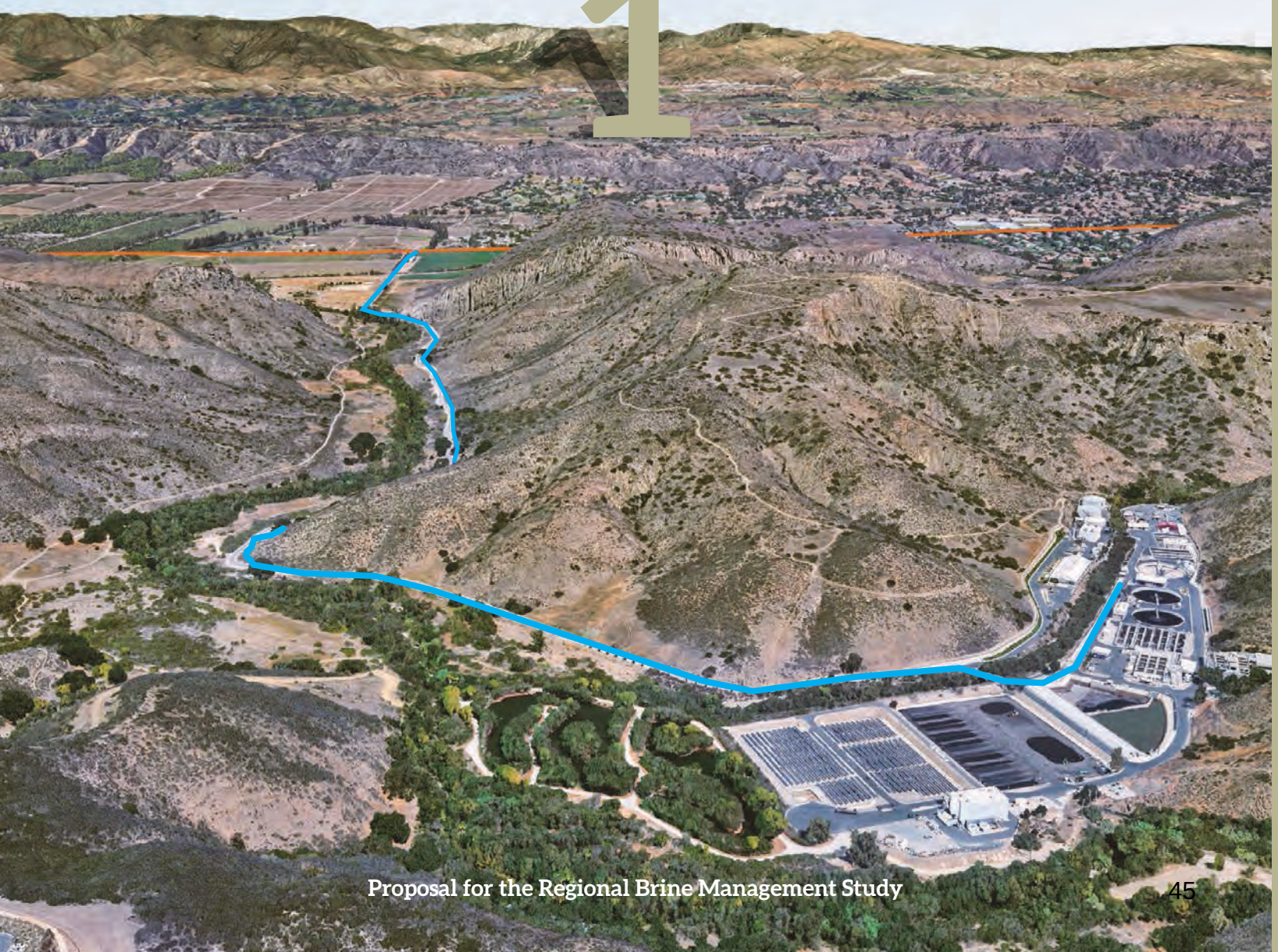
Matt Elsner, PE
Project Manager

Brian Dietrick, PE
Principal-In-Charge

Section One

FIRM INFORMATION

1



FIRM INFORMATION

Overview

Woodard & Curran is an integrated engineering, science, and operations company. Privately held and steadily growing, we serve public and private clients locally and nationwide. Talented people are at the heart of our firm. Our company was founded in 1979 on a simple business concept: provide an enjoyable place to work with opportunity, integrity, and commitment, and we will attract talented people. It happened. At the heart of our company are people who are experts in their fields and passionate about what they do, showing a level of commitment and integrity that drive results for our clients. You experience this power every day in our actions, our solutions, and our promises kept.

Woodard & Curran, Inc.

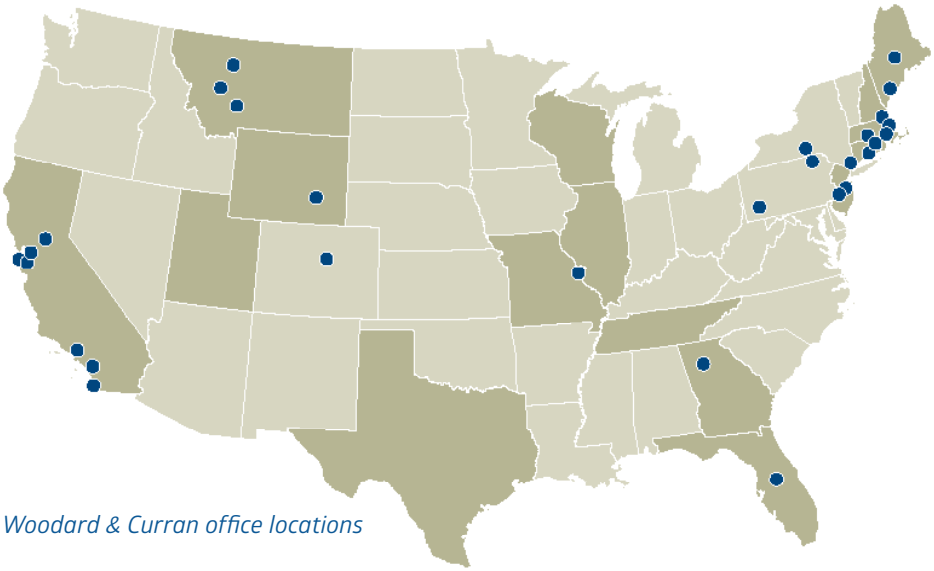
888 South Figueroa Street
Suite 1700
Los Angeles, CA 90017
P: 213.223.9460

Name of Principal:
Brian Dietrick, PE
bdietrick@woodardcurran.com
213.223.9479

Commitment evident in personal approach. Our commitment is reflected in the personal attention, collaborative resources, and dedication to results that we devote to each project. We assign the right people with the right expertise to the job and provide clients with easy accessibility to senior experts.

Our work is characterized by our responsiveness, resourcefulness, and willingness to do what it takes to get the job done properly. Woodard & Curran provides professional consulting expertise with master planning, treatment and infrastructure design, and meeting facilitation. The proposed study for the JPA and its project partners will require all of these skillsets to achieve success.

Full-service firm with multi-disciplined staff. Our staff are specialists in their fields, offering in-depth understanding of cutting-edge technology, astute problem-solving, multidisciplinary engineering, and expert regulatory guidance. Our company has over 1,000 highly-qualified professionals from 29 locations across the United States, we have in-house water and wastewater engineering and design disciplines as well as construction professionals with experience in all project delivery methods, including design-build. The firm has received numerous honors and awards, and we have ranked among Engineering News-Record's top 100 environmental firms every year since 2000.



Woodard & Curran office locations

Services to the public sector. We have been serving utilities, cities, towns, and state governments for over 35 years. Today, we offer services beginning with studies, concept, and design, on through construction and operations to address our clients' recycled and potable water, wastewater, stormwater, and civil engineering needs including:

- planning and modeling services;
- water supply and treatment;
- wastewater systems and process optimization;
- water recycling and stormwater;
- SCADA implementation and service;
- infrastructure management;
- GIS & Web based information systems; energy;
- civil engineering;
- O&M consulting services;
- funding and grant assistance;
- energy optimization;
- water resource planning;
- construction administration; and
- permitting and regulatory issues.

Tapping our pool of experts. Our project teams have the expertise and flexibility to meet the changing needs of clients and of ever-increasing regulations. Because we have access to a diverse group of in-house engineers, scientists, and operations professionals, we can match the right people and skills to the job. We are one of the few environmental consulting firms that specialize in process design, operations, automation, and information management - four key ingredients for efficient, well-managed utilities.

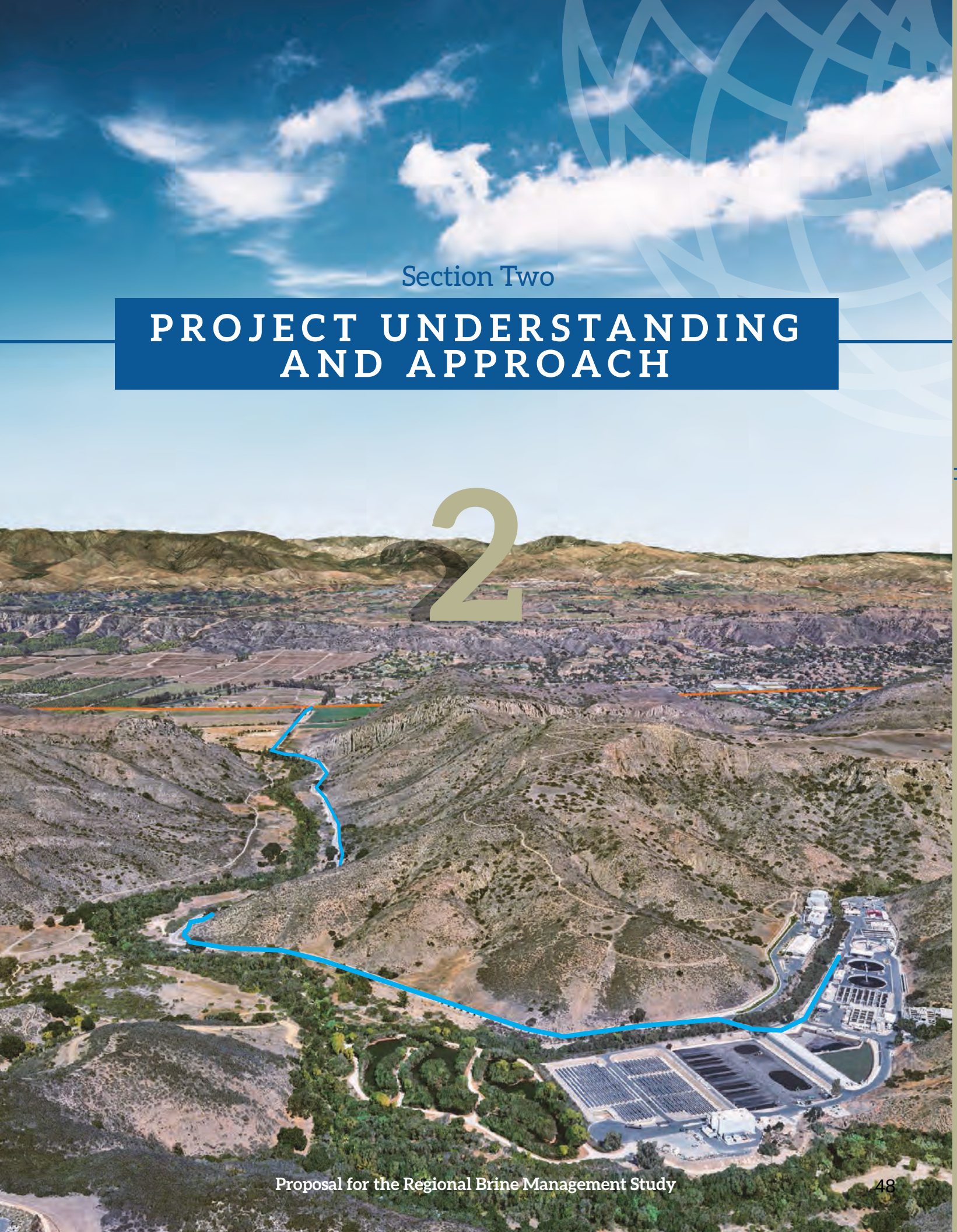
Full-service design: from upgrade to new facilities. Our experience and expertise encompass project implementation of all types, including:

- Initial planning and modeling services;
- investigating & improving system energy efficiency;
- assessing whether to design new facilities or upgrade existing ones;
- designing to maintain service during construction;
- phasing or staging implementation;
- maximizing financial assistance from State and Federal agencies;
- optimizing systems through SCADA and information technology; and
- addressing "payback": determining the period of time it will take for project savings to pay for improvement costs.

Section Two

PROJECT UNDERSTANDING AND APPROACH

2



PROJECT UNDERSTANDING AND APPROACH

Understanding

Led by the Las Virgenes-Triunfo Joint Powers Authority (JPA), a small group of proactive partner agencies are investigating a solution for brine management by undertaking the Regional Brine Management Study (Study). The partners, which include the JPA, the City of Thousand Oaks, Camrosa Water District, and Calleguas Municipal Water District, are motivated by some common goals:

Augment local water supplies for the region

Explore mutual benefits from partnering

Decrease salt loading to the region's groundwater basins

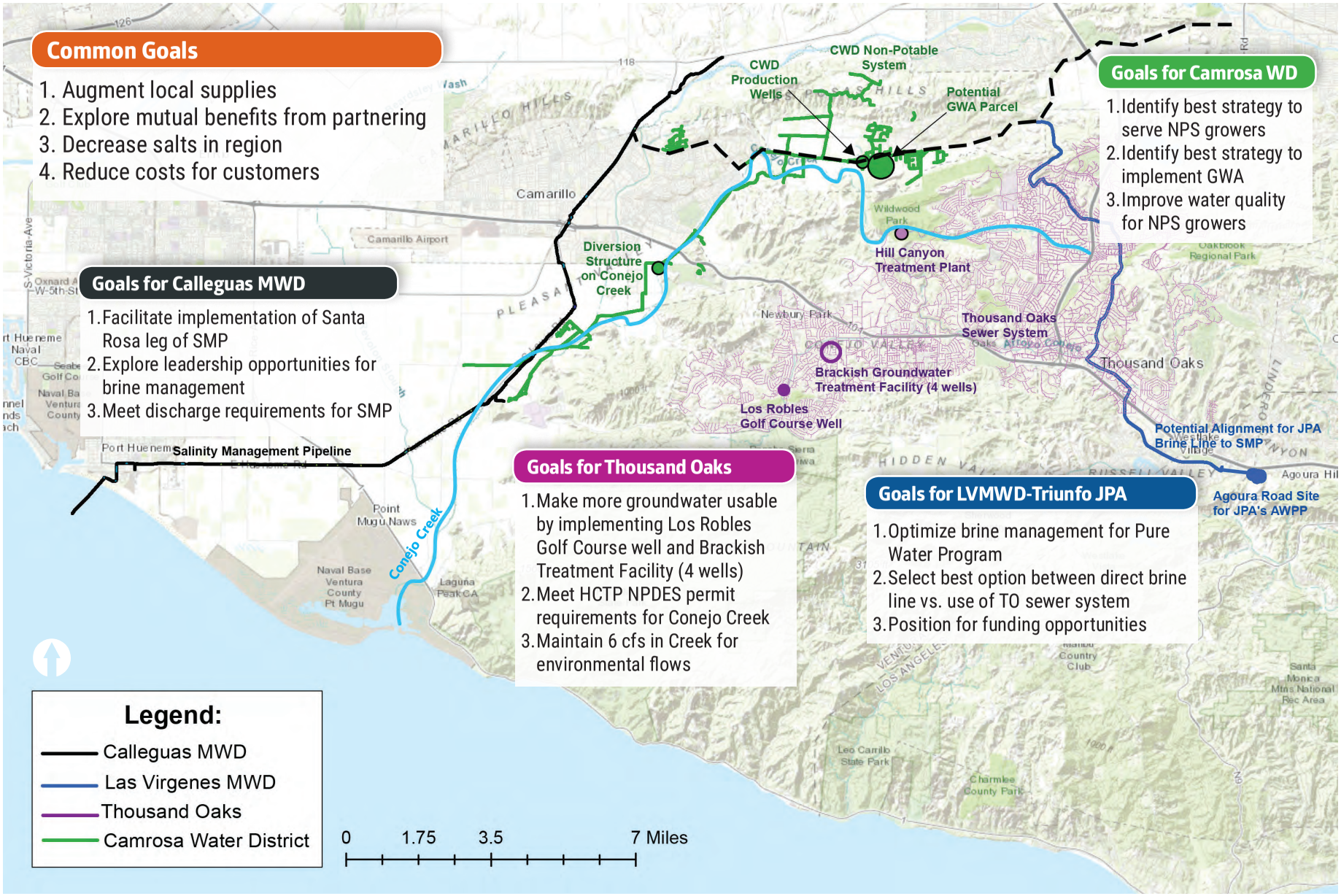
Reduce costs for customers/constituents

Also, as illustrated in the following map, the partners are further motivated by agency-specific goals. The JPA is pursuing the Pure Water Program and needs to identify the most cost-effective strategy to manage brine from the planned Advanced Water Treatment Plant (AWTP) on Agoura Road. Though previous Pure Water documents have identified alignments for a brine pipeline to the Calleguas Municipal Water District Salinity Management Pipeline (SMP), there may be an opportunity to partner with the City of Thousand Oaks to use their wastewater infrastructure to reach the SMP. The JPA is also interested in exploring funding/financing strategies for the "shared" facilities that might be recommended from this Study.

The City of Thousand Oaks (City) wants to increase their use of local groundwater supplies and, to this end, completed a study in 2016 to identify existing and new wells that could be brought online. Two of these project concepts involved the Los Robles Golf Course well (existing) and a Brackish Groundwater Treatment Facility (4 new wells) that would include reverse osmosis (RO) treatment for salinity reduction. These concept projects would also need to include a brine management strategy; hence a potential partnership with the JPA. Using the City's collection system to convey brine to the Hill Canyon Treatment Plant (HCTP) would prompt the addition of a desalter component at the plant to manage increased salt concentrations. The City would also be responsible for maintaining compliance with National Pollutant Discharge Elimination System (NPDES) requirements for discharges to Conejo Creek.

Camrosa Water District (CWD) is interested in maintaining, and potentially improving, the service that they provide to agricultural users on their Non-Potable System (NPS). Currently, the NPS is supplied through a diversion structure on Conejo Creek and is blended with imported water to reduce salinity for some agricultural customers. Since the HCTP discharges to the Creek, any increases in salts in the plant influent are a concern to CWD. The District is, at a minimum, interested in maintaining the water quality that is drawn from Conejo Creek for the NPS. CWD is also interested in exploring ways to improve that water quality (i.e., potentially maintaining chloride concentrations below 90 mg/L), including evaluating a direct connection between HCTP and the NPS. In addition, the CWD has been diversifying their water supply portfolio and they would like to explore the possibility of a groundwater augmentation (GWA) project. A well field (CWD) and a City-owned property have been identified at the base of Hill Canyon that could be used for this purpose.

Finally, Calleguas Municipal Water District (CMWD) is interested in supporting regional solutions that increase local water supplies. CMWD has built and operated the SMP to support this goal and would encourage projects that would rely on the future planned Santa Rosa leg of the SMP.

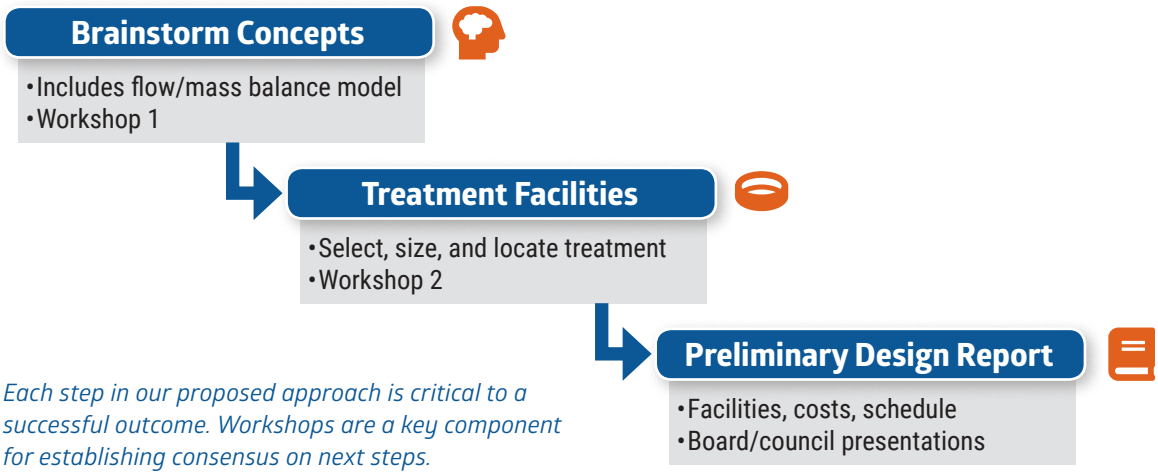


The project partners for the Regional Brine Management Study have agency-specific goals. A successful outcome for the Study will be to identify a project concept that addresses the goals for each of the partners.

Approach

This approach is based on the scope of work as outlined in the Request for Proposals (RFP); it also includes some optional work that is intended to address other issues that may be of interest to the project partners. The first step in our approach is to brainstorm concepts for the project, including the development of a mass balance/flow model to rack the movement of water and water quality constituents throughout the regional system. This tool, which is already developed in a preliminary format, will be used to account for specific water quality parameters at 8-10 key points in the regional sewer and treatment systems, to analyze the impacts of various scenarios for brine management, and to select an optimal management scenario. The second step is to use the model and our team's expertise to select, size and locate the optimal combination of treatment and conveyance facilities that would be needed. The third step is to develop a preliminary engineering concept report (Report) for treatment and conveyance facilities that would be needed to implement a regional brine project. And finally, throughout the course of this project, our team will conduct workshops with the project partners to present findings, get feedback, facilitate decision points, and report on progress toward the goals of the project.

Each of these steps is described in more detail below.



Each step in our proposed approach is critical to a successful outcome. Workshops are a key component for establishing consensus on next steps.

Brainstorm Concepts for Regional Brine Management

The first step on the project, which we have already begun as part of this proposal, is to brainstorm different project concepts that could be implemented. Our plan is to utilize the first workshop to discuss as many concepts as possible … some from discussions with the project partners and some from our own internal deliberations. Workshop 1 (which will also serve as the Kickoff Meeting) will involve a brainstorming session with the project partners to define the full field of options for pipeline alignments, connection points to the Thousand Oaks sewer system and to the SMP, desalter technologies, and desalter locations. The discussion will also include different technologies and locations for advanced oxidation processes (AOP) that could be implemented for a GWA project.

To account for the many variations that could be considered, a versatile tool is needed. The tool would be used to set constraints for different parts of the regional water/wastewater systems and in the Creek; and it would be used to calculate the impacts on water quality in various parts of the regional system. For example, how would the addition of brine flows from the JPA AWTP and from the proposed Thousand Oaks groundwater desalters impact water quality discharged from the HCTP? And what would the brine water quality be from a new desalting facility at HCTP?

Our team has already developed a working spreadsheet model to answer some of the questions we had while developing this proposal. A schematic diagram of the model is shown below. The spreadsheet tool incorporates both water balance and mass balance components, and it is set up to handle input data and output calculations on a monthly basis.

