AGENDA IRVINE RANCH WATER DISTRICT ENGINEERING AND OPERATIONS COMMITTEE TUESDAY, FEBRUARY 18, 2020

CALL TO ORDER	7:30 a.m., IRWD Operations Center, Committee Room 3512 Michelson Drive, Irvine, California 92612		
<u>ATTENDANCE</u>	Committee Chair: Committee Member:	Doug Reinhart John Withers	
<u>ALSO PRESENT</u>	Paul CookJose ZepedaRich MoriKelly LewLars OldewageJohn Dayer	Kevin Burton Wendy Chambers Eric Akiyoshi Jim Colston Malcolm Cortez Bruce Newell	Paul Weghorst Tom Roberts Richard Mykitta Ken Pfister Scott Toland

<u>NOTICE</u>: If you wish to address the Committee on any item, please file your name with the Committee. Forms are provided at the meeting. Remarks are limited to three minutes per speaker on each subject.

COMMUNICATIONS

- 1. Notes: Burton
- 2. Public Comments
- 3. Determine the need to discuss and/or take action on item(s) introduced that came to the attention of the District subsequent to the agenda being posted.
- 4. Determine which items may be approved without discussion.

INFORMATION

5. <u>UPCOMING PROJECTS STATUS REPORT – CORTEZ / AKIYOSHI / LEW /</u> <u>MORI / BURTON</u>

Recommendation: Receive and file.

6. <u>ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM</u> <u>ACCREDITATION STANDARD UPDATE – OLDEWAGE /</u> DRYZMYKOWSKI / COLSTON / BURTON

Recommendation: Receive and file.

7. IRWD PARTICIPATION IN UCI RESEARCH PROJECTS – WEGHORST

Recommendation: Receive and file.

8. <u>SYPHON RESERVOIR IMPROVEMENT PROJECT MITIGATION UPDATE –</u> <u>COREY / WELCH / SANCHEZ / WEGHORST</u>

Recommendation: Receive and file.

ACTION

9. <u>SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT</u> <u>AMENDMENT NO. 9 – BURTON</u>

Recommendation: That the Board approve Amendment No. 9 to the Santiago