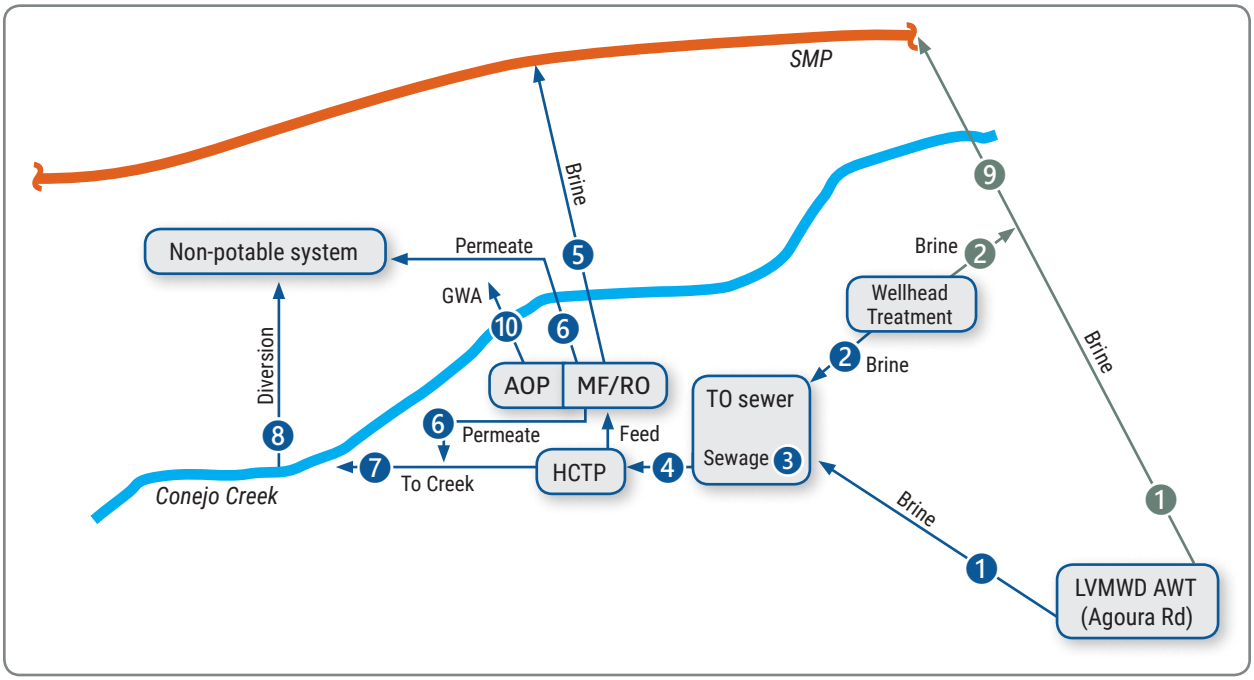
A spreadsheet model has many advantages for this project:

- Easy to understand and modify
- User-friendly for Workshops
- Output graphics can be customized
- Calculates water quality in sewer, at HCTP, in NPS, at connection to SMP, and for GWA project
- Set up to handle seasonality month by month
- Working version is already developed

Woodard & Curran has developed similar spreadsheet models for recycled water clients such as LADWP, Carpinteria Valley Water District, and Goleta Water District to analyze the impacts of increased brine discharges on NPDES limits. In each case, the keys to success were to design the model with user-friendly interfaces and output graphics, provide thorough QA/QC of formulas, and to allow for a full range of potential project options.

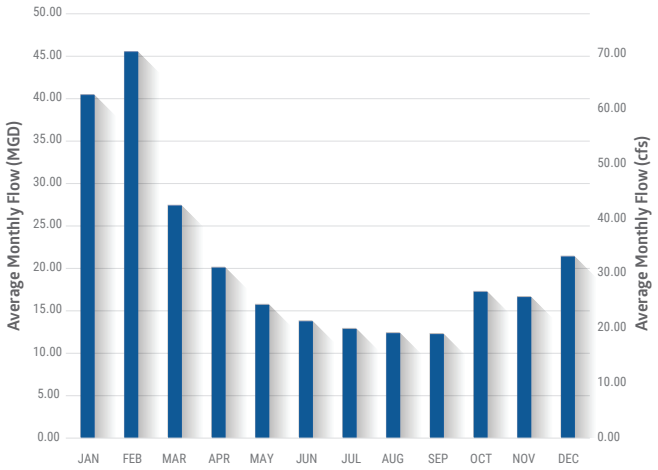
The model we have developed for the Study will be used to answer the following questions:

- What is the quantity/concentration of the JPA AWTP brine stream?
- What is the quantity/concentration of the Thousand Oaks brine streams?
- What is the relative increase in TDS, Boron, Chlorides, and Sulfate from additional brines (current vs. build-out influent)?
- What flow would need to be treated (RO capacity) to remove sufficient chlorides to meet HCTP NPDES limits?
- What flow would need to be treated (RO capacity) to remove sufficient chlorides to improve water quality in Conejo Creek?
- What are the monthly variations in the water quality of HCTP discharges under multiple scenarios?
- What is the water quality and flow that would be discharged to the SMP under various scenarios?



A spreadsheet model is essential to analyze various possibilities for a regional solution. A working version of the model has already been developed (shown here) and it indicates likely issues with chlorides and TDS at HCTP when brine flows are added to the sewer from the JPA Pure Water Project and from City wellhead desalters.

Brine flow quantity and quality will vary throughout the year, which will impact the water quality of effluent discharges to Conejo Creek. This graph illustrates the variation in Creek flows throughout the year. These factors will be incorporated into the spreadsheet model and used in our analysis to determine the sizing of a desalter at HCTP.

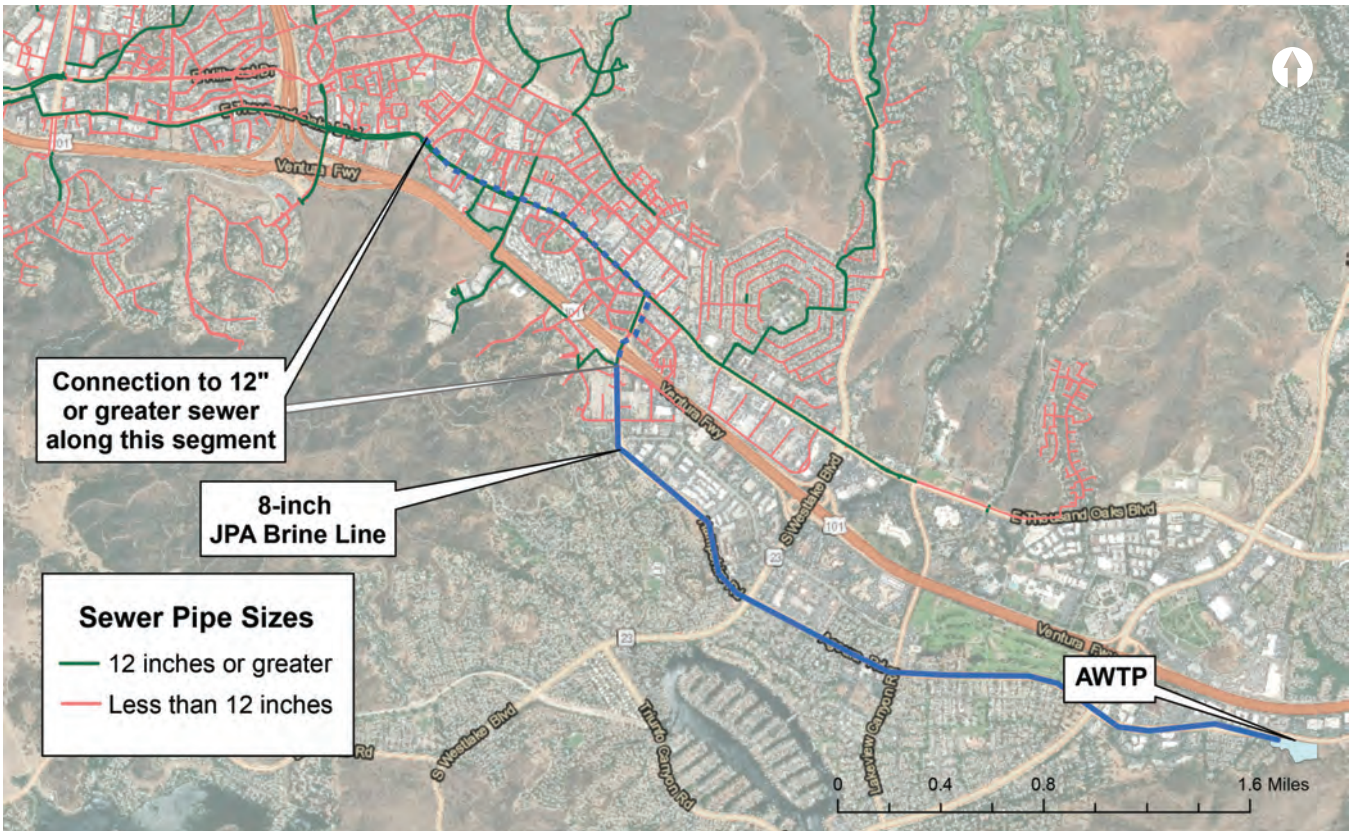


As previously mentioned, our team has already started the brainstorming process and have come up with the following concept ideas that could be analyzed using the model. It is anticipated that more concept ideas will arise. In general, all of the ideas have the potential for cost savings. Each of these would be vetted with the project partners during Workshop 1.

Concept Idea	Potential Advantages
Optimally-Sized Desalter – size desalter such that extra capacity during JPA non-discharge months (summer) can be used to produce high-quality water that offsets imported water for blending in CWD's NPS for avocado growers.	▪ Reduce costs to constituents ▪ Maximize yield of local supplies ▪ Meet water quality expectations of Ag growers in CWD NPS ▪ Avoid desalter facility being stranded during portions of year ▪ Fully use existing solar generation capacity at HCTP ▪ Meet NPDES chloride limits
Optimally-Located Desalter – analyze advantages of siting desalter at HCTP vs. a remote location near the SMP.	▪ Reduce costs to constituents ▪ Simplify operations ▪ Reduce number of pipelines ▪ Could avoid need to find space at HCTP ▪ Meet NPDES chloride limits
Optimize City Sewer Connection – select most cost-effective location to introduce brine flows into City sewer.	▪ Reduce costs to constituents ▪ Maximize Use of available capacity in City sewer ▪ Could reduce pipeline lengths
Direct Pipe to HCTP – analyze a direct pipe connection to the HCTP in lieu of connecting to the City sewer. This could take the form of an abandoned sewer or water pipeline.	▪ Reduce costs to constituents ▪ Reduce RO size by segregation of brine discharges ▪ Utilize abandoned infrastructure
Include JPA Title 22 Flows in Brine Line (*included as optional task*) - convey excess JPA recycled water during "shoulder" months in brine line to City sewer.	▪ Reduce costs to constituents ▪ Avoid discharges to Malibu Creek ▪ Increase effluent flows available to CWD ▪ Utilize available capacity in City sewer and HCTP
Optimally-Located AOP – analyze advantages of locating AOP (for GWA project) at remote location near SMP.	▪ Reduce costs to constituents ▪ Simplify operations ▪ Reduce number of pipelines ▪ Could avoid need to find space at HCTP

Several of these concepts are shown in the graphics below.

One potential concept could involve siting the desalter at a remote location near the SMP as shown above (Concept Idea #2 in table). If implemented, this concept could offer advantages such as reduced costs, simplified operations (if not operated by City), a reduced number of pipelines, and it could avoid the need to identify sufficient space at HCTP.



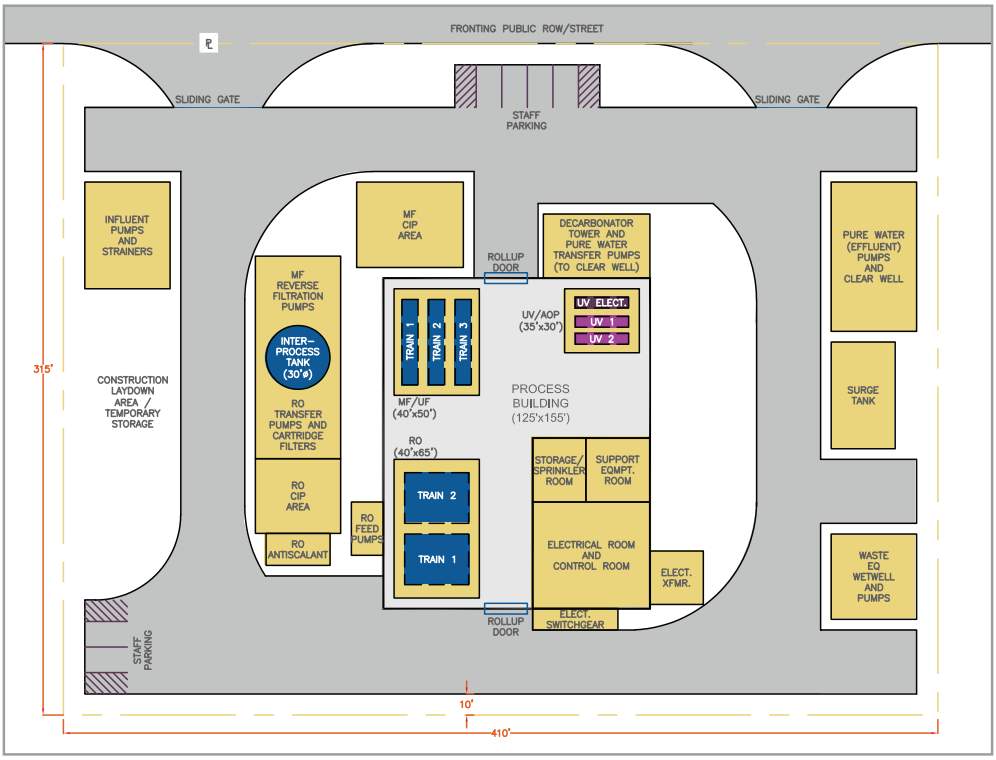
The connection to the City sewer system will dictate some of the capital costs for this project. A preliminary assessment of available pipes indicates several 12-inch diameter sewers which could be used and have hydraulic capacity available.

Matt Elsner, our proposed project manager, worked with Brian Dietrick recently on the Burbank Water & Power (BWP) Potable Reuse Study. This analysis looked at a set of options for advanced water treatment, storage, and conveyance to develop a feasible GWA project, with subsequent options for transitioning the project to a treated drinking water augmentation (TDWA) project in later years. The project's success relied on detailed descriptions and cost estimates for each of the project components, continuous communication with BWP staff, and creative use of available parcels in and around the City of Burbank. Our team will apply these lessons learned to this project.

Select, Size, and Locate Treatment Facilities

The second step in the project is to select, size, and site desalter facilities to achieve the desired water quality at HCTP (current and build-out), while also assessing water quality in the NPS and at the brine connection point to the SMP. As mentioned above, there may be strategies that will allow full use of desalting facilities through a 12-month period, rather than the 6-month period during which the JPA will be sending brine flows from the AWTP. There may be other cost-reducing strategies as well. The spreadsheet model will be used to calculate the anticipated product water quality, brine quality, and the water quality of any remaining discharges to Conejo Creek.

Our approach to the treatment facilities will be to first establish flow capacities, existing flow rates, and constituent removal requirements, while taking into account the seasonal fluctuations for each of these parameters. The capacity of the desalting facilities will depend on the gross pounds per day of removal needed for chlorides. Once the facilities are sized, a plan view layout will be developed that can be applied to available space at HCTP (see example shown below). It will be important to plan for future expansions of the desalter, if applicable, and for additional AOP facilities that could be needed for a GWA project if CWD decides to pursue it. If desired, the desalter layout may also be applied to available space at the City-owned site along Santa Rosa Road or other available parcels.



A preliminary layout for a desalter/AWTP is shown in the figure above. The layout would be optimized to take advantage of the location chosen and level of treatment required.

The analysis will include consideration of the brine water quality that is conveyed to the SMP, with recommendations for frequency and methodology of monitoring practices and a recommendation on any further treatment needed.

Our preliminary version of the spreadsheet model indicates likely issues with chlorides at certain times of year if maximum JPA Pure Water brines and brines from City desalters were added to the City sewer system. Using the model, it is estimated that a desalter of approximately 0.6 MGD would be needed to maintain consistent compliance with NPDES requirements based on Total Maximum Daily Limits (TMDLs). A higher desalter capacity would be required to improve water quality for CWD's NPS system. Our analysis will confirm these findings and will evaluate concept ideas that could help improve the cost-effectiveness and ease of operations.

			Month												
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	NPDES Limits
4 HCTP Flow	MGD		9.87	10.11	11.05	9.64	8.83	9.11	8.31	8.48	9.55	9.13	9.34	9.40	
Percent of effluent to RO			6%	6%	5%	6%	7%	7%	7%	7%	6%	7%	6%	6%	
4a - RO Feed	MGD		0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	
Combined Effluent:															
Flow	MGD		9.78	10.02	10.96	9.55	8.74	9.02	8.22	8.39	9.46	9.04	9.25	9.31	**14**
	AF/month		913	935	1,023	891	815	841	767	783	883	843	864	869	**12,889**
TDS	mg/L	wet	**868**	**903**	824	560	565	594	556	537	471	**930**	**894**	**910**	**850**
	PPD	dry	70,860	75,477	75,279	44,561	41,141	44,685	38,160	37,558	37,170	70,058	68,951	70,648	**99,250**
Boron	mg/L		0.57	0.57	0.52	0.42	0.42	0.44	0.45	0.41	0.39	0.63	0.60	0.58	**1**
	PPD		46	47	47	33	31	33	31	29	31	47	46	45	**120**
Sulfate	mg/L	wet	193.1	201.5	180.3	104.0	95.7	123.3	96.7	91.7	78.8	190.0	175.4	195.9	**250**
	PPD	dry	15,755	16,833	16,481	8,279	6,976	9,272	6,634	6,414	6,214	14,317	13,536	15,202	**29,200**
Chloride	mg/L	wet	**202.7**	**203.7**	**190.7**	130.6	127.4	138.8	138.6	133.3	117.6	**210.3**	**194.1**	**208.8**	**150**
	PPD	dry	16,542	17,022	17,429	10,400	9,283	10,439	9,501	9,323	9,270	15,853	14,979	16,205	**17,500**

Using preliminary assumptions, a HCTP desalter of approximately 0.6 MGD in capacity would be needed to maintain compliance with TMDL requirements. Our analysis will confirm this finding and will evaluate other concepts that could be implemented by the project partners to reduce costs.

Develop Report for Regional Brine Management Project

The third step in our approach is to develop a preliminary engineering concept report (report) for the treatment and conveyance facilities. This report will document all proposed facilities, and it will document the analyses conducted to arrive at the decisions of the project partners. Specific topics will include:

- Engineering concept for desalter (location, treatment technology, space requirements, energy needs)
- Engineering concept for AOP facilities
- Engineering concept for brine pipeline from HCTP to the SMP
- Engineering concept for the JPA brine pipeline from Agoura Road to the City sewer system
- Engineer's cost,(Class 5) by component, for initial capital and a range of treatment and ongoing O&M costs; includes lifecycle cost estimate
- A comparison to capital and lifecycle costs of a single brine pipeline from the Agoura Road site to the SMP, as presented in the Pure Water Las Virgenes AWTP Preliminary Siting Study and the Pure Water Las Virgenes Title XVI Feasibility Study. It will be assumed that the City desalters could potentially connect into this "original" brine line as well.
- Project schedule

The PDR represents another opportunity to realize cost-saving measures:

- Reduced dichlorination costs at HCTP
- Avoidance of out-of-service-area SMP charges (or partial charges)
- Potential to blend avocado grower NPS water with desalter product water and avoid imported water

Matt has worked extensively on preliminary design efforts for the types of infrastructure needed for this project. For example, he was in the role of Senior Technical Manager for the Paso Robles Recycled Water

Distribution System project. In this capacity, he was responsible for data collection, utility research, alignment evaluation, construction cost estimating, and storage evaluation. Preliminary design documents were prepared for the City's Phase 1 Recycled Water System (8 miles of up to 24-inch diameter pipe and a Salinas River crossing) along with a recharge investigation.

In addition to the technical aspects of the PDR, our team is also offering Funding/Financing Plan as an optional service. This Funding Plan could be used to determine financing options for various project components, including grant funding; and it could be used to determine the best project leads for each component. The table below indicates one possible breakdown of project components, with potential beneficiaries (leads) and grant and loan funding opportunities.

Project Component	Potential Beneficiaries	Potential Grant and Loan Funding
JPA Brine Pipeline to City Sewer	JPA	▪ DWR, Proposition 1 Grant Program ▪ DWR Water Desalination Grant Program ▪ SWRCB, Water Recycling Funding Program ▪ USBR, Title XVI WaterSMART Water and Energy Efficiency Grant Program ▪ USBR, Title XVI WaterSMART Drought Response Program ▪ Metropolitan Water District of Southern California, Local Resources Program ▪ Clean Water State Revolving Fund ▪ Infrastructure State Revolving Fund
City Sewer Upgrades	City	
Desalter	City	
HCTP Brine Pipeline (HCTP to SMP)	City	
AOP (for GWA project)	CWD	
Title 22 conveyance	CWD	
AOP conveyance	CWD	
SMP Extension into Santa Rosa	CMWD	

Our team is offering a Funding/Financing Plan as an optional task. The table above illustrates one potential approach to divide the costs for the various project components, including opportunities for grant and loan funding.

Conduct Workshops with Project Partners

Finally, all steps in our approach are woven together by workshops with the project partners. This is essential to a successful outcome given the numerous facility details and objectives at stake. Workshops will be conducted at key points throughout the project to present findings, get feedback, facilitate decision points, and report on progress toward the goals of each partner. Our approach includes the two workshops requested in the RFP, a presentation of Study results to the governing boards of the project partners, and an optional workshop (in case needed).

The graphic on page 2.10 illustrates the topics that would be covered at each of the planned workshops.

Workshop 1:

- Introduce Team and project goals for each partner; review background
- Introduce spreadsheet tool and demonstrate with example scenario
- Conduct brainstorm of concept ideas/scenarios that could be implemented
- Seek consensus on concept ideas that should be assessed with the spreadsheet tool
- Determine assumptions for comparison of concept ideas, cost estimating
- Review project schedule and deliverables
- Review action items
- Schedule next workshop

Workshop 2:

- Review action items from Workshop 1
- Present findings from model analysis of concept ideas
- Introduce treatment, conveyance, and operational details from Draft PDR
- Seek consensus on recommended project
- Review project schedule and deliverables
- Review action items
- Schedule next workshop (if needed)

Presentation to Boards/City Council:

- Introductions
- Background/Drivers for Project
- Spreadsheet Tool
- Concept Ideas
- Findings of Analyses and Recommended Project
- Schedule and Next Steps

Optional Workshop

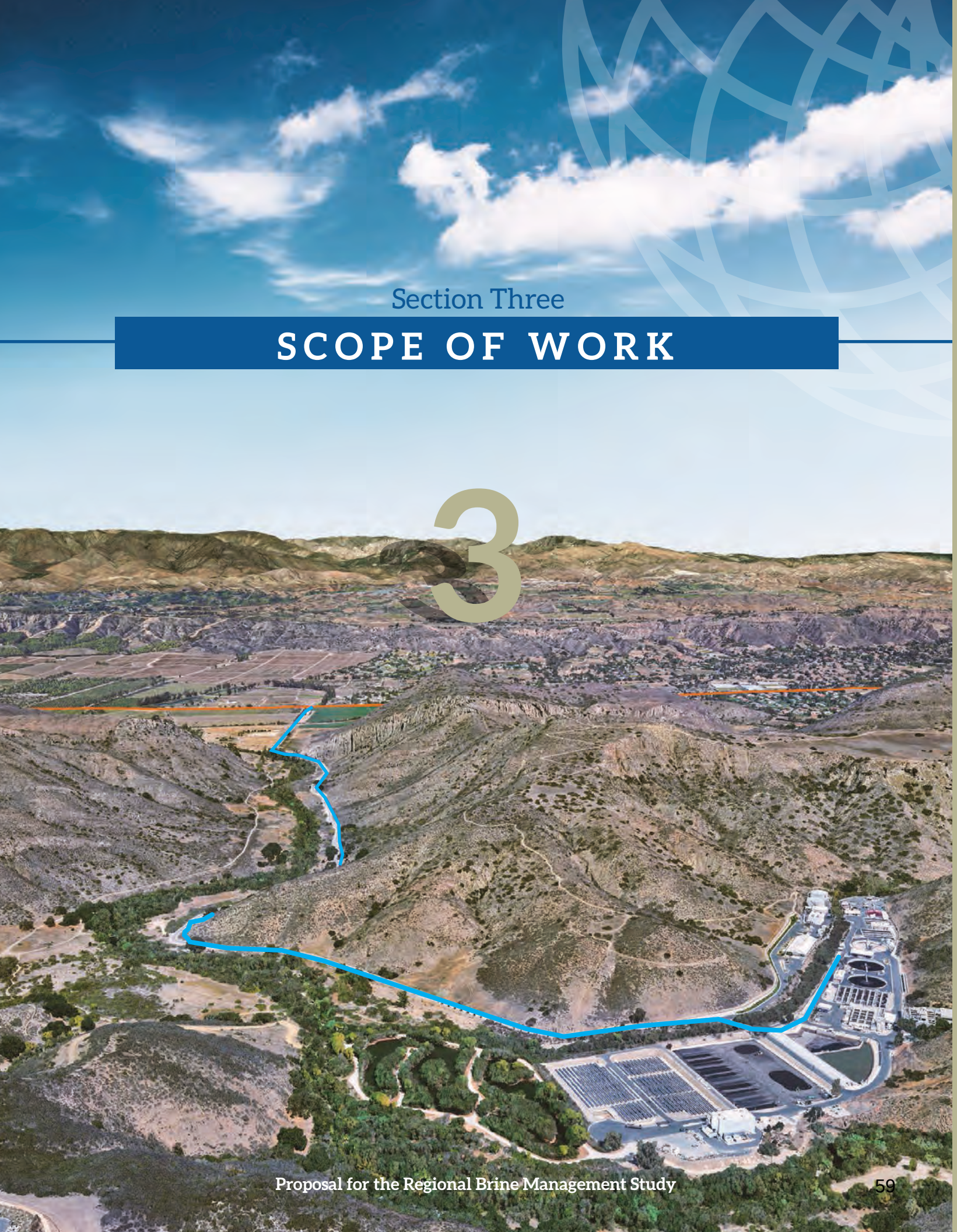
- Subject matter to be determined

The Woodard & Curran team has extensive experience conducting workshops and other types of stakeholder meetings. Brian Dietrick, who will be working closely with Matt on the coordination activities for this project, has been leading a 5-year effort for the Santa Ana Watershed Project Authority (SAWPA) known as the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP). This program involves six partner agencies and a variety of existing and new infrastructure that will be used to build and operate a 150,000 AF water bank. The complexity of the facilities and partner goals is similar to the Regional Brine Management Study; we have learned that it is critical to incorporate review of past action items, schedule progress, and "free-form" brainstorming into the meeting format. Our team will conduct workshops for this project in a similar manner. In addition, Matt has been the lead on numerous board and city council presentations and workshops during his time at Burbank Water and Power.

Section Three

SCOPE OF WORK

3



Task 1 | Project Management

1.1 Project Meetings and Workshops

Woodard & Curran will prepare for and attend up to six project meetings with the Las Virgenes-Triunfo Joint Powers Authority (JPA), City of Thousand Oaks (City), Camrosa Water District (CWD), and Calleguas Municipal Water District (CMWD) at key points throughout the project. The meetings are anticipated to include the following:

- Project Kickoff/Brainstorming Meeting
- Draft Report Workshop
- Presentations – up to four meetings, one with each of the governing Boards or Council of the JPA, City, CWD, and CWMD.

Woodard & Curran will prepare an agenda and meeting summaries for each meeting and distribute to the JPA project manager. At a minimum, Woodard & Curran's principal-in-charge, project manager, and project engineer will attend each meeting. It is assumed that other project coordination and meetings can occur through conference calls, which may also include web-based presentations.

1.2 Project Tracking and Communication

Woodard & Curran will prepare and submit progress reports and an updated project schedule with the monthly project invoice. Woodard & Curran will provide regular project coordination, communication, and updates to the JPA and track the project scope, budget, and schedule.

1.3 Quality Assurance and Quality Control

Woodard & Curran will implement its Quality Assurance and Quality Control Plan requirements for the project, which will include a senior level technical review of major project deliverables. The Plan will outline specific technical protocols, methods and checklists for Woodard & Curran staff to use in preparing work products. Where applicable, the QA/QC Plan will refer to Woodard & Curran's Quality Assurance Manual, supplemented with project-specific deliverable information, staff and procedures.

Task 1 Assumptions:

- Monthly progress meetings will be via teleconference call or combined with the scoped meetings
- Project duration is approximately six months

Task 1 Deliverables:

- Meeting Agenda (6) (.pdf or Microsoft Word files by email)
- Meeting Summaries (6) (.pdf or Microsoft Word files by email)
- Monthly Project Schedule (6) (hard copy with invoice)
- Monthly Progress Report (6) (hard copy with invoice)
- Microsoft PowerPoint presentation of final report (Microsoft PowerPoint files by email)

Task 2 | Data Gathering and Evaluation

Woodard & Curran will prepare a data request for the JPA that will include (but not be limited to) water quality data for Hill Canyon Treatment Plant (HCTP) influent and effluent, City groundwater wells, CWD Non-Potable System (NPS), and JPA Advanced Water Treatment Plant (AWTP) influent. The data request will also include existing and proposed pipeline and facility information (as-builts, utility mapping, planning documents), previous reports related to the project, and GIS data. Woodard & Curran will maintain and update the data request list as additional needs are identified and data are received.

Woodard & Curran will use the data obtained to prepare a spreadsheet-based water quality model for the regional brine system. A working version of this model has already been developed. This model will be used to determine the water quality impacts caused by JPA and City brine discharges on HCTP influent and the amount of salt removal required for the following scenarios:

1. JPA brine discharges
2. City brine discharges
3. CWD NPS system water quality improvement (chloride concentrations as low as 90 mg/l)

Each of these scenarios will be evaluated based on current and future (build-out) HCTP influent volumes. The model will also be used to predict the water quality of other regional brine management components under the same scenarios.

Task 2 Assumptions:

- JPA will provide information in electronic format.
- System will be evaluated based on monthly-average flows and concentrations

Task 3 | Santa Rosa Basin Augmentation

Woodard & Curran will evaluate utilizing a portion of the HCTP effluent for groundwater augmentation within the Santa Rosa Valley. The evaluation will include the following:

- Current and anticipated regulatory requirements
- Proposed treatment components (i.e., an AWTP)
- Location and types of facilities required
- Sizing considerations and expected yield for current and build-out HCTP flows

The evaluation will be summarized in the draft and final reports under Task 7.

Task 3 Assumptions:

- Groundwater augmentation sites and configurations presented will be limited to three options
- The AWTP will also treat permeate from the HCTP Desalter and no additional reverse osmosis will be required

Task 4 | Desalter Sizing

Woodard & Curran will use the spreadsheet model developed in Task 2 to determine the size of desalter required for the following conditions:

- JPA brine discharges
- City brine discharges
- CWD NPS water quality improvement (chloride concentrations as low as 90 mg/l)

Desalter sizing will be evaluated based on current and future (build-out) HCTP influent volumes. CWD water quality improvements will consider the advantages of a direct, piped connection between HCTP and CWD's NPS system.

Woodard & Curran will also use the model to compare predicted project brine water quality with the discharge requirements of the Salinity Management Pipeline (SMP). SMP discharge configuration and monitoring requirements will also be presented.

The sizing analysis will be summarized in the draft and final reports under Task 7.

Task 5 | Preliminary Engineering Concept

Woodard & Curran will use the information developed in Tasks 2 through 4 to develop a preliminary engineering concept of facilities required for the following project components:

- Brine line from JPA AWTP to City sewer
- Desalter
- Brine line from Desalter to SMP
- AWTP facilities for a GWA project

Pipeline components will be developed considering pipeline alignment, pipeline diameters, pipeline materials, and pressure ratings. The SMP discharge station conceptual design will be based on CWMD standard drawings. Components of the desalter to be developed include location (including plan view layout), treatment technology, energy needs, operational needs, and space for additional treatment steps required for groundwater augmentation. Similar components will be developed for the groundwater augmentation AWTP, which may be remotely located from the desalter.

The conceptual design will be included the draft and final reports under Task 7.

Task 5 Assumptions:

- Alignment of JPA brine discharge line to City collection system will be as currently proposed in the Pure Water project's Basis of Design Report. Discharge point will be evaluated based on readily-available sewer flow and capacity information.
- Discharge configuration of JPA brine line will be based on City standard drawings.
- SMP discharge station will be based on CWMD standard drawings.

Task 6 | Preliminary Cost Estimate

Woodard & Curran will prepare an engineer's opinion of cost. The cost estimate will be a Class 5 estimate (0-2% project definition) as defined by the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 56R-08 with an expected accuracy range of -35% to +65% of actual costs. The cost estimate will include costs for initial capital costs and the range of treatment costs for ongoing operations and maintenance (O&M).

The cost estimate will be included in the draft and final reports under Task 7.

Task 6 Deliverables:

- Draft and final cost estimate (.pdf or Microsoft Excel file by email)

Task 7 | Regional Brine Management Study Report

Woodard & Curran will summarize findings from tasks 2 through 6 into the Regional Brine Management Report. The Report will be submitted in draft form and Woodard & Curran will attend and facilitate a workshop with the JPA, City, CWD, and CMWD (see Task 1) to present and discuss the findings of the report. Comments received from the group will be incorporated into the final Report.

Task 7 Deliverables:

- Draft and final Report (four (4) hard copies and .pdf or Microsoft Word file by email)
- Regional Water Quality Model (Microsoft Word file by email)

Project Schecule

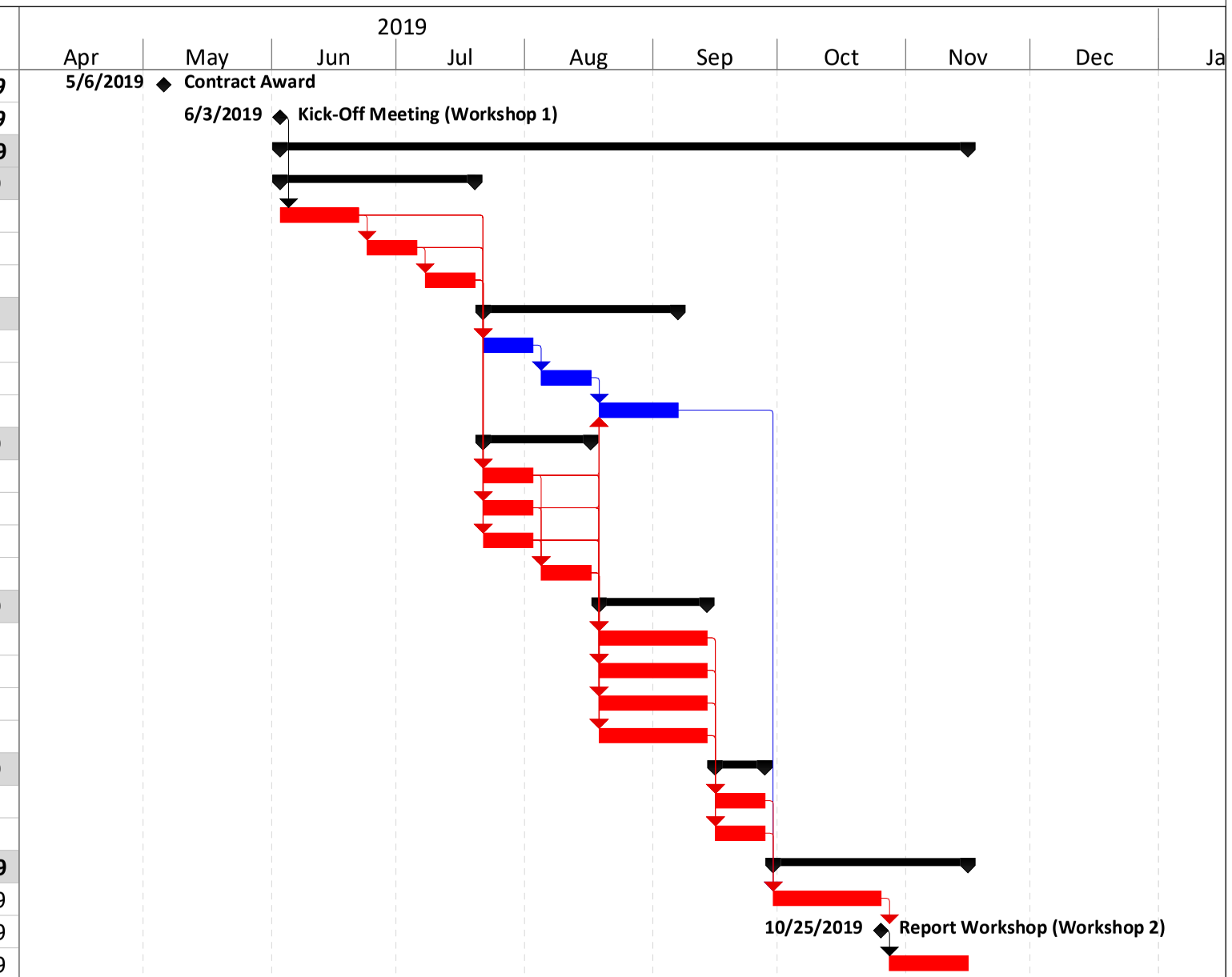
On the following page, Woodard & Curran has developed a detailed 6-month schedule for completion of the Regional Brine Management Study. We believe the schedule is feasible to complete the scope of work outlined in our proposal. As with any project, schedules may be delayed or expedited depending on the following factors:

- Responsiveness to requests for information
- Availability for meetings
- Timely review of comments on draft materials

Woodard & Curran prides itself on proactive schedule management, and if selected for the Study we will work closely with the JPA and its partners to ensure the project stays on track.

Las Virgenes - Triunfo Joint Powers Authority
Regional Brine Management Study

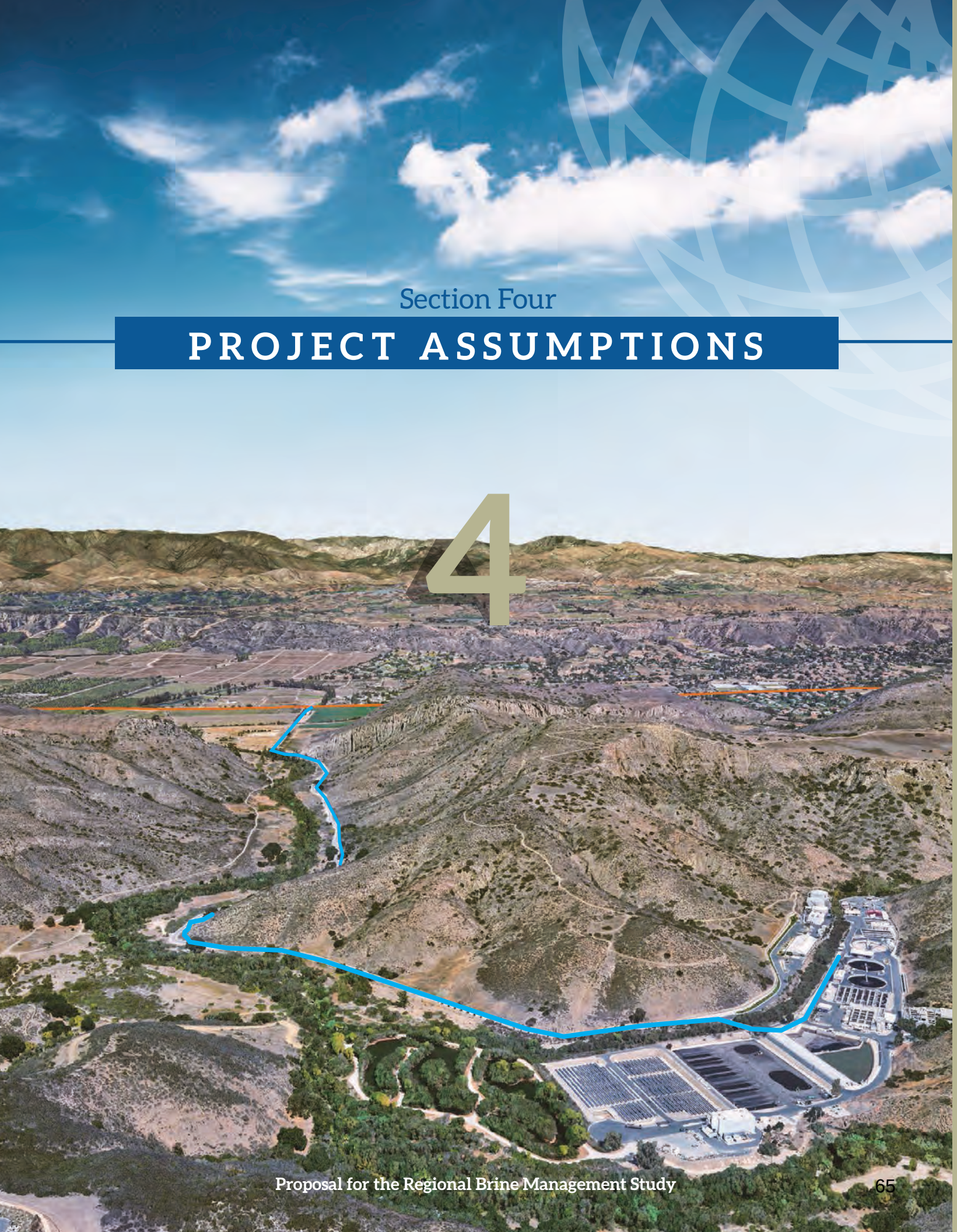
ID	Task Name	Duration	Start	Finish
1	***Contract Award***	***0 days***	***Mon 5/6/19***	***Mon 5/6/19***
2	***Kick-Off Meeting (Workshop 1)***	***0 days***	***Mon 6/3/19***	***Mon 6/3/19***
3	**Task 1 - Project Management**	**24 wks**	**Mon 6/3/19**	**Fri 11/15/19**
6	**Task 2 - Data Gathering and Evaluation**	**7 wks**	**Mon 6/3/19**	**Fri 7/19/19**
7	2.1 Characterize New Brine Discharges	3 wks	Mon 6/3/19	Fri 6/21/19
8	2.2 Determine Effect of Brine Discharges on HCTP Influent	2 wks	Mon 6/24/19	Fri 7/5/19
9	2.3 Analyze Salt Removal Requirements	2 wks	Mon 7/8/19	Fri 7/19/19
10	**Task 3 - Santa Rosa Basin Augmentation**	**7 wks**	**Mon 7/22/19**	**Fri 9/6/19**
11	3.1 Regulatory/Treatment Requirements	2 wks	Mon 7/22/19	Fri 8/2/19
12	3.2 Siting	2 wks	Mon 8/5/19	Fri 8/16/19
13	3.3 Facility Sizing	3 wks	Mon 8/19/19	Fri 9/6/19
14	**Task 4 - Desalter Sizing**	**4 wks**	**Mon 7/22/19**	**Fri 8/16/19**
15	4.1 JPA Brine Addition	2 wks	Mon 7/22/19	Fri 8/2/19
16	4.2 TO Brine Addition	2 wks	Mon 7/22/19	Fri 8/2/19
17	4.3 CWD WQ Improvement	2 wks	Mon 7/22/19	Fri 8/2/19
18	4.4 Evaluate SMP Discharge Requirements	2 wks	Mon 8/5/19	Fri 8/16/19
19	**Task 5 - Preliminary Engineering Concept**	**4 wks**	**Mon 8/19/19**	**Fri 9/13/19**
20	5.1 Desalter	4 wks	Mon 8/19/19	Fri 9/13/19
21	5.2 AWTP	4 wks	Mon 8/19/19	Fri 9/13/19
22	5.3 Brine Line from Desalter	4 wks	Mon 8/19/19	Fri 9/13/19
23	5.4 Brine Line from JPA to TO Sewer	4 wks	Mon 8/19/19	Fri 9/13/19
24	**Task 6 - Preliminary Cost Estimate**	**2 wks**	**Mon 9/16/19**	**Fri 9/27/19**
25	6.1 Capital	2 wks	Mon 9/16/19	Fri 9/27/19
26	6.2 O&M	2 wks	Mon 9/16/19	Fri 9/27/19
27	**Task 7 - Regional Brine Management Study Report**	**7 wks**	**Mon 9/30/19**	**Fri 11/15/19**
28	7.1 Draft Report	4 wks	Mon 9/30/19	Fri 10/25/19
29	Report Workshop (Workshop 2)	0 wks	Fri 10/25/19	Fri 10/25/19
30	7.2 Final Report	3 wks	Mon 10/28/19	Fri 11/15/19



Section Four

PROJECT ASSUMPTIONS

4



OPTIONAL TASKS

Assumptions:

The following assumptions have been incorporated into the proposed scope and fee.

- Monthly progress meetings will be via teleconference call or combined with the scoped meetings.
- Project duration is approximately six months.
- JPA will provide information in electronic format.
- System will be evaluated based on monthly-average flows and concentrations.
- Groundwater augmentation sites and configurations presented will be limited to three options.
- The AWPF will treat permeate from the HCTP Desalter and no additional reverse osmosis will be required.
- Alignment of JPA brine discharge line to City collection system will be as currently proposed in the Pure Water project's Basis of Design Report. Discharge point will be evaluated based on readily-available sewer flow and capacity information.
- Discharge configuration of JPA brine line will be based on City standard drawings.
- SMP discharge station will be based on CWMD standard drawings.

Optional Scope Items:

The following tasks are not included in the proposed scope and might provide value to some or all of the project participants. These services are described in Section 2 – Approach and are summarized in the table below.

Number	Optional Task	Reasoning	Anticipated Level of Effort[1]
O-1	**Evaluation of JPA Title 22 discharges to brine line**	The Las Virgenes-Triunfo JPA has periods of time during the year when they have excess Title 22 water. This water could be discharged to HCTP through the JPA brine line to avoid "shoulder" month discharges to Malibu Creek.	$5,000–$10,000
O-2	**Evaluation of effects of brine discharge on HCTP treatment processes**	Brine discharges to HCTP will affect influent concentrations. Some of these constituents may have an adverse effect on the physical or biological treatment processes at HCTP.	$15,000–$25,000
O-3	**Materials (corrosion) evaluation of T.O. sewer path to HCTP**	The addition of large quantities of brine into the City collection system will increase the corrosivity of the sewage in localized areas, potentially leading to increased maintenance and/or structural failure.	$5,000–$10,000
O-4	**Preparation of a funding/ financing plan for the project**	A funding/ financing plan would help maximize the potential for grant awards, lowering costs for participants. It would also help determine and justify the allocation of capital and O&M costs between the participating project partners.	$15,000–$25,000
O-5	**Additional workshops**	Additional workshops would help facilitate stakeholder participation in the project and allow additional time to deliberate technical, institutional, and other topics.	$3,000–$8,000 per workshop

1 These are initial estimates only and will ultimately depend on the needs of the JPA and project partners. W&C will provide a formalized scope and fee for any of these upon request.

Section Five

PROJECT EXPERIENCE AND REFERENCES

5

PROJECT EXPERIENCE AND REFERENCES

The following pages highlight our team's project experience that reflects services similar in scope to that those identified by Las Virgenes – Triunfo Joint Powers Authority for the Regional Brine Management Study project. The following projects contain a combination of experience with water quality accounting, preliminary design of treatment and infrastructure facilities, and facilitation of workshop-style settings.

Pure Water Silicon Valley Preliminary Engineering Services

Santa Clara Valley Water District (SCVWD)

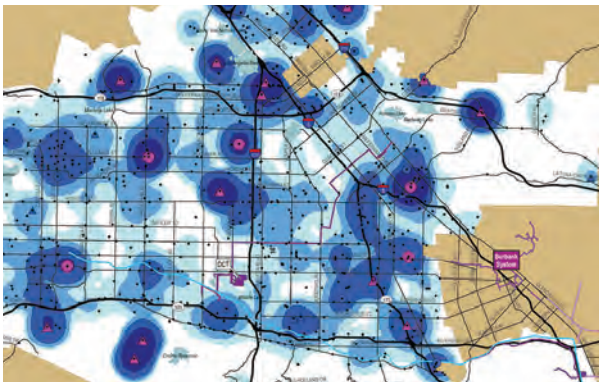
Woodard & Curran completed the South Bay Water Recycling (SBWR) Strategic and Master Planning Report (Master Plan) in December 2014 in a partnership with the City of San Jose. Santa Clara Valley Water District (SCVWD) is targeting construction of advanced treatment, conveyance and groundwater replenishment facilities to support up to 45,000 AFY of IPR by 2020 rather than the 2035 target date in the Master Plan. Woodard & Curran will provide technical assessments and preliminary engineering to further refine the potential components of the Pure Water Silicon Valley Program and a mechanism to assess those components relative to parameters such as operational flexibility, implementation timeline, and cost implications. The outcome of this project will be the Program Plan, which will support programmatic elements of implementation such as final design (or design/build), environmental documentation, financial planning, and public outreach. Program components include three advanced water purification facilities (5 mgd Ford Pond AWPF, 10 mgd Sunnyvale AWPF, and South County AWPF [capacity TBD]), 24 injection wells, new percolation ponds, and related conveyance infrastructure.

Relevance to Regional Brine Management Study:

- Demonstrates familiarity/understanding of reverse osmosis process and brine byproduct water quality
- Includes development of treatment technology options for producing advanced treated water
- Includes development of conveyance options for delivering purified water to customers and potable reuse destinations
- Includes facilitation of numerous client workshops

Client Reference: Debra Butler, Project Manager, 408.265.2600

Recycled Water Master Planning Follow-On Projects
Los Angeles Department of Water and Power (LADWP)



Woodard & Curran has been supporting LADWP with various follow-on tasks related to the completion of the 2012 Recycled Water Master Planning documents. These tasks have involved topics such as conversion of industrial facilities to recycled water in the Harbor Area, hydraulic modeling of the Valley System, investigation into potable reuse opportunities, and most recently, an analysis of maximum reuse opportunities for Hyperion Water Reclamation Plant (HWRP). As part of the HWRP effort, Woodard & Curran developed a water quality model to analyze the impact of increasing brine discharges on NPDES effluent limitations under multiple flow and treatment level scenarios. Findings included ammonia and metals as limiting brine disposal. Also, radioactivity is a potential concern but the California Ocean Plan has yet to set a limit. This modeling effort is very similar to the model we are proposing for the Regional Brine Management Study. The HWRP work also includes the development of project descriptions for several treatment and infrastructure options.

Woodard & Curran has completed similar brine modeling analysis for clients in Carpinteria and Goleta. The efforts in Carpinteria included conducting effluent dilution modeling under multiple effluent and brine flow conditions.

Relevance to Regional Brine Management Study:

- Includes water quality spreadsheet model for analysis of brine impacts to NPDES limits
- Demonstrates familiarity/understanding of RO process and brine byproduct water quality
- Includes development of treatment technology options for producing advanced treated water
- Includes development of conveyance options for delivering purified water to customers and potable reuse destinations

Client Reference: Yoshiko Tsunehara, Project Manager, 213.367.8783

Las Virgenes Advanced Water Treatment Plant (AWTP) Preliminary Siting Study
Las Virgenes – Triunfo JPA

Woodard & Curran worked with the Las Virgenes - Triunfo Joint Powers Authority (JPA) to identify and compare various sites for a new Advanced Water Treatment Plant to support the Pure Water Program. Woodard & Curran developed a methodology to compare/contrast all potential sites in the region (over 40,000 parcels) and rank them using various criteria; ultimately the number of candidate sites was narrowed to 26 and then down to two for subsequent CEQA analysis.

Woodard & Curran also developed a detailed layout for a 6.0 MGD advanced water treatment plant (AWTP). The AWTP footprint was approximately two acres in size and includes process buildings, tanks, parking and access roads. The Woodard & Curran team assessed each site looking at proximity to existing recycled water infrastructure, the salinity management brine line, and Las Virgenes Reservoir. Other criteria included property ownership, property cost, new infrastructure cost, alignments, adjacent neighborhoods, environmental and social impacts (residents and businesses) both in short and long term impacts. The top-ranked site from this analysis, located on Agoura Road, is being utilized in the Regional Brine Management Study.

Relevance to Regional Brine Management Study:

- Demonstrates familiarity/understanding of Pure Water Program and the Agoura Road AWTP site location; also familiarity with proposed brine line alignments to the SMP
- Includes development of AWTP layouts in a setting with limited available space
- Includes development of preliminary pipeline alignments for tertiary-treated recycled water, purified water, and brine

Client Reference: David Lippman, Director of Facilities and Operations, 818.251.2221

Woodland Hills Recycled Water Main Extension Preliminary Design

Las Virgenes Municipal Water District

Woodard & Curran completed an alignment evaluation, hydraulic evaluation, preliminary design report, CEQA MND and 30% design drawings for the Woodland Hills Water Recycling Project, a joint effort between LADWP and Las Virgenes Municipal Water District. The project included approximately 5 miles of 12-inch to 24-inch diameter pipeline to serve customers in Los Angeles recycled water from Tapia WRF. Challenges included heavy utility congestion, heavy traffic, several drainage crossings that required coordination with Los Angeles County Flood Control District, and installation within the Caltrans right-of-way and associated permitting coordination on State Route 27.

Relevance to Regional Brine Management Study:

- Demonstrates familiarity/understanding of LVMWD-Triunfo's recycled water system; also familiarity with LVMWD's pre-design standards, practices, and preferences
- Includes pre-design of a recycled water pipeline and supporting infrastructure from the existing system to the Woodland Hills Country Club and other nearby customers
- Demonstrates familiarity working with LVMWD staff

Client Reference: David Lippman, Director of Facilities and Operations, 818.251.2221

Recycled Water System Optimization Study
Burbank Water and Power

Burbank Water and Power (BWP) has expanded it recycled water system over the past ten years to serve all major landscape and HVAC cooling tower customers within the City of Burbank. Annual recycled water deliveries currently exceed 3,000 AFY, including 1100 AFY to the Magnolia Power Project. BWP recently initiated deliveries to LADWP for use within the City of Los Angeles which eventually are expected to approach 500 AFY.

The purpose of this study is to analyze BWP's recycled water system under existing and future demand conditions and recommend capital and/or operational improvements to maintain a high level of service. This study will help BWP achieve those goals while minimizing costs, meeting customer demands, and pressure requirements under daily and seasonal flow variations and reducing the possibility of system outages through system redundancy and resiliency. The study will analyze variability of water supply quality and quantity in comparison with existing and future demands while evaluating treatment and distribution operations system, including pumping capacity and system pressures.

Relevance to Regional Brine Management Study:

- Evaluation/optimization of multi-agency (BWP, BPW, LADWP, GWP, LA San) goals (flows and WQ)
- Analysis of monthly and daily variations in recycled water supply and demand
- Similar project team and municipal client

Client Reference: Michael Thompson, Water Engineering and Planning Manager, 818.238.3500

Recycled Water Strategic and Facilities Master Plan
Eastern Municipal Water District

Woodard & Curran developed a recycled water strategic and master plan to set the near- and long-term course for recycled water use. The plan evaluates options to achieve zero year-round discharge as flows from four wastewater treatment plants increase from 45,000 AFY to 80,000 over 30 years. The plan focuses on options to implement over 20,000 AFY of groundwater recharge via surface spreading, nearly 6,000 AFY of new large landscape irrigation, and maintaining almost 10,000 AFY of agricultural irrigation. The plan considers facility, policy, and phasing options to achieve the different end uses. The plan was successful in avoiding the need for new seasonal storage reservoirs, limiting the need for elevated storage, and removing $70 million of projects from the previous CIP.

Relevance to Regional Brine Management Study:

- Involved complex, regional recycled water system
- Involved optimization of recycled water facility components (conveyance, treatment, etc.) to achieve multiple regional goals
- Included consideration of a GWA project to augment local water supplies

Client Reference: Dave Ahles, P.E., Sr. Civil Engineer, (951) 928-3777, ext. 4458

Program Management for the Santa Ana River Conservation and Conjunctive Use Program (SARCCUP) Santa Ana Watershed Project Authority (SAWPA)

The member agencies of the Santa Ana Watershed Project Authority (SAWPA) have selected Woodard & Curran to provide Program Management services for its proposed Santa Ana River Conservation and Conjunctive Use Program – SARCCUP. SARCCUP is a cooperative effort between Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, San Bernardino Valley Municipal Water District, and Western Municipal Water District, which are the member agencies of SAWPA. The Program focuses on banking up to 150,000 AF of wet year water in multiple groundwater basins and providing the extraction facilities and linkages to allow up to 50,000 AFY of banked water to be utilized by all five agencies during dry water year conditions. The $160 million Program is being funded by a combination of $55 million in Proposition 84 grants and $105 million in local funding. The Program also includes in-stream conservation efforts (Arundo removal) and environmental habitat enhancements for the endangered Santa Ana Sucker.

Relevance to Regional Brine Management Study:

- Involves facilitation of workshops for five years regarding the implementation of existing/new facilities for a new water bank
- Demonstrates knowledge of state funding opportunities that could be applicable to one or more projects coming out of the Regional Brine Management Study

Client Reference: Mark Norton, Water Resources & Planning Manager, 951.354.4221

Design of Studio District Recycled Water Main Extension
Burbank Water and Power

As part of Burbank Water and Power's (BWP) Recycled Water Master Plan, the Recycled Water Main Extension Project was the first to incorporate the City's new aggressive recycled water use ordinance. The pipeline extension connected high profile television and movie studios as well as schools and parks.

Woodard & Curran's scope of work included a preliminary design report and preparation of plans, specifications and cost estimates for approximately 24,000 LF of 8-inch, 12-inch, and 16-inch diameter recycled water pipeline in the City of Burbank.

The design included a crossing of 134 Freeway and associated Caltrans permitting for open cut construction under a freeway overpass. Woodard & Curran assisted the client with obtaining a Caltrans encroachment permit for the Highway crossing. Construction cost for the project was $4.2 million.

Relevance to Regional Brine Management Study:

- Pipeline planning, design, and construction
- Multi-agency coordination (with LADWP)

Client Reference: Bill Mace, Assistant General Manager, Water Division, 818.238.3500

Section Six

PROJECT TEAM AND SUBCONSULTANTS

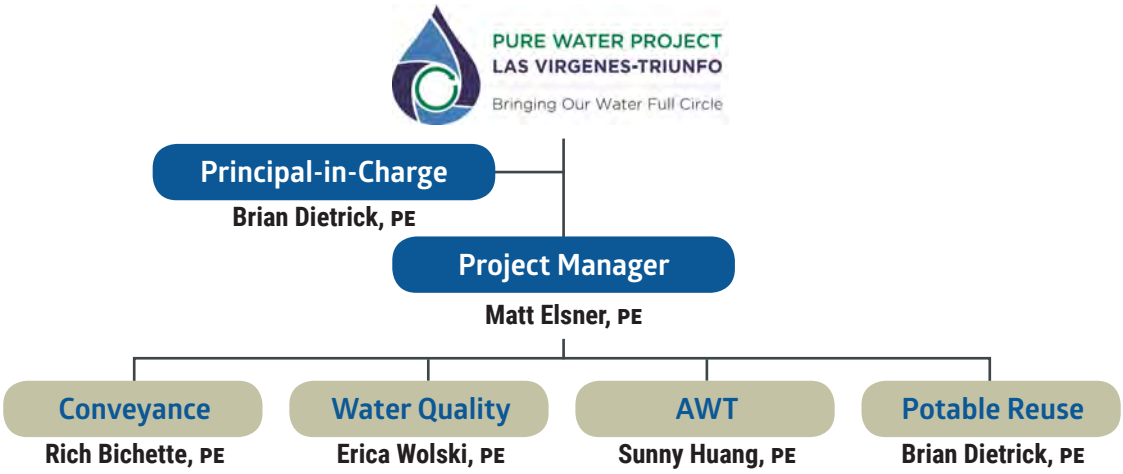
6

PROJECT TEAM

Woodard & Curran staff members have the expertise and flexibility to meet the changing needs of clients and of ever-increasing regulations. Because we have access to a diverse group of in-house engineers, scientists, and operations professionals, we can match the right people and skills to the job.

To that end, our company offers the Las Virgenes – Triunfo Joint Powers Authority (JPA) and project partners a team with the specific skillsets needed for the Regional Brine Management Study. To ensure successful and timely completion of all engineering tasks, we will work with the JPA and its partners to function as a committed team, with the big picture in mind, to answer the important technical questions, keep costs under control, and increase efficiency.

The members of our proposed project team will do what it takes to make this project a success, whether it's using new technology to optimize operations and reduce costs or leveraging funding sources to help the JPA achieve its brine management goals.



A Leadership Delivering Innovative Solutions

With an experienced management team, Las Virgenes – Triunfo Joint Powers Authority and its project partners can be confident that our team will provide the necessary guidance for the project. **Principal-in-Charge, Brian Dietrick**, will have ultimate responsibility for this project the JPA's overall satisfaction with Woodard & Curran's work. He will work in collaboration with **Project Manager, Matt Elsner**, who will be involved in the day-to-day activities regarding project development and communications with the JPA's staff, technical decisions, and ensuring quality control and overall performance. They will communicate regularly with the JPA and the project team to ensure continuity of the project.

Brief biographies of our team are presented on the following pages, and resumes are included in the Appendix. We will comply with the JPA's requirement to seek approval for any staff substitutions that may be required due to extenuating circumstances. We will not have any subconsultants on this proposal.

Matt Elsner, PE
Project Manager

Education: Masters, Civil Engineering, Drexel University;
Masters, Environmental Engineering, Drexel University;
Bachelors, Civil Engineering, Drexel University

Certifications/Licenses: Professional Engineer - CA, 73432

Matt has 25 years of experience in the design of water production, treatment, and distribution systems. Prior to joining Woodard & Curran, he was a principal civil engineer for Burbank Water and Power (BWP) where he was responsible for the operation and expansion of the recycled water system, water quality, and conservation initiatives. This experience includes extensive knowledge of Burbank's Water Reclamation Plant, the main source of BWP's recycled water. Prior to BWP, he worked for Tucson Water Department designing potable and recycled water main projects and serving as their corrosion engineer. During his career, Matt has overseen the planning, design, and construction of over 150,000 feet of potable and recycled water mains ranging in size from 8" to 36" in diameter. He recently managed final design for extension of two recycled water mains for the Santa Clarita Valley Water Agency that included hydraulic analysis and condition assessments.

Relevant Experience:

Burbank Water and Power, CA. Principal Civil Engineer. Matt was responsible for recycled water, water quality, and water conservation at a publicly-owned utility. Effectively supervised professional staff including engineers and water quality personnel. Presented reports to the Burbank City Council and the utility's governing board relating to water quality, recycled water, and contract awards. Represented the utility at various meetings related to water supply, water quality, conservation, and recycled water. Consulted with system operations and construction/maintenance personnel to optimize water system operations and ensure compliance with regulatory requirements. Lead the CIP and O&M budget process for the recycled water cost center including the evaluation and update of water rates and fees. Managed the accelerated design and construction of a $20 million expansion of Burbank's recycled water system. Prepared and negotiated MOUs and contracts with neighboring utilities and water suppliers. Evaluated water quality data for compliance with state and federal regulations.

City of Paso Robles, CA. Paso Robles Recycled Water Distribution System. Senior Technical Manager responsible for data collection, utility research, alignment evaluation, construction cost estimating, and storage evaluation. This project involves preparing preliminary design documents for the City's Phase 1 Recycled Water System (8 miles of up to 24" pipe and a Salinas River crossing) along with a recharge investigation.

Burbank Water and Power, Burbank, CA. Potable Reuse Feasibility Study. Primary technical resource for a Feasibility Study that developed a conceptual potable reuse project that uses available effluent from the Burbank Water Reclamation Plant. The study analyzed siting options for an advanced treatment facility, identified potential receptors for various types of purified recycled water, and specified infrastructure needed to deliver the purified water. Both indirect potable reuse and direct potable reuse alternatives were considered. Cost estimates were included to support the recommendation of a preferred alternative, and comparisons to projected MWD rates were developed to demonstrate the long-term financial feasibility of a potable reuse project. The project was partially funded by a planning grant from the Water Recycling Funding Program administered by the State Water Resources Control Board, and the report was formatted to meet the requirements of that program.

Burbank Water and Power, Burbank, CA. Recycled Water System Optimization Study. Senior Technical Manager Provided technical support with the newest, up-to-date water conservation initiatives. The purpose of this study is to analyze BWP's recycled water system under existing and future demand conditions and recommend capital and/or operational improvements to maintain a high level of service. This study will help BWP achieve those goals while minimizing costs, meeting customer demands, and pressure requirements under daily and seasonal flow variations and reducing the possibility of system outages through system redundancy and resiliency.

Brian Dietrick, PE
Principal-In-Charge

Education: Masters, Civil/Environmental Engineering, Loyola Marymount University; Bachelors, Civil/Environmental Engineering, Duke University

Certifications/Licenses: Professional Engineer, CA, - 54920

Brian has 27 years of experience and specializes in facilities planning and design for recycled water, water resources, and wastewater projects, including mass balance and flow modeling. He has experience in technical planning for collection systems, distribution systems, groundwater recharge facilities, integrated regional water management plans, urban water management plans, and environmental impact and regulatory compliance reports. Brian's design experience includes large-diameter trunk sewer relief and replacement projects, sewer force mains, and sewer rehabilitation. He is also experienced in funding, cost estimating, industrial waste discharge programs, and stakeholder facilitation.

Relevant Experience:

Las Virgenes Municipal Water District, CA. Recycled Water Seasonal Storage Project Feasibility Study. Project Manager for the Feasibility Study that analyzed a recycled water seasonal storage project, including expansions of the existing conveyance system and customer base outside the Las Virgenes service area. The project included writing a successful application for a Water Recycling Planning Grant from the State Water Resources Control Board. The project also included a conceptual groundwater recharge project intended to maximize reuse from the District's water reclamation plant.

Las Virgenes Municipal Water District, CA. Preliminary AWTP Siting Study. As Project Manager, led a team, including Associated Right of Way Services as a subconsultant, that conducted an extensive siting study for a proposed advanced water treatment plant (AWTP). The AWTP is envisioned for a future potable reuse project that will provide purified water to offset imported supplies at the District's local surface water reservoir. The study began with over 10,000 potential parcels; and using various screening criteria and a detailed comparative analysis, we narrowed down the number to nine preferred sites. The remaining preferred sites will be used for subsequent public outreach efforts and environmental documents.

Burbank Water and Power, Burbank, CA. Potable Reuse Feasibility Study. Project Manager for a Feasibility Study that developed a conceptual potable reuse project that uses available effluent from the Burbank Water Reclamation Plant. The study analyzed siting options for an advanced treatment facility, identified potential receptors for various types of purified recycled water, and specified infrastructure needed to deliver the purified water. Both indirect potable reuse and direct potable reuse alternatives were considered.

City of Los Angeles, CA - Recycled Water Master Plan, Long Term Concept Report. **Deputy Project Manager, for three years, managing a consultant team of 12, including three subconsultant partners.** Prepared scope, budget, and earned value analysis reports. Wrote and/or edited numerous technical memoranda on wastewater treatment, regional recycled water systems, regional groundwater assessment, Los Angeles River flow assessment, direct potable reuse, treatment plant opportunities, preliminary project screening, advanced treatment temperature analysis, and Central and West Coast Basin Judgment Amendments. This project, and subsequent follow-on work, included a mass balance and flow spreadsheet model that was used to calculate the impacts of increasing brine discharges on NPDES permit limits at the Hyperion Water Reclamation Plant.

Santa Ana Watershed Project Authority, CA. **Santa Ana River Conservation and Conjunctive Use Program.** Co-project manager for the SARCCUP program management. SARCCUP is a cooperative effort between Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, San Bernardino Valley Municipal Water District, and Western Municipal Water District, which are the member agencies of SAWPA. The Program focuses on banking 150,000 AF to 180,000 AF of wet year water in multiple groundwater basins and providing the extraction facilities and linkages to allow up to 60,000 AFY of banked water to be utilized by all five agencies during dry water year conditions. The $160 million Program is being funded by a combination of $55 million in Proposition 84 grants and $105 million in local funding. The Program also includes in-stream conservation efforts (Arundo removal), water use efficiency programs, and environmental habitat enhancements for the endangered Santa Ana Sucker.

Rich Bichette, PE
Conveyance

Education: Bachelors, Civil Engineering, Purdue University

Certifications/Licenses: Professional Engineer, CA, - 70228

Rich has 20 years of experience and is a senior civil engineer and project manager with experience in planning (facility planning, master planning), design and construction management of potable and recycled water distribution, stormwater collection, wastewater collection and treatment, site development, and pumping systems design. Rich manages teams of staff and subconsultants to ensure a high-quality, cost effective project delivered on schedule.

Relevant Experience:

Las Virgenes Municipal Water District, CA. **Woodland Hills Water Reclamation Project Preliminary Design and CEQA.** Project Manager for the preliminary design and CEQA (MND) for a project to deliver recycled water from the Las Virgenes Municipal Water District Tapia Water Reclamation Plant to customers within the City of Los Angeles. The project consists of approximately 5 miles of 24-inch diameter pipeline.

Sweetwater Authority, CA. **Membrane Bioreactor (MBR) Feasibility Study.** Technical Reviewer of a report for the Sweetwater Authority, in conjunction with the City of Chula Vista and Otay Water District, to evaluate the feasibility of constructing an MBR Recycled Water Satellite Treatment Plant within or near the City of Chula Vista. The report identified wastewater flows, recycled water demand, required infrastructure for the MBR project, permitting requirements and developed preliminary cost estimates for the project to evaluate feasibility.

Erica Wolski, PE
Water Quality

- **Education:** Bachelors, Civil/Environmental Engineering, California State Polytechnic University-Pomona
- **Certifications/Licenses:** Professional Engineer - CA, 67594

Erica has 17 years of experience specializing in drinking water and recycled water regulatory compliance. In addition to her consulting engineering experience, she has worked for the State Water Resources Control Board, Division of Drinking Water (formerly the California Department of Health Services and California Department of Public Health) in the field operations branch for the Sonoma, Santa Ana, San Bernardino and San Diego Districts and in the Recycled Water Unit.

Relevant Experience:

Yucaipa Valley Water District, CA. Recycled Water Expansion Assistance. This project includes assisting the District with implementing its dual-plumbed recycled water project for several upcoming residential developments. As Project Engineer, assisted with the preparation of Rules and Regulations for Recycled Water Use, Title 22 reports for the use of recycled water at these developments, and coordination with DPH and other miscellaneous tasks.

Yucaipa Valley Water District, CA. SRF and Other Funding Assistance. Project Engineer assisting with the loan application process for several District projects including the District's wastewater treatment plant upgrade and recycled water system expansion, proposed brine line and new sewer construction projects.

Sunny Huang, PE
Advanced Water Treatment

- **Education:** Bachelors, Chemical Engineering, Cornell University
- **Certifications/Licenses:** Professional Chemical Engineer - CA, CH 6102
  40-hour HAZWOPER Training (ETAC Cert. No. 3093)

Sunny has 22 years of experience and is a process engineer for water and wastewater treatment projects for both municipal and industrial clients. His design experience ranges from planning/feasibility study and bench/pilot test level through full-scale design. He has developed project documents, including technical reports, P&ID's, construction drawings, project specifications.

Relevant Experience:

Las Virgenes Municipal Water District, CA. Water Demand Model Development. As Project Engineer, developed conceptual framework and oversaw development of demand models for water and wastewater to project revenues and estimate changes in water use for different tier pricing scenarios. Proposed revision of water and wastewater fee structures using tiered rate pricing.

Azusa Light and Water (ALW), CA. Microfiltration Pilot Test. Project Engineer for three-month pilot evaluation of microfiltration (MF) membrane technologies at ALW's Canyon Water Filtration Plant. Findings served as design basis for a 12-mgd microfiltration facility to replace their existing deep bed sand filtration system.

Section Seven

QUALITY CONTROL PROCESS

7

QUALITY CONTROL PROCESS

Quality Assurance/Quality Control

Woodard & Curran employs a "quality-first" culture that emphasizes the importance of quality assurance and quality control (QA/QC) from the start of a project through to the final deliverable.

Step 1 – STAR Workshop

Senior Technical Approach Review (STAR) Workshops are held at the outset of our projects to identify any potential project issues and identify and implement measures to avoid those issues. The intent of STAR Workshops is to bring together the project team and other internal and external senior technical experts beyond the project team to review the project scope, schedule, and technical challenges. For this project, Ali Taghavi (Senior Hydrogeologist), Scott Goldman (advanced treatment siting at an operating WWTP), and Tom Richardson (potable reuse strategies and regulatory expert) will join the project team in a STAR workshop soon after project kickoff to efficiently leverage their technical expertise and insights. Mr. Taghavi and Mr. Goldman will be involved in the project only for the purposes of the STAR workshop.

Step 2 – Project Work Plan

The Project Work Plan will be developed at the start of the project, identifying team roles and responsibilities, QA/QC procedures and responsibilities, applicable design standards, and the overall team communications strategy. This document, memorializing those facets of the project, is provided to the District management team.

Step 3 – Robust Communication

Frequent communication between our Project Manager, Matt Elsner, and the District management team, including the kick-off meeting (Workshop 1), bi-weekly conference calls and monthly progress meetings will be used as the primary tool to identify and resolve issues and provide clear direction for next steps. This communication will make sure that our team's activities stay aligned with the District's management team, a critical component of delivering a quality product. A second workshop will be held around the time when the Draft Preliminnary Design Report is complete.

Step 4 – QC Every Work Product, Every Time

Woodard & Curran requires technical review of all work products before they are submitted. Upon receiving notice to proceed, Project Managers are required establish a QA/QC Plan with our integrated business solutions software, Deltek, that identifies all scoped deliverables, as well as the QC Reviewer, and the dates on which QC will take place for each deliverable. This ensures that the QA/QC process is incorporated into the project schedule at the outset. Our policy requires a "cold-eye" review from an independent, (non-team) technical expert, providing a detailed and impartial assessment of the technical accuracy and overall quality of document, as well as confirming that the approach employed in executing the project is appropriate and satisfies the scope of work.

Step 5 – QC Coordinators

"Trust but Verify" - Woodard & Curran Project Managers are responsible for the successful completion of their projects and for adhering to the requirements of the Project and QA/QC Plans. Woodard & Curran QC Coordinators routinely meet with Project Managers through informal check-ins and more formal audits to confirm that budgets and schedules are being managed proactively, technical concerns are being addressed, and that QC reviews are being completed and documented.

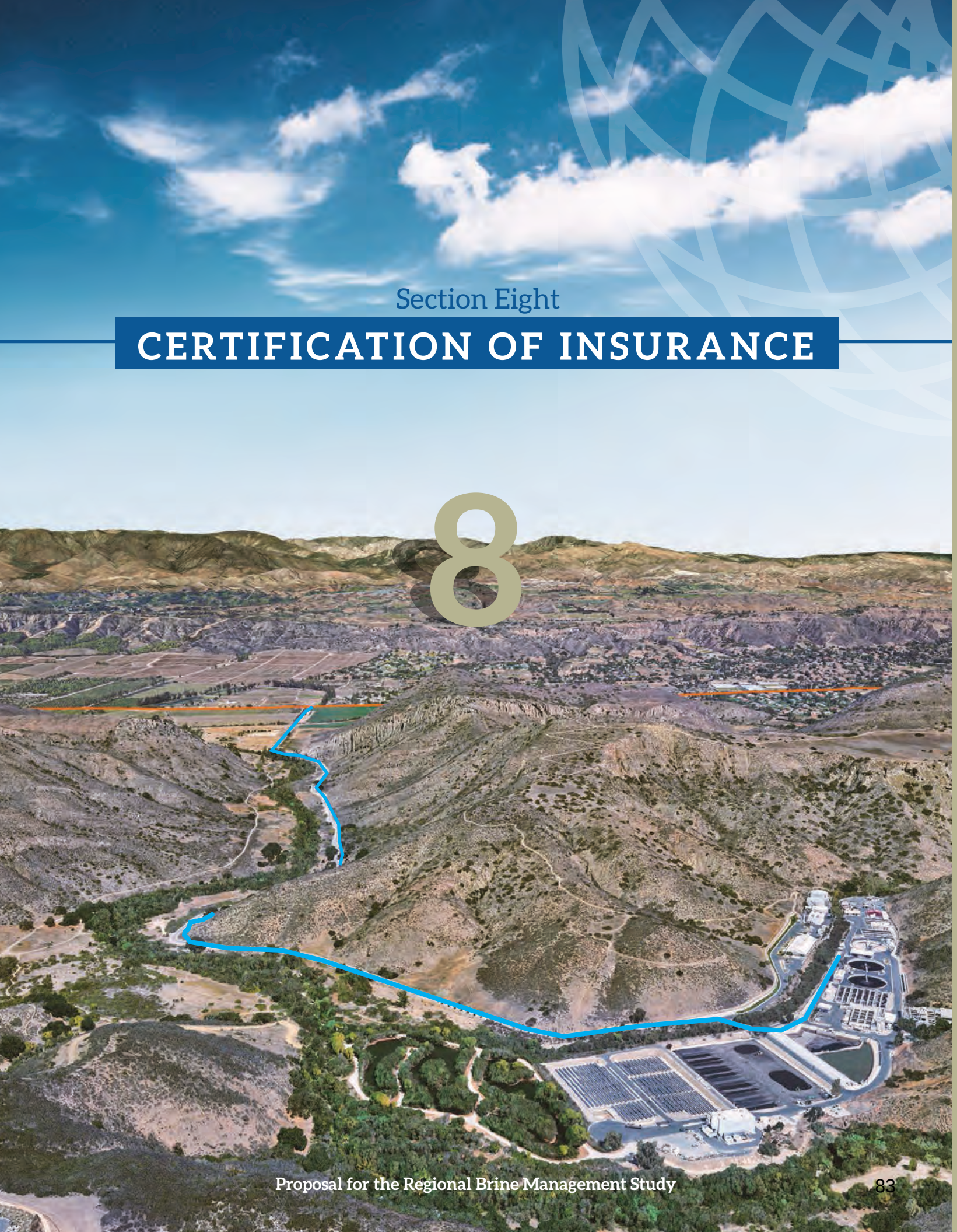
Step 6 – Principal-in-Charge "Client Check-Ins"

Our PIC, Brian Dietrick, will schedule periodic check-ins to monitor LVMWD's assessment of our performance as this project unfolds. These check-ins will be conducted every few months, and are separate (and not billable) from regularly scheduled project meetings. This external interaction complements the internal activities of our QC Coordinators.

Section Eight

CERTIFICATION OF INSURANCE

8



WOOD&CU-01 CMURPHY

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 2/27/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Ames & Gough
859 Willard Street
Suite 320
Quincy, MA 02169

CONTACT NAME:
PHONE (A/C, No, Ext): (617) 328-6555 FAX (A/C, No): (617) 328-6888
E-MAIL ADDRESS: boston@amesgough.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Continental Casualty Company (CNA) A, XV	20443
INSURER B : Continental Insurance Company A(XV)	35289
INSURER C : American Casualty Co of Reading, PA A(XV)	20427
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Woodard & Curran, Inc.
41 Hutchins Drive
Portland, ME 04102

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			6014561812	2/23/2019	2/23/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 500,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY / SCHEDULED AUTOS HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY			6014561843	2/23/2019	2/23/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $ $
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 0			6014561826	2/23/2019	2/23/2020	EACH OCCURRENCE AGGREGATE	$ 1,000,000 $ 1,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N N If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		6076061262	2/23/2019	2/23/2020	X PER STATUTE / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Professional Liab			114135520	2/23/2019	2/23/2020	Per Claim/Aggregate	1,000,000
A	Pollution Liability			114135520	2/23/2019	2/23/2020	Per Claim/Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
If AI box is checked, GL Endorsement Form# CNA75079XX , Auto Endt Form# CNA71527XX to the extent provided therein applies and all coverages are in accordance with the policy terms and conditions.

Proof of Insurance

CERTIFICATE HOLDER

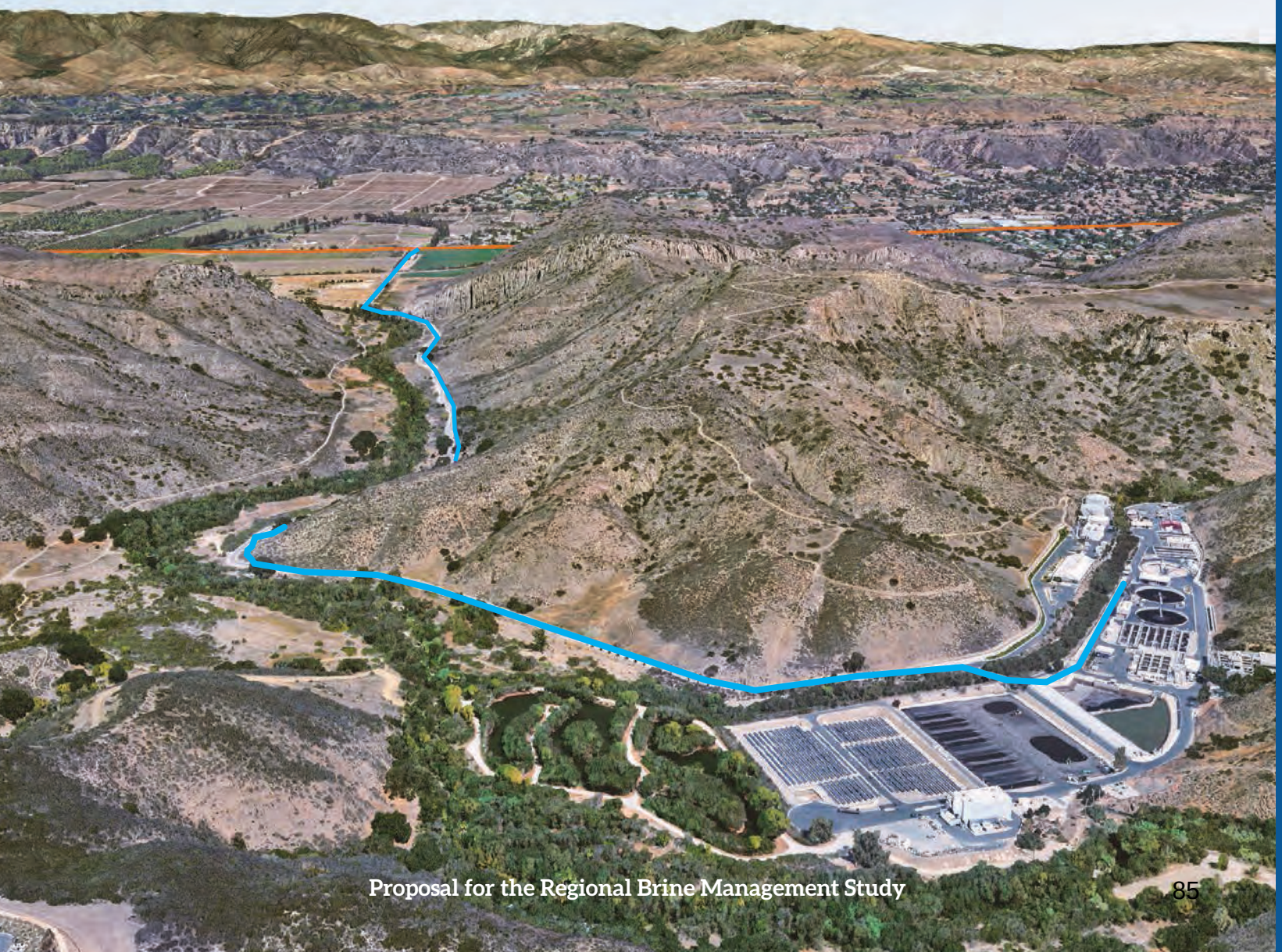
Woodard & Curran, Inc.

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Michael Keeley

APPENDIX



BRIAN DIETRICK, PE
PRINCIPAL-IN-CHARGE/POTABLE REUSE

Professional Profile

Brian has 25 years of experience and specializes in facilities planning and design for recycled water, water resources, and wastewater projects. He has experience in technical planning for collection systems, distribution systems, groundwater recharge facilities, integrated regional water management plans, urban water management plans, and environmental impact and regulatory compliance reports. Brian's design experience includes large-diameter trunk sewer relief and replacement projects, sewer force mains, and sewer rehabilitation. He is also experienced in funding, cost estimating, industrial waste discharge, and public outreach. In addition to his engineering planning and design experience, Brian has served as a faculty lecturer at Loyola Marymount University for graduate level solid waste management courses.

Related Experience

Las Virgenes Municipal Water District, CA - Recycled Water Seasonal Storage Project Feasibility Study. Project Manager for the Feasibility Study that analyzes a recycled water seasonal storage project, including expansions of the existing conveyance system and customer base outside the Las Virgenes service area. The project included writing a successful application for a Water Recycling Planning Grant from the State Water Resources Control Board The project also included a conceptual groundwater recharge project intended to maximize reuse from the District's water reclamation plant.

Las Virgenes Municipal Water District, CA – Preliminary AWTP Siting Study. As Project Manager, led a team, including Associated Right of Way Services as a subconsultant, that conducted an extensive siting study for a proposed advanced water treatment plant (AWTP). The AWTP is envisioned for a future potable reuse project that will provide purified water to offset imported supplies at the District's local surface water reservoir. The study began with over 10,000 potential parcels; and using various screening criteria and a detailed comparative analysis, we narrowed down the number to nine preferred sites. The remaining preferred sites will be used for subsequent public outreach efforts and environmental documents.

SAWPA, CA - Santa Ana River Conservation and Conjunctive Use Program (SARCCUP). Co-project manager for the SARCCUP program management. SARCCUP is a cooperative effort between Eastern Municipal Water District, Inland Empire Utilities Agency, Orange County Water District, San Bernardino Valley Municipal Water District, and Western Municipal Water District, which are the member agencies of SAWPA. The Program focuses on banking 150,000 AF to 180,000 AF of wet year water in multiple groundwater basins and providing the extraction facilities and linkages to allow up to 60,000 AFY of banked water to be utilized by all five agencies during dry water year conditions. The $160 million Program is being funded by a combination of $55 million in Proposition 84 grants and $105 million in local funding. The Program also includes

Education

- Masters, Civil/Environmental Engineering, Loyola Marymount University
- Bachelors, Civil/Environmental Engineering, Duke University

Registration

- Professional Engineer - CA, 54920

Affiliations

- Water Environment Federation
- California Water Environment Association
- American Society of Civil Engineers
- CA WateReuse, Los Angeles Chapter

in-stream conservation efforts (Arundo removal), water use efficiency programs, and environmental habitat enhancements for the endangered Santa Ana Sucker.

Eastern Municipal Water District, CA - Recycled Water Strategic and Master Plan. Project manager for the recycled water strategic plan portion, to set the near- and long-term course for recycled water use. The plan evaluates options to achieve zero year-round discharge as flows from four wastewater treatment plants increase from 45,000 AFY to 80,000 over 30 years. The plan focuses on options to implement over 20,000 AFY of groundwater recharge via surface spreading, 10,000 AFY of large landscape irrigation, and 10,000 AFY of agricultural irrigation. Our team has evaluated facility, policy, and phasing options to achieve the different end uses. The plan was successful in avoiding the need for new seasonal storage, limiting the need for elevated storage, and removing $70 million of projects from the previous CIP.

City of Los Angeles, CA - Recycled Water Master Plan, Long Term Concept Report. Deputy project manager, for three years, managing a consultant team of 12, including three subconsultant partners. Prepared scope, budget, and earned value analysis reports. Wrote and/or edited numerous technical memoranda on wastewater treatment, regional recycled water systems, regional groundwater assessment, Los Angeles River flow assessment, direct potable reuse, treatment plant opportunities, preliminary project screening, advanced treatment temperature analysis, and Central and West Coast Basin Judgment Amendments. Concept-level cost estimates and permitting/institutional issues were characterized for each of the long-term concept projects, most of which involve advanced wastewater treatment and large-scale groundwater recharge and recovery.

City of Los Angeles, CA - Recycled Water Master Plan, Non-Potable Reuse Master Plan. Technical writer and primary author for technical memoranda on harbor area existing and Tier 1 recycled water facilities and recycled water customer development.

City of Los Angeles, CA - Recycled Water Master Plan, Satellite Feasibility Concept Report. Technical advisor/reviewer for technical memoranda on wastewater collection and storm water systems.

City of Oceanside, CA - Recycled Water Master Plan. Technical advisor during alternatives development and analysis and was a primary author on several sections of the facilities plan. Woodard & Curran developed a recycled water master plan for the City of Oceanside that included a market assessment, alternatives development and analysis, recommended project, implementation plan, and facilities plan.

Eastern Municipal Water District, CA - Local Groundwater Banking Feasibility Study. Technical support for feasibility study to identify water banking opportunities in the Upper Pressure and/or Canyon Subbasins and determine the facilities needed for conveyance, recharge, and extraction of banked water. The work included development of a suite of recharge and extraction scenarios that can then be pieced together to form banking alternatives.

City of San Jose, CA - South Bay Water Recycling Master Plan. Technical advisor who led the effort to define the governance structure currently in place for SBWR, describe other structures operating in Southern California, and recommend potential changes to the SBWR structure to accommodate changes to the infrastructure associated with expansion of the recycled water system. Woodard & Curran prepared strategic and master planning documents to determine the future direction, policies, and priorities of the South Bay Water Recycling (SBWR) system, which may result in system improvements and expansions over a 20-year planning horizon. The scope of the project goes beyond a typical master plan and begins with a strategic evaluation of how South Bay Water Recycling can transition from an organization focused on discharge reduction through non-potable reuse to an organization that promotes sustainable water supply through expanded non-potable, indirect and (eventual) direct potable reuse. The project evaluated alternatives to pay for these efforts and determined how to apportion the costs between wastewater and water supply stakeholders.

Greater Los Angeles County, CA - Proposition 84, Round 3 Application (Drought Relief). Project manager who led a team of staff in preparing work plans, budgets, schedules, lists of performance measures, technical justifications, and benefit-cost analyses, among other eligibility documents and supporting information. Woodard & Curran assisted the Greater Los Angeles County IRWM project proponents in the preparation of Proposition 84 drought relief implementation grant applications. In total, the grant application included fourteen projects for a total grant award of over $27 million. The projects in the grant package included a water reclamation plant process upgrade, recycled water pipelines, conservation programs, a desalter plant expansion, groundwater well improvements, pipeline interconnections, recycled water site retrofits, and a recycled water replenishment project.

MATTHEW ELSNER, PE
PROJECT MANAGER

Professional Profile

Matt has 25 years of experience with recycled water, water quality, and water conservation projects. Prior to joining Woodard & Curran, Matt was a principal civil engineer with a major public utility in Southern California and a civil engineer with a public water utility in southern Arizona. He has served as editor of the WateReuse Association Los Angeles section newsletter since its inception in 2010.

Related Experience

Castaic Lake Water Agency, CA - South End (Phase 2C) Recycled Water Main Extension. Senior Technical Manager responsible for the data collection, utility research, hydraulic evaluation, corrosion evaluation, final design, and construction cost estimating. This project involves preparing final design and construction documents for the South End Recycled Water Main (6 miles of up to 24" pipe). Project elements include a Caltrans crossing of the I-5 at Valencia Boulevard, a LA County Flood Control District crossing of the Santa Clara River at Orchard Village Road, hydraulic evaluation of an existing booster station, and design of a new booster station for a closed zone.

Castaic Lake Water Agency, CA - West Ranch (Phase 2D) Recycled Water Main Extension. Senior Technical Manager for the final design and construction cost estimating. This project involves preparing final design and construction documents for the West Ranch Recycled Water Main (1 mile of 12" pipe). Project elements include a new booster station for a closed zone and construction adjacent to several schools.

City of Paso Robles, CA - Paso Robles Recycled Water Distribution System. Senior Technical Manager responsible for data collection, utility research, alignment evaluation, construction cost estimating, and storage evaluation. This project involves preparing preliminary design documents for the City's Phase 1 Recycled Water System (8 miles of up to 24" pipe and a Salinas River crossing) along with a recharge investigation.

Rowland Water District, CA - Phase 3 Construction Support for Fullerton Road Grade Separation. Senior Technical Manager developing design drawings, redesigning pipe alignments to avoid obstacles, and preparing a State of California Water Resources Control Board Division of Drinking Water waiver request for recycled water pipelines which will not meet minimum separation requirements. Woodard & Curran is providing design and construction support services for Phase 3 of the Fullerton Grade Separation Project: Relocation of potable water and recycled water facilities.

Goleta Water District, CA - Goleta Potable Reuse Facilities Plan. Senior Technical Manager providing potable reuse pathways screening tasks including reports, cost estimates, and technical reviews. Woodard & Curran is working with Goleta Water District and Goleta Sanitary District to improve local water resources reliability by developing an underutilized local supply through advanced water purification and potable reuse. Woodard & Curran developed a comprehensive plan to maximize beneficial

Education

- Masters, Civil Engineering, Drexel University
- Masters, Environmental Engineering, Drexel University
- Bachelors, Civil Engineering, Drexel University

Registration

- Professional Engineer - AZ, 57683
- Professional Engineer - CA, 73432

Affiliations

- Water Reuse Association (Los Angeles Section Newsletter Editor since 2010)
- American Water Works Association

use of recycled water as a potable water supply supplement to meet future demands and reduced surface water supply reliability.

Castaic Lake Water Agency, CA - Erosion Evaluation and Repair Alternative Analysis. Project Manager of CLWA's Rio Vista Water Treatment Plant Upper Mesa Erosion Evaluation and Stabilization Alternatives Analysis project. The project included estimating stormwater runoff volumes and rates, identifying where repairs or improvements are justified, and providing solid alternatives and engineer's estimates for the cost of those improvements.

Arvin Edison Water Storage District, CA - Recycled Water Feasibility Study. As Senior Technical Manager, reviewed the recycled water supply; evaluation of water quality impacts and funding sources; assessment of water quality impacts; and preparation of planning grant application The study included review and evaluation of the Arvin Edison Water Storage District's recycled water supplies; development of design criteria for required treatment, pump stations, storage facilities, land/easements, and any other key infrastructure for a project; and development of an implementation plan.

PROJECT PRIOR TO WOODARD & CURRAN

Burbank Water and Power, CA. Principal Civil Engineer responsible for recycled water, water quality, and water conservation at a publicly-owned utility. Effectively supervised professional staff including engineers and water quality personnel. Presented reports to the Burbank City Council and the utility's governing board relating to water quality, recycled water, and contract awards. Represented the utility at various meetings related to water supply, water quality, conservation, and recycled water. Consulted with system operations and construction/maintenance personnel to optimize water system operations and ensure compliance with regulatory requirements. Lead the CIP and O&M budget process for the recycled water cost center including the evaluation and update of water rates and fees. Managed the accelerated design and construction of a $20 million expansion of Burbank's recycled water system. Prepared and negotiated MOUs and contracts with neighboring utilities and water suppliers. Evaluated water quality data for compliance with state and federal regulations. Provided technical support with the newest, up-to-date water conservation initiatives. Oversaw major water planning studies including the 2007 and 2010 Recycled Water Master Plans and the 2010 and 2015 Urban Water Management Plans.

City of Tucson, CA - Environmental Services Department. Project Manager responsible for the Planned Area Development of the Los Reales Landfill including the construction of new entrance facilities, residential waste transfer station, household hazardous waste receiving facility, administration building, learning center, and public roadway relocation. Led the selection process for on-call design consultants for various projects at the landfill. Designed various projects such as drainage structures, litter management facilities, landfill gas system upgrades, and site security modifications. Managed environmental remediation projects related to leaking underground storage tank clean-ups, municipal landfills site closures, and groundwater contamination. Oversaw and evaluated the operation of site remediation systems including compliance with air quality, groundwater quality, and NPDES permits. Ensured project compliance with the City's CIP process including project charter development, budget preparation, expenditure tracking, and future cost predictions.

Tucson Water Department, AZ. Civil Engineer responsible for the design and management of projects relating to potable and reclaimed water transmission and distribution facilities. Managed consultants and in-house staff during the planning and design of water transmission and distribution projects. Oversaw specialty consultants during the design phase including surveying, surface water hydrology, archaeological, endangered species, and corrosion evaluation. Served as project engineer during the construction of water transmission projects including the monitoring of construction progress, resolution of constructability issues, and the processing of pay estimates and change orders. Participated and led review committees for the selection of engineering design consultants for detailed pipeline designs and route studies. Served as the Department's corrosion engineer, providing review of new development, system modifications, and CIP projects for corrosion-related concerns.

Pima County Wastewater Management Department, Tucson, AZ. Manager responsible for overseeing the operation of the Technical Services Section of the Treatment Division, serving as the technical consultant to the Deputy Director of the Department on all technical issues relating to the operation and maintenance of the Department's eleven wastewater treatment plants. Managed the operation of the Department's industrial wastewater pretreatment program and NPDES permit compliance sampling for the Department's two major facilities. Supervised the operation of the Department's analytical laboratory. Led the preparation, negotiation, and implementation of NPDES permits for the Department's facilities. Represented the Department in the rewriting of the State's reclaimed water regulations.

RICHARD BICHETTE, PE
CONVEYANCE

Professional Profile

Rich has 20 years of experience and is a senior civil engineer and project manager with experience in planning (facility planning, master planning), design and construction management of potable and recycled water distribution, stormwater collection, wastewater collection and treatment, site development, and pumping systems design. Rich manages teams of staff and subconsultants to ensure a high-quality, cost effective project delivered on schedule.

Related Experience

Las Virgenes Municipal Water District, CA - Woodland Hills Water Reclamation Project Preliminary Design and CEQA. Project Manager for the preliminary design and CEQA (MND) for a project to deliver recycled water from the Las Virgenes Municipal Water District Tapia Water Reclamation Plant to customers within the City of Los Angeles. The project consists of approximately 5 miles of 24-inch diameter pipeline. Woodard & Curran's scope of work included an alignment evaluation, hydraulic analysis, preliminary design drawings and report, and preparation of a CEQA MND.

Sweetwater Authority, CA - Membrane Bioreactor (MBR) Feasibility Study. Technical Reviewer of a report for the Sweetwater Authority, in conjunction with the City of Chula Vista and Otay Water District, to evaluate the feasibility of constructing a Membrane Bioreactor (MBR) Recycled Water Satellite Treatment Plant within or near the City of Chula Vista. The report identified wastewater flows, recycled water demand, required infrastructure for the MBR project, permitting requirements and developed preliminary cost estimates for the project to evaluate feasibility.

City of Escondido, CA - Recycled Water Easterly Main Extension. Project Manager responsible for the development of a Preliminary Design Report and is currently managing final design, CEQA, permitting and bid assistance for a recycled water system extension to deliver approximately 6,300 acre-feet per year of recycled water to agriculture and landscape irrigation customers in eastern Escondido. The project consists of 5.1 miles of 24-inch recycled water pipeline, 4.9 miles of 12-inch brine conveyance pipeline, a 6,000-gpm pump station and a pre-stressed concrete storage tank up to 2 million gallons in capacity. The engineer's construction cost estimate for the project is $12-$15 million.

City of San Diego, CA - Water Purification Demonstration Project. Task Leader for the evaluation a conveyance system to deliver advanced-treated recycled water from the City's North City Water Reclamation Facility to San Vicente Reservoir for indirect potable reuse (IPR). The conveyance system consists of approximately 25 miles of 30- to 36-inch diameter pipeline, a pump station and discharge structure. Rich was responsible for providing recommendations on pipeline alignment, facilities, and preparing a construction cost estimate for the project.

Education

- Bachelors, Civil Engineering, Purdue University

Registrations

- Professional Engineer - CA, 70228

Affiliations

- American Society of Civil Engineers
- WateReuse Association

Delta Diablo Sanitation District, CA - Bridgehead Pump Station and Bridgehead Conveyance System Phases 1 and 2. As Cost Estimator/ Technical Reviewer, prepared cost estimates and conducted quality control review of a new pump station, emergency storage basin, and refurbishments to convert an existing pump station into an emergency diversion pump station. Facilities included an 11.75-mgd wet/dry pit pump station and 900 kW standby diesel generator; a 1.3-mg circular concrete emergency storage basin tank; and the appurtenant facilities for the pump station and force main.

City of Pasadena Department of Water and Power, CA - Pasadena Recycled Water Project. Project Manager responsible for managing implementation of the City's recycled water distribution system. Rich prepared a feasibility study for the City's recycled water system that meets the requirements of the Federal Bureau of Reclamation or Title XVI funding and the State of California Recycled Water Planning Grant. Rich also oversaw preliminary design; CEQA/NEPA document preparation; preparation of a Title 22 Engineering Report; evaluation of indirect potable reuse via groundwater recharge of advanced treated water; assistance with grants and loans for planning, design and construction; customer coordination and retrofit design; and permitting. The project is currently in 90% design completion. Construction costs for Phase I estimated to be approximately $18 million, consisting of approximately 20,000 LF of 24-inch and 20-inch diameter pipeline, a 0.5 MG and 1.25-MG storage tank and a pressure reducing station.

Hazelwood, IN - Hazelwood Sewer Evaluation and Engineering Report. As Project Engineer, evaluated costs and benefits of alternatives for the town of Hazelwood, IN for implementation of sewage collection and treatment to address bacterial contamination of local waterways associated with failing onsite septic tanks. Responsibilities included the evaluation of Septic Tank Effluent Pumping (STEP), grinder pumping, vacuum collection, and conventional gravity sewer as collection alternatives. Treatment alternatives evaluated were pumping to a nearby regional plant, a packaged mechanical/biological plant, and sand filter treatment of septic tank effluent. The use of onsite advanced treatment and subsurface disposal was evaluated as an alternative to collection/treatment. Conceptual level design, cost estimates and rate studies were developed for each alternative. The findings of the evaluation were presented in an Engineering Report and presented to the Technical Advisory Committee representatives.

City of Los Angeles, CA - Recycled Water Master Plan. As Service Area Lead, played a significant role in an effort to maximize the use of tertiary treated effluent from the City of Los Angeles' four treatment plants. The goal is to increase water reuse in the City by 50,000 AFY by 2019 through indirect potable reuse via groundwater recharge and non-potable reuse through irrigation and industrial demand. Part of the goal is to identify approximately 20,000 AFY of non-potable reuse opportunities, and oversaw the effort in the San Fernando Valley, which is the largest of the LADWP service areas in terms of non-potable demand and supply. Responsible for identifying and screening potential customers (including site visits and customer meetings) and developing projects to serve these customers. Prepared an evaluation of a system interconnection between the City of Burbank and the City of Los Angeles recycled water systems to exchange water between the agencies.

City of Paso Robles, CA - Phase I Recycled Water System Preliminary Design. Quality Control Reviewer responsible for quality control for preliminary design of approximately 4 miles of 24-inch pipeline to deliver recycled water to irrigation customers in Paso Robles. The project included alignment evaluation, hydraulic evaluation, storage evaluation, development of design criteria, and preliminary plan and profile drawings.

City of Malibu, CA - Legacy Park Project. Lead Project Engineer responsible for leading a design team to evaluate alternatives and develop preliminary plans for a wastewater collection and treatment system, recycled water distribution system, and effluent disposal system. The sanitary sewer alternatives included a grinder pump system, a Septic Tank Effluent Pump (STEP) system and gravity sewer. Treatment alternatives included Membrane Bio-Reactor (MBR) and Sequencing Batch Reactor (SBR) with nitrification/ denitrification. The recommended project and preliminary design consisted of approximately five miles of gravity sewer and force main, four sanitary sewer pump stations, three miles of recycled water pipeline, recycled water storage and pumping facilities, a 0.5-mgd MBR Reclamation Plant and disposal fields.

Burbank Water and Power, CA - Studio District Recycled Water Main Extension. Project Manager responsible for the development of a preliminary design report and preparation of plans, specifications and cost estimate for approximately 24,000 LF of 8-inch and 12-inch diameter recycled water pipeline in the City of Burbank. The design included a crossing of 134 Freeway and associated Caltrans permitting for open cut construction under a freeway overpass. Construction cost for the project was approximately $4.2 million.

ERICA WOLSKI, PE
WATER QUALITY

Professional Profile

Erica has 17 years experience specializing in drinking water and recycled water regulatory compliance. In addition to her consulting engineering experience, she has worked for the State Water Resources Control Board, Division of Drinking Water (formerly the California Department of Health Services and California Department of Public Health) in the field operations branch for the Sonoma, Santa Ana, San Bernardino and San Diego Districts and in the Recycled Water Unit. Her project experience includes the design of water and wastewater treatment facilities, assistance with the DDW permitting and preparation of Title 22 reports for recycled water. While working in the field branch at DDW, she inspected and permitted water systems, assisted in developing recycled water policy as a member of DDW Recycled Water Committee, and gave presentations on behalf of DDW. While working in the Recycled Water Unit, Erica reviewed Title 22 reports for potable reuse projects and participated in developing potable reuse regulations.

Related Experience

Yucaipa Valley Water District, CA - SRF and Other Funding Assistance. Project Engineer assisting with the loan application process for several District projects including the District's wastewater treatment plant upgrade and recycled water system expansion, proposed brineline and new sewer construction projects. The $45 million SRF loan for the wastewater plant was approved in 2006. The $12.8 million SRF loan and a $2 million Title XVI grant for the brineline was approved in2009 and 2010. Currently, Woodard & Curran handles submittals to the state and federal government on behalf of the District including pay requests, quarterly MBE/WBE compliance reports and other required submittals.

Yucaipa Valley Water District, CA - Recycled Water Expansion Assistance. This project includes assisting the District with implementing its dual-plumbed recycled water project for several upcoming residential developments. As Project Engineer, assisted with the preparation of Rules and Regulations for Recycled Water Use, Title 22 reports for the use of recycled water at these developments, and coordination with DPH and other miscellaneous tasks.

Irvine Ranch Water District, CA - Manning Water Treatment Plant Expansion and Upgrades. Project Engineer met with DDW during the PDR stage to familiarize DDW with the upcoming plant changes and was available throughout the permitting process to answer DDW questions and provide additional requested information. This project has been ongoing since 2005 and has consisted of various phases. The first phase included updating the operations plan for submittal to DDW, the addition of individual filter effluent (IFE) turbidimeters for Long Term 1 Enhanced Surface Water Treatment Rule compliance and the addition of a coagulation alarm. Later phases included the addition of ammonia injection to the plant to switch from free chlorine to chloramines for a distribution system

Education

- Bachelors, Civil/Environmental Engineer, California State Polytechnic University-Pomona

Registrations

- Professional Engineer - CA, 67594

Professional Associations

- California/Nevada American Water Works Association
- Legislative/Regulatory committee Liaison for the Inland Empire Chapter of WateReuse 2006-2007
- Secretary for the Inland Empire Chapter of WateReuse 2009-2010

residual; completion of an amendment to the 1999 Negative Declaration for CEQA compliance; and completion of a preliminary design report (PDR) for the expansion of the plant to 360 gpm without adding filters or additional disinfection capacity and expansion to 500 gpm with the replacement of the District's current on site hypochlorite generator with bulk hypochlorite feed and storage.

Coachella Valley Water District, CA - Travertine Water Filtration Facility Preliminary Design. Project Engineer responsible for completing design calculations, performing process design and research, layout of facilities, and permitting and district coordination. The project included the design of a 2 mgd water filtration plant that includes influent pumping, submerged membrane ultrafiltration unit, and chlorination.

West Valley Water District, CA - Lytle Creek Water Filtration Facility Design. Project Engineer completed a pilot study protocol for this plant, supervised the pilot phase and compiled the results of the pilot work. The design phase of the project is for an 8 mgd water filtration plant that includes influent pumping, submerged membrane microfiltration unit, granular activated carbon vessels, and chlorination. Responsibilities will include completing design calculations, performing process design and research, layout of facilities, selecting equipment, preparing plan sets, writing specifications, permitting and district coordination.

Yucaipa Valley Water District, CA - DDW Permitting and Other Regulatory Assistance. Project Engineer assisting with the permitting process for the District's water treatment plant which began operation in 2007 and for the ultraviolet disinfection facilities at the District's wastewater treatment plant. The project required attending meetings and inspections with DDW at the water plant site and answering questions that arose during the permitting process. Ms. Wolski prepared the permit report for the San Bernardino DDW office to use as a template and thus expedite the permitting process as the DDW office was short staffed at the time. The project has also included preparation of the triennial Public Health Goal (PHG) reports and calculation and submittal of the capital costs to install fluoridation that is due to DDW every ten years. A Risk Management Plan Update was also completed in 2009 for the District's chlorine gas facilities at the wastewater treatment plant for compliance with the California Accidental Release Prevention Program (CalARP). Tasks included submitting the RMP online to the EPA through CDX and responding to County questions on the RMP.

Elsinore Water District, CA - Regulatory Assistance. This project has been ongoing since 2005, as Project Engineer, Erica's assisting the District with any DDW regulatory needs such as reviewing Consumer Confidence Reports, preparation of the District's Initial Distribution System Evaluation (IDSE) monitoring plan and report for the Stage 2 D/DBPR, the preparation of a Nitrification Action Plan and review of monthly nitrification data reports, and other as needed tasks. Ms. Wolski has also been available to contact DDW, including after business hours, in the event of main breaks, system shutdowns and/or other sensitive compliance issues that require DDW and public notification.

West Basin Municipal Water District, CA - 2015 Recycled Water Customer Development. Project Manager responsible for assessing the feasibility of recycled water service, obtaining agreements with potential customers, securing regulatory approvals, and assisting with bid and construction for recycled water conversions from potable to reclaimed water.

Trabuco Canyon Water District, CA - Crystal Canyon Water Reclamation Plant. Project Engineer responsible for design calculations, process design and research, layout of facilities, equipment selection, plan set preparation, Title 22 and air quality permitting and District coordination. The project consisted of the design of a 7,000 gpd water reclamation plant that included influent pumping, sequencing batch reactors, coagulation, filtration, and chlorination. The first phase of construction began in 2006 and all major equipment is now installed. The plant's influent holding tank is currently being used for wastewater storage until additional houses are constructed to provide enough flow to continuously operate the plant.

Inland Empire Utilities Agency, CA - RP-1 Aeration Basin Modifications Project. Project Engineer responsible for the design project consisting of modifications in the Aeration System including replacement of fifty-two slide gates, installation of a mixed liquor recycle system, and modifications to the aeration channels to eliminate the channel agitation system. These projects were designed based on recommendations from the preliminary design phase, which included evaluation of system hydraulics, mixed liquor recycle flow rate options, evaluation of materials, consideration of operation and maintenance requirements, preliminary design of a basin drainage system. The project was constructed in 2009.

SUNNY HUANG, PE
ADVANCED WATER TREATMENT

Professional Profile

Sunny has 22 years of experience and is a process engineer for water and wastewater treatment projects for both municipal and industrial clients. His design experience ranges from planning/feasibility study and bench/pilot test level through full-scale design. He has developed project documents, including technical reports, P&ID's, construction drawings, project specifications.

Related Experience

Las Virgenes Municipal Water District, CA - Water Demand Model Development. As Project Engineer, developed conceptual framework and oversaw development of demand models for water and wastewater to project revenues and estimate changes in water use for different tier pricing scenarios. Revision of water and wastewater fee structures using tiered rate pricing.

Azusa Light and Water (ALW), CA - Microfiltration Pilot Test. Project Engineer for three-month pilot evaluation of microfiltration (MF) membrane technologies at ALW's Canyon Water Filtration Plant. Findings served as design basis for a 12-mgd microfiltration facility to replace their existing deep bed sand filtration system.

Santa Clara Valley Water District, CA - Preliminary Engineering Services for Indirect Potable Reuse (IPR). Treatment Design Engineer for the preliminary engineering scope which includes three advanced water treatment (AWT) facilities, including treatment technology alternatives and facilities siting evaluations; source water quality analysis; source and treated water conveyance; and evaluation of IPR receptor options. AWT technology alternatives evaluated include conventional full advanced treatment (i.e., microfiltration/reverse osmosis/UV-hydrogen peroxide advanced oxidation) and ozone-biologically active filtration. Aggregate treated water production capacities ranging from 14 to 18+ mgd were evaluated, with facility layouts, space requirements, and cost analyses developed for each alternative.

City of Oxnard, CA - Blending Station No. 1 Desalter Technology Evaluation and Full-Scale Design. Lead Design Engineer for five-month pilot program that evaluated performance and cost impacts of desalter and related technologies. 250 gpm pilot system was comprised of large diameter reverse osmosis (RO), pellet softening, microfiltration, media filtration, and ultra-high lime/sodium aluminate precipitation for RO brine recovery. 7.5 mgd brackish water RO desalter system. Provided operations and water quality analysis training to client O&M staff. Evaluated pilot findings, yielding full-scale system design criteria. Design engineer for full-scale system.

Ventura County Waterworks District No. 1, CA - Brine Minimization Evaluation for Moorpark Desalter. Project Engineer responsible for conceptual system design of each alternative and cost development. Evaluation of brine minimization alternatives to reduce brine discharge volumes from the Moorpark Desalter. Alternatives included a

Education

- Bachelors, Chemical Engineering, Cornell University

Registration

- Professional Engineer - CA, CH6102
- 40-hour HAZWOPER Training (ETAC Cert. No. 3093)

secondary RO concentrator, conversion of existing percolation ponds at the Moorpark Wastewater Treatment Plant to evaporation ponds, use of evaporative technologies, and inclusion of solar voltaic arrays to offset purchased power costs for energy intensive options. Costs on a per acre foot of brine disposed basis were developed for each alternative using a lifecycle cost approach.

Sunkist Growers, CA - Industrial Wastewater Treatment System Pilot Test and Preliminary Design. Lead Process and Design Engineer for 600,000 gpd wastewater treatment system allowing the discharge of treated fruit processing wastewater to Cucamonga Creek. Project entailed a two-month pilot evaluation of a dissolved air floatation (DAF), membrane bioreactor (MBR), and ozone polishing treatment process. Pilot followed by 30% design of a full-scale treatment system and development of detailed construction cost estimate to allow client to obtain funding approval.

La Paloma Generating Company, CA - Economic Evaluation of Brackish Water Treatment. Project Engineer responsible for development of capital and O&M costs, as well conceptual design of treatment options. Economic Evaluation of technologies to convert brackish groundwater into drinking water. Technologies evaluated included reverse osmosis, hot lime softening, and thermal treatment to reduce reverse osmosis brine to zero discharge.

Goleta Water District, CA - Goleta Potable Reuse Facilities Plan. Project Engineer for the development of the requirements for a future AWPF pilot test system. The pilot system will be used to confirm site specific design criteria for design of the full-scale AWPF, satisfy any requirements or questions on the part of DDW to allow permitting of a full-scale system, and serve as a PR tool for outreach by the District to their customers. Woodard & Curran is developing a comprehensive Plan that will maximize beneficial use of recycled water as a potable water supply supplement to meet future demands and reduced surface water supply availability and reliability. We evaluated maximizing reuse through conveying purified water for groundwater augmentation, raw water augmentation (to surface water treatment plant), and treated water augmentation (to directly to potable system). The Plan clearly identifies the benefits of potable reuse to gain support of the public, funding entities, and potential project partners; and demonstrate the technical feasibility of potable reuse to stakeholders and the community in general. The facilities plan is funded with a 50% grant from the State Water Resources Control Board (SWRCB) Water Recycling Funding Program.

City of Patterson, CA - Hexavalent Chromium Treatment Feasibility Study. Project Manager for a feasibility study to evaluate treatment of hexavalent chromium, and potential treatment for nitrate and total dissolved solids (TDS) for 7 well potable wells with an aggregate supply capacity of up to 7,300 gpm. Treatment technologies evaluated include reduction/coagulation/filtration (RCF), weak based anion exchange (WBA), strong based anion exchange (SBA), and reverse osmosis (RO) for treatment of hexavalent chromium as well as potential treatment for nitrate and total dissolved solids (TDS). Conceptual design and planning-level lifecycle cost analysis was developed for each alternative, and considered siting options for individual wellhead systems and centralized treatment.

Yucaipa Valley Water District, CA - Digester Cleaning and Cover Replacement. Project Manager overseeing construction management services for four digesters at the Henry N. Wochholz Regional Water Recycling Facility. Project consisted of digester condition assessment, cover replacement for all digesters, and construction of new digester gas piping.

Ventura County Waterworks District No. 1, CA - Moorpark Desalter Preliminary Design Report (PDR). Project Engineer for overall design and design engineer for RO system. 5,000 acre- foot/year brackish water RO desalter system. System components included greensand filters for iron and manganese treatment, RO desalter, infrastructure for desalter and chemical systems, 400,000 gallon blending tank, and new source water supply well field.

Burbank Water Reclamation Plant, CA - Bench Study for Heavy Metals Removal in Municipal Wastewater. Project Engineer for the development, implementation, and execution of a bench study investigating the removal of heavy metals through chemical precipitation. Study was needed to assess the potential impact of the California Toxics Rule on their future discharge limits.

Burbank Water Reclamation Plant Upgrade. Project Engineer for evaluating odor control treatment options and design of 2,000 cfm granular activated carbon odor treatment unit. Upgrades to existing 9 mgd water treatment plant that include new equalization basins and odor control system.

Confidential Mining Facility, CA - Pilot Study to Treat Mining Facility Wastewater. Project Engineer for pilot system evaluating technologies to reduce hydrocarbon concentrations in the solution mining plant effluent to meet regulatory compliance. Technologies evaluated included sand/anthracite, walnut shell, and cartridge filtration, GAC adsorption, ultrafiltration, and nanofiltration.

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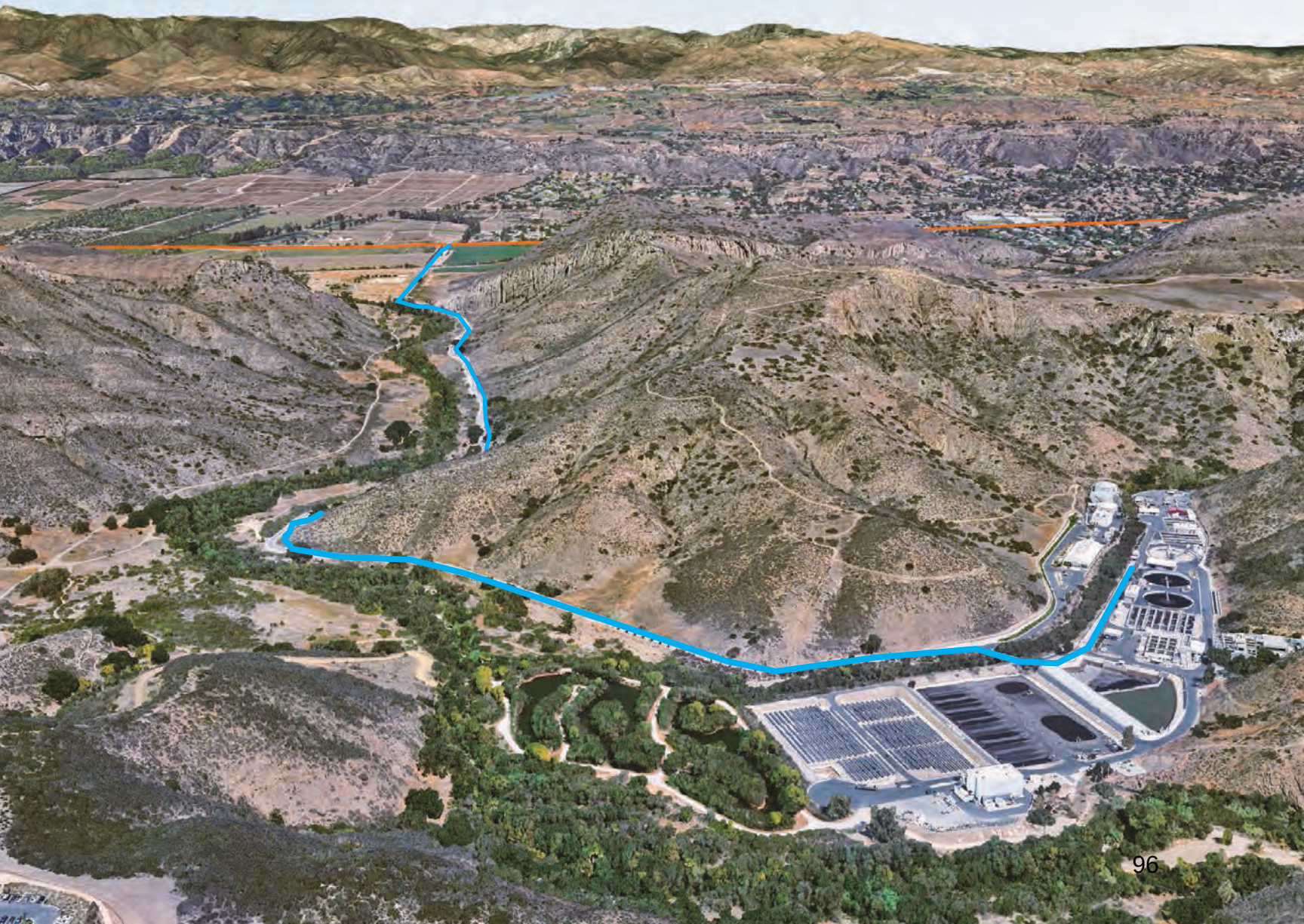

Las Virgenes-Triumfo Joint Powers Authority
Regional Brine Management Study
Cost Estimate

WOODARD & CURRAN	Brian Dietrick	Matt Elsner	Rich Bichette	Sunny Huang	Erica Wolski	Jehan Anketell	Ally Davis	TBD	Project Admin	Total W&C Hours	Total Labor Costs (1)	Total ODCs (2)	Total Cost
	Principal In Charge	Project Manager	Pipeline Lead	Treatment	Water Quality	Engineer 2	Engineer 1	Designer 1	Admin.				
	$282	$282	$282	$282	$266	$187	$162	$125	$110				
Task 1: Project Management													
1.1 Project Meetings and Workshops													
Project Kickoff/Brainstorming/Workshop 1	6	8					8	4		26	$5,744	$110	$5,854
Draft Report Presentation/Workshop 2	6	8					8	4		26	$5,744	$110	$5,854
Board/Council Presentations (includes 4)	16	16					4	8		44	$10,672	$440	$11,112
1.2 Project Tracking and Communication		6					12		6	24	$4,296	$0	$4,296
1.3 Quality Assurance and Quality Control	4	2	2	2	2					12	$3,352	$0	$3,352
Subtotal Task 1:	32	40	2	2	2	0	32	16	6	132	$29,808	660	30,468
Task 2: Data Gathering and Evaluation													
2.1 Characterize New Brine Discharges		4					24			28	$5,016	$0	$5,016
2.2 Determine Effect of Brine Discharge on HCTP Influent		4					24			28	$5,016	$0	$5,016
2.3 Analyze Salt Removal Requirements		4					24			28	$5,016	$0	$5,016
Subtotal Task 2:	0	12	0	0	0	0	72	0	0	84	$15,048	$0	$15,048
Task 3: Santa Rosa Basin Augmentation													
3.1 Regulatory/Treatment Requirements	4				12		16			32	$6,912	$0	$6,912
3.2 Facility Siting	2	8					16	4		30	$5,912	$0	$5,912
3.3 Facility Sizing		2		8			24	4		38	$7,208	$0	$7,208
Subtotal Task 3:	6	10	0	8	12	0	56	8	0	100	$20,032	$0	$20,032
Task 4: Desalter Sizing													
4.1 JPA Brine Addition				4			8			12	$2,424	$0	$2,424
4.2 TO Brine Addition				4			8			12	$2,424	$0	$2,424
4.3 CWD WQ Improvement				4			8			12	$2,424	$0	$2,424
4.4 Evaluate SMP Discharge Requirements					8		16			24	$4,720	$0	$4,720
Subtotal Task 4:	0	0	0	12	8	0	40	0	0	60	$11,992	$0	$11,992
Task 5: Preliminary Engineering Concept													
5.1 Desalter		2		4		24		4		34	$6,680	$0	$6,680
5.2 AWTP		2		4		24		4		34	$6,680	$0	$6,680
5.3 Brine Line from Desalter		2	8			16		4		30	$6,312	$0	$6,312
5.4 Brine Line from JPA to City Sewer		2	8			16		4		30	$6,312	$0	$6,312
Subtotal Task 5:	0	8	16	8	0	80	0	16	0	128	$25,984	$0	$25,984
Task 6: Preliminary Cost Estimate													
6.1 Capital		4	8	8		8	32		2	62	$12,540	$0	$12,540
6.2 O&M		4		4		8	8		2	26	$5,268	$0	$5,268
Subtotal Task 6:	0	8	8	12	0	16	40	0	4	88	$17,808	$0	$17,808
Task 7: Regional Brine Management Study Report													
7.1 Draft Report	4	8	4	4	4	20	40	16	2	102	$19,144	$55	$19,199
7.2 Final Report	2	4	2	2	2	8	20	8	2	50	$9,308	$55	$9,363
Subtotal Task 7:	6	12	6	6	6	28	60	24	4	152	$28,452	$110	$28,562
TOTAL	44	90	32	48	28	124	300	64	14	744	$149,124	$770	$149,894

1. The individual hourly rates include salary, overhead and profit.
2. Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus 10%.

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2019 Standard Rates	
Labor Category	**Rate**
Engineer 1 (E1) Scientist 1 (S1) Geologist 1 (G1) Planner 1 (P1) Technical Specialist 1 (TS1)	162
Engineer 2 (E2) Scientist 2 (S2) Geologist 2 (G2) Planner 2 (P2) Technical Specialist 2 (TS2)	187
Engineer 3 (E3) Scientist 3 (S3) Geologist 3 (G3) Planner 3 (P3) Technical Specialist 3 (TS3)	212
Project Engineer 1 (PE1) Project Specialist 1 (PS1) Project Geologist 1 (PG1) Project Planner 1 (PP1) Project Technical Specialist 1 (PTS1)	221
Project Engineer 2 (PE2) Project Specialist 2 (PS2) Project Geologist 2 (PG2) Project Planner 2 (PP2) Project Technical Specialist 2 (TS2)	236
Project Manager 1 (PM1) Technical Manager 1 (TM1)	251
Project Manager 2 (PM2) Technical Manager 2 (TM2)	266
Senior Project Manager (SPM) Senior Technical Manager (STM)	282
Senior Technical Practice Leader (STPL)	310
National Practice Leader (NPL) Strategic Business Unit Leader (SBUL)	320
Software Engineer 1 (SE1)	147
Software Engineer 2 (SE2)	170
Designer 1 (D1)	125
Designer 2 (D2)	155
Designer 3 (D3) Senior Software Developer (SSD)	160
Senior Designer (SD)	165
Project Assistant (PA)	110
Marketing Assistant (MA) Graphic Artist (GA)	118
Senior Accountant (SA) Senior Project Assistant Billing Manager (BM)	129
Marketing Manager (MM) Graphics Manager (GM)	149

Note: The individual hourly rates include salary, overhead and profit. Other direct costs (ODCs) such as reproduction, delivery, mileage (as allowed by IRS guidelines), and travel expenses will be billed at actual cost plus 10%. Subconsultants will be billed as actual cost plus 10%. Woodard & Curran, Inc., reserves the right to adjust its hourly rate structure at the beginning of each year for all ongoing contracts.

COMMITMENT & INTEGRITY DRIVE RESULTS

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T 213.223.9460

Via Electronic Mail

June 28, 2019

Eric Schlageter, PE, ENV SP
Senior Engineer
Las Virgenes Municipal Water District
4232 Las Virgenes Road
Calabasas, CA 91302

Re: Proposal for Las Virgenes Pure Water Project Regional Brine Management Study – Hydraulic Analysis of the Thousand Oaks Existing Wastewater Collection System

Dear Mr. Schlageter:

Thank you for the opportunity to present our proposal to provide professional engineering services for the Hydraulic Analysis of the Thousand Oaks Existing Wastewater Collection System. This work is intended as an additional set of tasks to be performed as part of the Las Virgenes Pure Water Project Regional Brine Management Study, awarded to Woodard & Curran in May of 2019.

The focus of the study is to evaluate the hydraulic capacity of the sewer collection system within portions of the system that will be impacted by brine flows from the Las Virgenes Pure Water project (assumed to be Units V and W). The analysis will be based on the City's sewer GIS and flows estimated as part of the 2002 City of Thousand Oaks Wastewater Interceptor Master Plan (2002 Master Plan). The work will be directed by our project manager for the Regional Brine Management Study, Matt Elsner, and will be primarily conducted by one of our most experienced sewer master planners, Andy Baldwin (resume enclosed) and his support staff.

The following describes the scope of work. Since this work will be incorporated into the Regional Brine Management Study, which included Tasks 1 through 7, the scope of work for the hydraulic analysis will be identified as "Task 8".

SCOPE

Task 8.1: Review of existing Wastewater Master Plan

- Kickoff Meeting – This includes time for Andy Baldwin to participate by phone in the kickoff meeting already planned for the Regional Brine Management Study. Attendance of other Woodard & Curran personnel at this meeting is already included in the Regional Brine Management Study scope.
- Review of 2002 Master Plan – Focus will be on areas of the Thousand Oaks Wastewater Collection System which would be impacted by approximately 1.0 MGD of brine flow, assumed to be Units V & W on the east side of the collection system.
- Preparation of a Data Request, currently anticipated to include:
    - GIS data – sewer pipe and manhole locations; pipe diameters
    - Wastewater flow metering data (January – April 2019, 15-minute increments): meters at V59-3, W50-13B, U3-5, W24-2
    - 2002 Master Plan (Woodard & Curran has a scanned copy)

Task 8.2: Perform the hydraulic analysis of Unit V and Unit W with the additional brine flows

- Develop a hydraulic model:
  - It is assumed that the existing HydroWorks model is unavailable. A new model will be developed for this analysis using the InfoWorks ICM platform.
  - Pipes and manholes for the sewers downstream of the proposed brine flow will be extracted from the City's current GIS data.
  - Flows will be applied according to the estimates prepared in Table 6 of the 2002 Master Plan for units E, G, U, V, and W.
- Compare current flows:
  - Flows from the current meters will be compared to the flow estimates prepared for the 2002 Master Plan. If necessary, adjustments to the modeled flows will be proposed.
- Perform hydraulic analysis:
  - The capacity of the existing sewers will be evaluated under PDWF and PWWF conditions with and without the proposed brine flow.
  - Three (3) selected locations for a sewer connection in the vicinity of Units V and W. Our team will select these locations in collaboration with LVMWD and Thousand Oaks staff.

Assumptions:

1. GIS data for pipes and manholes are available and can be linked through an ID field. Potential errors in elevation or connectivity data will be referred to the City.
2. Data used to generate the design storm for the 2002 Master Plan are not available. Therefore, the model will be run using steady state conditions with the flows documented in the 2002 Master Plan. If necessary, flows will be subdivided proportionally to tributary area.

Task 8.3: Identify system deficiencies and required improvements (if any)

- Evaluate existing and future capacity deficiencies
  - Quantify available capacities for:
    - Peak flow period
    - Typical dry day (winter)
    - Future (buildout) flow scenario
- Documentation and communication
  - Prepare a draft chapter for inclusion in the draft Regional Brine Management Study Report summarizing findings including tables and maps
  - Project meetings (assumes 2, via telephone conference)
  - Prepare and provide a presentation to LVMWD and Thousand Oaks staff

Assumptions:

1. Buildout flow scenario will be based on flows documented in the 2002 Master Plan. New estimates of potential future flows will not be developed.

Optional Task: Recommend Needed Improvements

- Identify improvements needed to accommodate Las Virgenes Pure Water project brine flows in the Thousand Oaks sewer system

BUDGET

Woodard & Curran proposes to provide LVMWD the above scope of work for a fee not to exceed **$29,667** to be billed on a time and materials basis according to our contract terms. There is also an optional task for recommendations about needed improvements for **$6,384**. A proposed fee estimate is shown in the attached table.

SCHEDULE

Our team proposes to complete the draft chapter in 4 weeks, starting from NTP for the Regional Brine Management Study. Conference calls are anticipated at week two and week four.

Sincerely,

WOODARD & CURRAN

Brian Dietrick, P.E.
Principal-in-Charge

Matt Elsner, P.E.
Project Manager

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Tasks	Woodard & Curran							
	Labor					ODCs		
	Matt Elsner	Andy Baldwin	Jaclyn Lemieux	Total Hours	Total Labor Costs (1)	ODCs	Total ODCs (2)	Total Fee
	PM	Sewer Model Lead	Wastewater Modeler					
	$282	$282	$187					
Task 8.1: Review of existing Wastewater Master Plan								
Kickoff Meeting		2		2	$564	$175	$193	$757
Data Collection		2	4	6	$1,314		$0	$1,314
Review of WW Master Plan		4	2	6	$1,504		$0	$1,504
Subtotal Task 1:	0	8	6	14	$3,383	$175	$193	$3,576
Task 8.2: Perform hydraulic analysis of Units V and W								
Develop hydraulic model		8	40	48	$9,756		$0	$9,756
Compare Current Flows		4	4	8	$1,879		$0	$1,879
Evaluate hydraulics for connections at three (3) locations	2	4	24	30	$6,192		$0	$6,192
Subtotal Task 2:	2	16	68	86	$17,827	$0	$0	$17,827
Task 8.3: Identify system deficiencies and required improvements								
Evaluate system deficiencies		6	8	14	$3,193		$0	$3,193
Prepare draft chapter for Regional Brine Mgmt Study Report		4	8	12	$2,629		$0	$2,629
Project meetings (2 conf. calls)	2	2		4	$1,128		$0	$1,128
Prepare presentation for LVMWD/TO staff		2	4	6	$1,314		$0	$1,314
Subtotal Task 3:	2	14	20	36	$8,264	$0	$0	$8,264
TOTAL (without Optional Task):	4	38	94	136	$29,474	$175	$193	$29,667
Optional Tasks:								
Recommend Needed Improvements	8	4	16	28	$6,384		$0	$6,384
Subtotal Optional Tasks:	8	4	16	28	$6,384	$0	$0	$6,384

1. The individual hourly rates include salary, overhead and profit.
2. Other direct costs (ODCs) such as reproduction, delivery, mileage (rates will be those allowed by current IRS guidelines), and travel expenses, will be billed at actual cost plus10%.

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ANDY BALDWIN

FACILITIES PLANNING TASK MANAGER: WASTEWATER

Professional Profile

Andy Baldwin specializes in water, wastewater, and environmental engineering. Andy has focused his career in the planning and assessment of water and wastewater infrastructure systems including asset management planning, hydraulic and mathematical modeling, water/wastewater master planning, Computerized Maintenance Management System (CMMS) implementation, and development of Geographical Information Systems (GIS) and data management applications.

Andy is a hydraulic computer modeling expert specializing in water, wastewater and environmental engineering. He has extensive experience of many hydraulic modeling software systems including InfoSewer, InfoWorks ICM, InfoWorks CS, InfoSWMM, Mike Urban, PCSWMM, H20Map Sewer, SewerGEMS and master planning for water distribution and wastewater collection systems. He has extensive experience in sewer master planning throughout the USA and overseas providing marketing and technical support for major sewer network modeling projects including the development and presentation of proposals, technical training, and specialized modeling advice. In addition, Andy has extensive knowledge of asset management and CMMS software systems including InfoMaster, Maintenance Connection, CityWorks and Lucity (GBA Master Series) with specific focus on selection and implementation for water and wastewater agencies.

Related Experience

Orange County Sanitation District, CA - Collection Capacity Evaluation Study (PS15-08). Project manager leading the technical direction for District's collection capacity evaluation project which involves updating and calibrating the dynamic sewer model (InfoWorks ICM) of the District's trunk sewer system. The project utilizes flow data from 85 meters collected by ADS to analyze dry weather flows, inflow and infiltration flows and support the model calibration. Data collected from as-builts and the District's GIS is being used to update the model which includes multiple siphons, pump stations and diversion structures. Following the model calibration, Andy's team will be conducting comprehensive model training for the District's engineering staff and delivering a model user guide to assist them with future model updates and applications.

City of Santa Ana, CA - Wastewater Collection System Master Plan. Project manager and hydraulic modeling lead responsible for building and calibrating the City's entire wastewater collection system including pump stations, interceptors, diversion structures and force-mains. The study includes management of sewer flow monitoring data, hydraulic modeling using InfoWorks ICM, model calibration, risk analysis and planning and design of rehabilitation projects. The model calibration phase utilizes radar rainfall data to accurately relate the rainfall with the observed inflow and infiltration (I&I) entering the collection system. The project includes the development and prioritization of the CIP program. The CIP projects were selected based on hydraulic and condition-related issues and prioritized using a risk analysis approach applied using the InfoMaster software.

Education

- Bachelors, Civil Engineering, Sheffield, UK

Padre Dam Municipal Water District, CA - Siphon Capacity and Condition Assessment Project. Hydraulic modeling lead responsible for the capacity evaluation of critical collection system facilities including siphons, pump stations, diversion structures and pipelines impacted by the District's recycled water program. The studied analyzed the impact of the recycled water facilities on the wastewater collection system for multiple flow scenarios and facility alternatives. The complex analysis used a hydraulic model (InfoSWMM) to evaluate the siphon capacity and optimize the diversion settings. Results from the model were entered into a spreadsheet-based system model which enabled existing and future flow projections to be analyzed along with multiple capital improvement alternatives. The model predicted timing of the CIP projects and relevant triggers such as flows generated from the recycled water facilities. The spreadsheet-based model was delivered to the District enabling staff to update the CIP project planning when flow projections and recycled water demands change.

City of San Pomona, CA - Sewer and Water Master Plan. Master planning and hydraulic modeling lead responsible for the preparation of both the sewer and water master plans as part of a strategic plan project. The master planning tasks included the building and calibration of hydraulic models (InfoSewer and InfoWater) to support the capacity analysis and development of capacity improvement projects. The models were used to predict capacity deficiencies impacted by both existing and future flow projections. Recommended CIP projects were prioritized based on capacity needs, current condition and risk-based impacts and were imported into a web-based project tracking tool enabling the City to update the CIP list.

City of Pomona, CA - Water and Sewer Master Plan. Technical modeling lead responsible for developing the City's sewer model for use in the master planning study. The model building task required extensive data processing of the City's GIS data and as-built drawings to extract the necessary manhole and pipe data. The model was built using H20Map Sewer (now InfoSewer) and incorporated sewer flows generated from land-use, census forecasts and groundwater infiltration derived from flow metering data. Andy worked closely with the client to ensure all the built sewer CIP project were included in the model resulting in an accurate model used for future planning.

Eastern Municipal Water District, CA - Moreno Valley flow Monitoring and Model Calibration. Technical reviewer supported the model calibration and unit flow calculations; analyzed and reviewed the flow diversion curves; conducted review and quality checks on reports and deliverables; and supported project management and client meetings.

Orange County Sanitation District, CA - Newhope Placentia Trunk Sewer Replacement Project (P2-72). Hydraulic modeling lead responsible for the hydraulic modeling of the OCSD collection system to support the hydraulic analysis of the Newhope Placentia trunk sewer replacement. The project requires updating the InfoWorks ICM model using the latest population projections and land-use data, and conducting model calibration to verify the dry and wet-weather flow conditions. In addition, Andy is using the InfoWorks ICM model to determine flow diversion strategies to minimize the SARI flow in addition to sizing the replacement sewer lines.

Orange County Sanitation District, CA - Wastewater Plant (Primary Effluent) Hydraulic Modeling. As project and technical lead, developed an InfoWorks CS model of the primary effluent system for the Orange County Sanitation District/s (OCSD) wastewater treatment plants. The dynamic model comprised of complex piping, primary clarifiers, pumping stations and SCADA control logic. The model was calibrated against detailed flow and level data and used to analyze hydraulic operation of the primary effluent pump station and associated overflow structures. Andy hosted client workshops using 'live' demonstrations of the model to explain the plant hydraulics to the operations and engineering staff.

Orange County Sanitation District, CA - SARI Trunk Hydraulic Evaluation Study. As project manager and hydraulic modeling lead, evaluated the hydraulic capacity of the Santa Ana River Interceptor (SARI) on behalf of OCSD's legal counsel in support of a dispute between OCSD and the Santa Ana Watershed Project Authority (SAPWA). The study provided an independent assessment of the available hydraulic capacity and associated engineering justification using the InfoWorks hydraulic model. The results of the study supported the successful settlement of the case between OCSD and SAWPA.

City of San Clemente, CA - Hydraulic Modeling and Sewer Master Planning Study. As project and technical lead, developed an InfoWorks ICM model of the wastewater collection system for the City of San Clemente. The project utilized InfoWorks ICM to model the collection system which included complex pump stations and real-time-control (RTC) systems. Andy's ICM modeling and planning expertise was used to support all modeling activities including GIS data management, land-use and population analysis, model calibration and data management. He was also responsible for providing technical guidance throughout the modeling and master planning activities and hosted client workshops using 'live' demonstrations of the planning tool to explain the system hydraulics to operations and engineering staff.

BEST BEST & KRIEGER
ATTORNEYS AT LAW

Memorandum

To: Las Virgenes-Triunfo JPA
From: Syrus Devers, Best Best & Krieger
Date: July, 2019
Re: Monthly State Political Report

Legislative Report

The deadline for bills to clear all policy committees was July 12th. Any bill that is still in a policy committee is now a "2-year bill", which means it will sit there until January. The Legislature will recess from July 12th to August 12th, and bills that have survived will have to pass the fiscal committees by August 30th.

As the bill count continues to drop on what is shaping up to be a good year for water policy advocates, three issues of concern have taken center stage and are showing signs that they're here to stay.

AB 402 (Quirk): This is the bill to allow the SWRCB to collect the fees to fund Local Primacy Agencies (LPAs) that regulate small drinking water systems with less than 200 connections. While the program has merit, the bill lets the SWRCB run the funds through the Safe Drinking Water Fund (SDWF), which collects fees from all public water agencies. This makes the SDWF operate like a tax since large water agencies would be paying the majority of the costs without any corresponding benefit…to the extent that regulation can be called a "benefit".

The challenge for the advocates opposing the bill is that it's difficult to the point of impossible to get legislators fired up about it. Those steeped in water policy see the danger of legitimizing this mechanism out of fear over how the SWRCB will abuse it in the future, but everyone else sees that the SDWF is used to fund water agency regulatory costs and AB 402 is all about funding regulatory costs, and in the most efficient manner that maximizes local control, so "what's the big deal?" All efforts are now focused on the Senate Appropriations Committee which will hear the bill in August.

AB 756 (C. Garcia): Standalone regulation of Per- and Polyfluoroalkyl substances (PFAS). The problem isn't that PFAS shouldn't be regulated, it's that they should go through the existing process like all other pollutants. Larger issues have overshadowed this bill during the year until the very end. Unfortunately it squeaked off the Senate Floor with the minimum votes needed to pass and is

already headed to the Governor, but all hope should not be lost. State agencies never liked being told how to do their job. Perhaps the Newsom Administration can be persuaded to allow the system to work.

The final issue is **SB 1 (Atkins)**. Briefly stated, SB 1 requires a list of state agencies to consider adopting regulations in an expedited manner to maintain standards in place in 2017 if the Trump administration rolls back workplace or environmental protections.

At issue is the interplay between the federal Endangered Species Act (ESA), the state ESA, and the federal Central Valley Project, or CVP. For all things state related there's no real issue: the federal ESA already permits states to adopt more restrictive standards than federal law. For this reason, the bill creates no new state authority—for state ESA regulations. But the CVP isn't a state facility and the California ESA isn't referenced in the authorizing federal legislation that created the CVP, so the CVP should be governed by the federal ESA, right? Otherwise, the state would be able to dictate ESA regulations *to the federal government*. Obviously, that's absurd...except that it isn't. The CVP is under the federal Reclamation Act that was enacted in 1902. Back then, the federal government bent over backwards to defer to state authority and the Reclamation Act clearly states that nothing in the Act shall interfere with a state's control over irrigation and water distribution. Some of California's most significant regulations over water distribution arise under the...wait for it...state ESA.

To cut to the chase, this is an unsettled area of law and the opponents of SB 1are accusing the sponsors of trying to settle the issue in favor of state authority in the bill. This issue was teed up nicely in the Assembly Judiciary Committee but no progress was made. All hope now is pinned on Governor Newsom who expressed strong support for the voluntary agreement process on the CVP prior to being elected. If the Governor's main deputies weighed in, it would make a difference.

Las Virgenes-Triunfo JPA

Prepared by Best Best & Krieger LLP, July 19, 2019

A. Priority Support/Oppose

Measure	Author	Topic	Current Text Version	Location	Brief Summary	Position	Notes 1
AB 292	Quirk D	Recycled water: raw water and groundwater augmentation.	Amended: 6/20/2019	7/9/2019-S. APPR.	Current law requires the State Water Resources Control Board, on or before December 31, 2023, to adopt uniform water recycling criteria for direct potable reuse through raw water augmentation, as specified. Current law defines "direct potable reuse" and "indirect potable reuse for groundwater recharge" for these purposes. This bill would eliminate the definition of "direct potable reuse" and instead would substitute the term "groundwater augmentation" for "indirect potable reuse for groundwater recharge" in these definitions. The bill would revise the definition of "treated drinking water augmentation."	Support	Sent letter to Quirk and members of the Environmental Safety and Toxic Materials Committee on 3/5/19. Sent support letter to Senator Allen, Chair of the Senate Env. Qual Committee on 5/22/19. Possi ble follow-up letter to Approp Committee by August 5.
AB 402	Quirk D	State Water Resources Control Board: local primacy delegation: funding stabilization program.	Amended: 6/18/2019	7/3/2019-S. APPR.	The California Safe Drinking Water Act requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health, including, but not limited to, conducting research, studies, and demonstration programs relating to the provision of a dependable, safe supply of drinking water, enforcing the federal Safe Drinking Water Act, adopting implementing regulations, and conducting studies and investigations to assess the quality of water in private domestic water supplies. This bill would authorize the state board to delegate partial responsibility for the act's administration and enforcement by means of a local primacy delegation agreement. The bill would authorize the state board, for counties that have not been delegated primary responsibility as of January 1, 2020, to offer an opportunity for the county to apply for partial or primary responsibility if the state board determines that it needs assistance in performing administrative and enforcement activities,	Oppose unless amended	Sent oppose letter to Sen. Stern on June 11. Possible oppose letter to Approp Committee by August 5.

					as specified.		
AB 1180	Friedman D	Water: recycled water.	Amended: 6/18/2019	6/24/2019-S. APPR. SUSPENSE FILE	The California Safe Drinking Water Act requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health. Current law requires, on or before January 1, 2020, the state board to adopt standards for backflow protection and cross-connection control through the adoption of a policy handbook, as specified. This bill would require that handbook to include provisions for the use of a swivel or changeover device to supply potable water to a dual-plumbed system during an interruption in recycled water service.	Support	Sent letter to Assemblymember Friedman and Quirk, Chair of the Environmental Safety and Toxic Materials Committee on 3/19/19.
ACA 3	Mathis R	Clean Water for All Act.	Amended: 3/20/2019	4/30/2019-A. W.,P. & W.	This measure, the Clean Water for All Act, would additionally require, commencing with the 2021–22 fiscal year, not less than 2% of specified state revenues to be set apart for the payment of principal and interest on bonds authorized pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014; water supply, delivery, and quality projects administered by the department, and water quality projects administered by the state board, as provided.	Out for Analysis	
SB 1	Atkins D	California Environmental, Public Health, and Workers Defense Act of 2019.	Amended: 7/1/2019	7/9/2019	Current state law regulates the discharge of air pollutants into the atmosphere. The Porter-Cologne Water Quality Control Act regulates the discharge of pollutants into the waters of the state. The California Safe Drinking Water Act establishes standards for drinking water and regulates drinking water systems. The California Endangered Species Act requires the Fish and Game Commission to establish a list of endangered species and a list of threatened species, and generally prohibits the taking of those species. This bill would require specified agencies to take prescribed actions regarding certain federal requirements and standards pertaining to air, water, and protected species, as specified.	Out for Analysis	Possible oppose unless amended. Letter to Assembly Appropriations due by August 5. Bill in current form disrupts voluntary settlement agreements/does not support sound scientific evidence.
SB 200	Monning D	Drinking water.	Enrollment: 7/15/2019	7/15/2019-S. ENROLLED	Would establish the Safe and Affordable Drinking Water Fund in the State Treasury to help water systems provide an adequate and affordable supply of safe drinking water in both the near and the long terms. The bill would authorize the State Water Resources Control Board to provide for the deposit into the fund of certain moneys and would continuously appropriate the moneys in the fund to the state board for	Support	Passed through both houses and awaiting signature by governor. All funding via Greenhouse Gas Fund and General Fund. No letter.

					grants, loans, contracts, or services to assist eligible recipients.		
SB 204	Dodd D	State Water Project: contracts.	Amended: 5/17/2019	7/10/2019-A. 2 YEAR	Would require the Department of Water Resources to provide at least 10 days' notice to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature before holding public sessions to negotiate any potential amendment of a long-term water supply contract that is of projectwide significance with substantially similar terms intended to be offered to all contractors. The bill would require the department, before the execution of a specified proposed amendment to a long-term water supply contract and at least 60 days before final approval of such an amendment, to submit to the Joint Legislative Budget Committee and relevant policy and fiscal committees of the Legislature certain information regarding the terms and conditions of a proposed amendment of a long-term water supply contract and to submit a copy of the long-term contract as it is proposed to be amended.	Oppose	Coalition letter mailed out 4/24/19. Amended and no longer threatens to delay the Delta tunnels.
SB 414	Caballero D	Small System Water Authority Act of 2019.	Amended: 6/25/2019	7/10/2019-A. APPR.	Would create the Small System Water Authority Act of 2019 and state legislative findings and declarations relating to authorizing the creation of small system water authorities that will have powers to absorb, improve, and competently operate noncompliant public water systems. The bill, no later than March 1, 2020, would require the state board to provide written notice to cure to all public agencies, private water companies, or mutual water companies that operate a public water system that has either less than 3,000 service connections or that serves less than 10,000 people, and are not in compliance, for the period from July 1, 2018, through December 31, 2019, with one or more state or federal primary drinking water standard maximum contaminant levels, as specified.	Support	Sent letters to Caballero, Eastern Municipal WD (sponsor) and Senator Allen, Chair of the Environmental Quality Committee on 3/19/19. Lette r to Assembly Chair Quirk on 6/20/19 and Assembly Local Government Committee 6/20/19.

B. Watch

Measure	Author	Topic	Current Text Version	Location	Brief Summary	Position	Notes 1
AB 382	Mathis R	Integrated regional water management plans: grant funding: upper	Introduced: 2/5/2019	5/17/2019-A. 2 YEAR	Current law provides that an integrated regional water management plan is eligible for funding allocated specifically for implementation of integrated regional water management. Current law requires certain state agencies to include in any set		

		watershed health.			of criteria used to select projects and programs for funding, a criterion that provides a preference for regional projects or programs. This bill would require the department to include in any criteria used to select a project or program for grant funding authorized on or after January 1, 2020 a criterion that provides a preference for a regional water management group undertaking a project improving upper watershed health upstream and outside of the defined geographical area covered by the group's plan.		
AB 405	Rubio, Blanca D	Sales and use taxes: exemption: water treatment.	Amended: 4/25/2019	5/15/2019-A. APPR. SUSPENSE FILE	Would, on and after January 1, 2020, and before January 1, 2025, exempt from that Sales and Use Tax the gross receipts from the sale in this state of, and the storage, use, or other consumption in this state of, chemicals used by a city, county, public utility, and sanitation district to treat water, recycled water, or wastewater regardless of whether those chemicals or other agents become a component part thereof and regardless of whether the treatment takes place before or after the delivery to consumers.		
AB 441	Eggman D	Water: underground storage.	Amended: 3/27/2019	5/17/2019-A. 2 YEAR	Under current law, the right to water or to the use of water is limited to that amount of water that may be reasonably required for the beneficial use to be served. Current law provides for the reversion of water rights to which a person is entitled when the person fails to beneficially use the water for a period of 5 years. Current law declares that the storing of water underground, and related diversions for that purpose, constitute a beneficial use of water if the stored water is thereafter applied to the beneficial purposes for which the appropriation for storage was made. This bill would instead provide that any diversion of water to underground storage constitutes a diversion of water for beneficial use for which an appropriation may be made if the diverted water is put to beneficial use, as specified.		
AB 591	Garcia, Cristina D	Central Basin Municipal Water District: board of directors.	Enrolled: 7/9/2019	7/8/2019-A. ENROLLMENT	The Municipal Water District Law of 1911 provides for the formation of municipal water districts and grants to those districts specified powers. Current law permits a district to acquire, control, distribute, store, spread, sink, treat, purify, recycle, recapture, and salvage any water for the beneficial use of the district, its inhabitants, or the owners of rights to water in the district. Current law requires the board of directors of the Central Basin Municipal Water District to be composed		

					of 8 directors until the directors elected at the November 8, 2022, election take office, when the board would be composed of 7 directors, as prescribed. Current law requires the 3 directors appointed by the water purveyors, as specified, to live or work within the district and requires the term of an appointed director to be terminated if the appointed director no longer is employed by or a representative of the appointing entity. This bill would define representative for these purposes to be a consultant to or contractor of an entity, or a governing board member of a mutual water company.		
AB 636	Gray D	State Water Resources Control Board: water quality objectives.	Introduced: 2/15/2019	4/26/2019-A. 2 YEAR	Would prohibit the State Water Resources Control Board from implementing water quality objectives for which the state board makes a certain finding relating to environmental quality until it has submitted the water quality objectives and a statement of that finding to the appropriate policy committees of the Legislature and each committee has held a hearing on these matters.		
AB 637	Gray D	State Water Resources Control Board: disadvantaged communities: drinking water.	Amended: 4/11/2019	5/17/2019-A. 2 YEAR	Would require the State Water Resources Control Board, before taking an action that significantly impacts drinking water, to use existing information to identify impacted disadvantaged communities and to seek to reduce impacts to those communities to the greatest extent practicable. The bill would also require the board to ensure that disadvantaged communities are provided an opportunity to participate in the public process for a decision that significantly impacts drinking water by holding a public hearing in or near an impacted community.		
AB 638	Gray D	Department of Water Resources: water storage: climate change impacts.	Amended: 7/11/2019	7/11/2019-S. APPR.	Current law requires the Department of Water Resources to gather and correlate information and data pertinent to an annual forecast of seasonal water crop, as specified. Current law also requires the department to update every 5 years the plan for the orderly and coordinated control, protection, conservation, development, and use of the water resources of the state, which is known as The California Water Plan. This bill would require the department, as part of the update to the California Water Plan every 5 years, to identify water storage facilities vulnerable to climate change impacts and the mitigation strategies for anticipated adverse impacts, as provided.		
AB 658	Arambula D	Water rights: water	Amended: 7/11/2019	7/9/2019-S. APPR.	Would authorize a groundwater sustainability agency or local agency to		

		management.			apply for, and the State Water Resources Control Board to issue, a conditional temporary permit for diversion of surface water to underground storage for beneficial use that advances the sustainability goal of a groundwater basin, as specified.		
AB 756	Garcia, Cristina D	Public water systems: perfluoroalkyl substances and polyfluoroalkyl substances.	Enrolled: 7/9/2019	7/8/2019-A. ENROLLMENT	Would authorize the State Water Resources Control Board to order a public water system to monitor for perfluoroalkyl substances and polyfluoroalkyl substances. The bill would require a community water system or a nontransient noncommunity water system, upon a detection of these substances, to report that detection, as specified. The bill would require a community water system or a nontransient noncommunity water system where a detected level of these substances exceeds the response level to take a water source where the detected levels exceed the response level out of use or provide a prescribed public notification.		
AB 841	Ting D	Drinking water: contaminants: perfluoroalkyl and polyfluoroalkyl substances.	Amended: 3/20/2019	7/10/2019-S. 2 YEAR	Would require the Office of Environmental Health Hazard Assessment to adopt and complete a work plan within prescribed timeframes to assess which substances in the class of perfluoroalkyl and polyfluoroalkyl substances should be identified as a potential risk to human health, as provided. The bill would require the office, as part of those assessments, to determine which of the substances are appropriate candidates for notification levels to be adopted by the state board. The bill would require the Office of Environmental Health Hazard Assessment, by January 1, 2022, to provide to the Legislature an update on the assessment.		
AB 955	Gipson D	Water replenishment districts: water system needs assessment program.	Amended: 7/11/2019	7/11/2019-S. APPR.	Would authorize a water replenishment district, pursuant to an agreement with the State Water Resources Control Board, to offer to conduct a needs assessment program for water systems serving disadvantaged communities within the district, as specified. The bill would make a water system's participation in the program voluntary. The bill would authorize the district, upon completion of the needs assessment, to develop and evaluate options to address the findings and recommendations in the needs assessment and prepare an implementation plan for recommendation to the water system.		
AB 1204	Rubio, Blanca D	Public water systems: primary	Introduced: 2/21/2019	4/26/2019-A. 2 YEAR	Would require the adoption or amendment of a primary drinking water standard for a contaminant in drinking water not		

		drinking water standards: implementation date.			regulated by a federal primary drinking water standard or that is more stringent than a federal primary drinking water standard to take effect 3 years after the date on which the state board adopts or amends the primary drinking water standard. The bill would authorize the state board to delay the effective date of the primary drinking water standard adoption or amendment by no more than 2 additional years as necessary for capital improvements to comply with a maximum contaminant level or treatment technique.		
AB 1220	Garcia, Cristina D	Metropolitan water districts.	Chaptered: 7/10/2019	7/10/2019-A. CHAPTERED	Under the Metropolitan Water District Act, the board of a metropolitan water district is required to consist of at least one representative from each member public agency, as prescribed. The act authorizes each member public agency to appoint additional representatives not exceeding one additional representative for each 5% of the assessed valuation of property taxable for district purposes within the entire district that is within the boundaries of that member public agency. This bill would prohibit a member public agency from having fewer than the number of representatives it had as of January 1, 2019.		
AB 1414	Friedman D	Urban retail water suppliers: reporting.	Amended: 6/3/2019	6/25/2019-S. THIRD READING	Would require each urban retail water supplier to submit a completed and validated water loss audit report as prescribed by the Department of Water Resources on or before October 1 of each year until October 1, 2023, if reporting on a calendar year basis and on or before January 1 of each year until January 1, 2024, if reporting on a fiscal year basis. The bill would require on or before January 1, 2024, and on or before January 1 of each year thereafter, each urban retail water supplier to submit a completed and validated water loss audit report for the previous calendar year or previous fiscal year as part of an existing report relating to its urban water use.		
AB 1588	Gloria D	Drinking water and wastewater operator certification programs.	Amended: 6/25/2019	7/9/2019-S. APPR.	Current law requires the State Water Resources Control Board to issue a water treatment operator certificate and water distribution operator certificate by reciprocity to any person holding a valid, unexpired, comparable certification issued by another state, the United States, prescribed territories or tribal governments, or a unit of any of these. Current law requires the board to classify types of wastewater treatment plants for the purpose of determining the levels of		

					competence necessary to operate them. This bill would require the board to evaluate opportunities to issue a water treatment operator certificate or water distribution operator certificate by reciprocity, or a wastewater certificate by examination waiver, to persons who performed duties comparable to those duties while serving in the United States military, as specified.		
SB 19	Dodd D	Water resources: stream gages.	Amended: 6/11/2019	7/3/2019-A. APPR. SUSPENSE FILE	Would require the Department of Water Resources and the State Water Resources Control Board, upon an appropriation of funds by the Legislature, to develop a plan to deploy a network of stream gages that includes a determination of funding needs and opportunities for modernizing and reactivating existing gages and deploying new gages, as specified. The bill would require the department and the board, in consultation with the Department of Fish and Wildlife, the Department of Conservation, the Central Valley Flood Protection Board, interested stakeholders, and, to the extent they wish to consult, local agencies, to develop the plan to address significant gaps in information necessary for water management and the conservation of freshwater species.		
SB 45	Allen D	Wildfire, Drought, and Flood Protection Bond Act of 2020.	Amended: 4/4/2019	4/25/2019-S. APPR.	Would enact the Wildfire, Drought, and Flood Protection Bond Act of 2020, which, if approved by the voters, would authorize the issuance of bonds in the amount of $4,300,000,000 pursuant to the State General Obligation Bond Law to finance projects to restore fire damaged areas, reduce wildfire risk, create healthy forest and watersheds, reduce climate impacts on urban areas and vulnerable populations, protect water supply and water quality, protect rivers, lakes, and streams, reduce flood risk, protect fish and wildlife from climate impacts, improve climate resilience of agricultural lands, and protect coastal lands and resources.		
SB 134	Hertzberg D	Water conservation: water losses: enforcement.	Amended: 5/8/2019	6/18/2019-A. APPR.	Current law requires the State Water Resources Control Board, no earlier than January 1, 2019, and no later than July 1, 2020, to adopt rules requiring urban retail water suppliers to meet performance standards for the volume of water losses. This bill would prohibit the board from issuing an information order, written notice, or conservation order to an urban retail water supplier that does not meet its urban water use objective if the board determines the urban retail water supplier is not meeting its urban water use		Avoids duplicative fines under water conservation regs., although there's disagreement over the meaning of the recent amendment.

					objective solely because the volume of water loss exceeds the urban retail water supplier's standard for water loss and the board is taking enforcement action against the urban retail water supplier for not meeting the performance standards for the volume of water losses.		
SB 205	Hertzberg D	Business licenses: stormwater discharge compliance.	Amended: 7/1/2019	7/10/2019-A. APPR.	Would require, when applying to a city or a county for an initial business license or business license renewal, a person who conducts a business operation that is a regulated industry to demonstrate enrollment with the NPDES permit program by providing specified information, under penalty of perjury, on the application, including, among other things, the Standard Industrial Classification Code for the business. The bill would apply to all applications for initial business licenses and business license renewals submitted on and after January 1, 2020.		
SB 307	Roth D	Water conveyance: use of facility with unused capacity.	Enrolled: 7/18/2019	7/11/2019-S. DESK	Current law prohibits the state or a regional or local public agency from denying a bona fide transferor of water from using a water conveyance facility that has unused capacity for the period of time for which that capacity is available, if fair compensation is paid for that use and other requirements are met. This bill would, notwithstanding that provision, prohibit a transferor of water from using a water conveyance facility that has unused capacity to transfer water from a groundwater basin underlying desert lands, as defined, that is in the vicinity of specified federal lands or state lands to outside of the groundwater basin unless the State Lands Commission, in consultation with the Department of Fish and Wildlife and the Department of Water Resources, finds that the transfer of the water will not adversely affect the natural or cultural resources of those federal or state lands, as provided.		

C. Spot Bill

Measure	Author	Topic	Current Text Version	Location	Brief Summary	Position	Notes 1
AB 508	Chu D	Drinking water: consolidation and extension of service: domestic wells.	Amended: 7/5/2019	7/10/2019-S. APPR.	The California Safe Drinking Water Act requires the state board, before ordering consolidation or extension of service, to, among other things, make a finding that consolidation of the receiving water system and subsumed water system or extension of service to the subsumed water	Watch	

					system is appropriate and technically and economically feasible. The act defines "subsumed water system" for these purposes as the public water system, state small water system, or affected residences consolidated into or receiving service from the receiving water system. This bill would modify the provision that authorizes consolidation or extension of service if a disadvantaged community is reliant on a domestic well described above to instead authorize consolidation or extension of service if a disadvantaged community, in whole or in part, is reliant on domestic wells that consistently fail to provide an adequate supply of safe drinking water.		
AB 722	Bigelow R	Water: dams: fees.	Amended: 4/2/2019	7/10/2019-S. 2 YEAR	Current law requires the Department of Water Resources to adopt, by regulation, a schedule of fees to cover the department's costs in carrying out the supervision of dam safety. Existing law limits the total annual fee for a dam or reservoir located on a farm or ranch property or a privately owned dam with less than 100 acre-feet of storage capacity to no more than 20% of the fees assessed pursuant to the schedule of fees. This bill would limit the total annual fee for a dam operated by certain irrigation districts to no more than 20% of the fees assessed pursuant to the schedule of fees.	Watch	
AB 1021	Frazier D	Pupils with exceptional needs: summer school.	Amended: 4/22/2019	4/26/2019-A. 2 YEAR	Current law requires that every individual with exceptional needs, as defined, who is eligible be provided with educational instruction, services, or both, at no cost to the pupil's parent or guardian or, as appropriate, to the pupil. A free appropriate public education is required to be made available to individuals with exceptional needs in accordance with specified federal regulations adopted pursuant to the federal Individuals with Disabilities Education Act. This bill would require school districts to provide summer school instruction for pupils with intellectual disabilities or autism on weekdays from the last day of the regular school year to the first day of summer school and from the last day of summer school to the first day of the regular school year.	Watch	
AB 1432	Dahle R	Water shortage emergencies: declarations: wildfires.	Chaptered: 6/26/2019	6/26/2019-A. CHAPTERED	Would authorize a public water supplier to declare a water shortage emergency condition without holding a public hearing in the event of a wildfire.	Watch	
AB 1439	Melendez R	State policy for water quality control.	Introduced: 2/22/2019	5/3/2019-A. 2 YEAR	Under current law, the Porter-Cologne Water Quality Control Act, the state policy for water quality control is required to		

					consist of water quality principles and guidelines for long-range resource planning, water quality objectives, and other principles and guidelines deemed essential by the State Water Resources Control Board for water quality control.This bill would make nonsubstantive changes to that provision.		
AB 1653	Frazier D	Missing or Murdered Indigenous Women Task Force.	Amended: 4/25/2019	5/17/2019-A. 2 YEAR	Would create the Missing or Murdered Indigenous Women Task Force in the Department of Justice, and would provide for the membership of that task force. The bill would, among other things, require the task force to complete a formal consultation with California's Indian tribes on how to improve tribal access to databases, develop recommendations for how to increase state resources for reporting and identifying missing and murdered American Indian persons in the state, and develop a database of nonprofit or nongovernmental organizations that provide aid or support in locating missing American Indian persons.	Watch	
AB 1694	O'Donnell D	San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy: territory: Dominguez Channel watershed and Santa Catalina Island.	Amended: 7/11/2019	7/11/2019-S. APPR.	Current law establishes the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy in the Natural Resources Agency and prescribes the functions and duties of the conservancy with regard to the protection, preservation, and enhancement of specified areas of the Counties of Los Angeles and Orange located along the San Gabriel River and the lower Los Angeles River and tributaries along those rivers. Current law, for purposes of those provisions, defines "territory" to mean the territory of the conservancy that consists of those portions of the Counties of Los Angeles and Orange located within the San Gabriel River and its tributaries, the lower Los Angeles River and its tributaries, and the San Gabriel Mountains, as described.This bill would additionally include the Dominguez Channel watershed and Santa Catalina Island, as described, within that definition of territory.	Watch	
SB 762	Jones R	Groundwater storage: beneficial use.	Introduced: 2/22/2019	2/22/2019-S. RLS.	Current law specifies that the storing of water underground, including the diversion of streams and the flowing of water on lands necessary to the accomplishment of that storage, constitutes a beneficial use of water if the water so stored is thereafter applied to the beneficial purposes for which the appropriation for storage was made.This bill would make a nonsubstantive change in those provisions.		

Dead Bill

Measure	Author	Topic	Current Text Version	Location	Brief Summary	Position	Notes 1
AB 129	Bloom D	Microfiber pollution.	Amended: 3/25/2019	4/26/2019-A. 2 YEAR	Would require the State Water Resources Control Board to take specified actions relating to microfiber pollution on or before July 1, 2020, and would require the state board to identify best practices for clothing manufacturers to reduce the amount of microfibers released into the environment. The bill would require, on or before January 1, 2020, a public entity that uses a laundry system, and a private entity that contracts with a state agency for laundry services, to install a filtration system to capture microfibers that are shed during washing.	Watch	
AB 223	Stone, Mark D	California Safe Drinking Water Act: microplastics.	Introduced: 1/16/2019	4/26/2019-A. 2 YEAR	The California Safe Drinking Water Act requires the State Water Resources Control Board to administer provisions relating to the regulation of drinking water to protect public health. Current law requires the state board, on or before July 1, 2020, to adopt a definition of microplastics in drinking water and, on or before July 1, 2021, to adopt a standard methodology to be used in the testing of drinking water for microplastics and requirements for 4 years of testing and reporting of microplastics in drinking water, including public disclosure of those results. This bill would require the state board, to the extent possible, and where feasible and cost effective, to work with the State Department of Public Health in complying with those requirements.	Support	
AB 231	Mathis R	California Environmental Quality Act: exemption: recycled water.	Introduced: 1/17/2019	2/7/2019-A. 2 YEAR	Would exempt from CEQA a project to construct or expand a recycled water pipeline for the purpose of mitigating drought conditions for which a state of emergency was proclaimed by the Governor if the project meets specified criteria. Because a lead agency would be required to determine if a project qualifies for this exemption, this bill would impose a state-mandated local program. The bill would also exempt from CEQA the development and approval of building standards by state agencies for recycled water systems.		
AB 1672	Bloom D	Solid waste: flushable products.	Amended: 4/25/2019	5/17/2019-A. 2 YEAR	The California Integrated Waste Management Act of 1989, administered by the Department of Resources Recycling and Recovery, generally regulates the disposal, management, and recycling of	Support	Sent letter of support to Bloom on 3/8/19 and Environmental

					solid waste. This bill would, among other things, on or after January 1, 2021, prohibit a covered entity, as defined, from labeling a covered product as safe to flush, safe for sewer systems, or safe for septic systems, unless the product is a flushable wipe that meets certain performance standards. The bill would require nonflushable products to be labeled clearly and conspicuously to communicate that they should not be flushed, as specified.		Safety and Toxic Materials Committee on 4/2/19

Not Moving

Measure	Author	Topic	Current Text Version	Location	Brief Summary	Position	Notes 1
AB 134	Bloom D	Safe Drinking Water Restoration.	Amended: 5/20/2019	7/10/2019-S. 2 YEAR	Would require the State Water Resources Control Board to report to the Legislature by July 1, 2025, on its progress in restoring safe drinking water to all California communities and to create an internet website that provides data transparency for all of the board's activities described in this measure. The bill would require the board to develop metrics to measure the efficacy of the fund in ensuring safe and affordable drinking water for all Californians.		
AB 533	Holden D	Income taxes: exclusion: turf removal water conservation program.	Amended: 4/4/2019	5/1/2019-A. APPR. SUSPENSE FILE	Current law, for taxable years beginning on or after January 1, 2014, and before January 1, 2019, excludes from gross income under both laws any amount received as a rebate, voucher, or other financial incentive issued by a local water agency or supplier for participation in a turf removal water conservation program. Current law limits the collection and use of taxpayer information and provides that any unauthorized use of this information is punishable as a misdemeanor. This bill would extend the operative date of the provisions excluding from gross income specified amounts received in a turf removal water conservation program to taxable years beginning before January 1, 2024.	Support	Held in Assm. Approps.
AB 1194	Frazier D	Sacramento-San Joaquin Delta: Delta Stewardship Council.	Introduced: 2/21/2019	4/26/2019-A. 2 YEAR	Would increase the membership of the Delta Stewardship Council to 13 members, including 11 voting members and 2 nonvoting members, as specified. By imposing new duties upon local officials to appoint new members to the council, the bill would impose a state-mandated local program.	Oppose	Signed onto coalition letter via Metropolitan on 3/27/19
SB 332	Hertzberg D	Wastewater treatment:	Amended: 4/30/20	5/17/2019-S. 2 YEAR	Would declare, except in compliance with the bill's provisions, that the discharge of	Oppose	No formal letter from

		recycled water.	19		treated wastewater from ocean outfalls is a waste and unreasonable use of water. The bill would require each wastewater treatment facility that discharges through an ocean outfall and affiliated water suppliers to reduce the facility's annual flow as compared to the average annual wastewater discharge baseline volume, as prescribed, by at least 50% on or before January 1, 2030, and by at least 95% on or before January 1, 2040. The bill would subject the owner or operator of a wastewater treatment facility, as well as the affiliated water suppliers, to a civil penalty of $2,000 per acre-foot of water above the required reduction in overall volume discharge for the failure to meet these deadlines.		JPA or LV. CASA and ReUse have taken formal positions to oppose or oppose unless amended
SB 669	Caballero D	Water quality: Safe Drinking Water Fund.	Introduced: 2/22/2019	5/13/2019-S. APPR. SUSPENSE FILE	Would establish the Safe Drinking Water Fund in the State Treasury and would provide that moneys in the fund are continuously appropriated to the State Water Resources Control Board. The bill would require the state board to administer the fund to assist community water systems in disadvantaged communities that are chronically noncompliant relative to the federal and state drinking water standards and do not have the financial capacity to pay for operation and maintenance costs to comply with those standards, as specified.	Support	Sent letter to Committee Chair Senator Allen and Caballero on 3/7/19

Total Measures: 45

Total Tracking Forms: 45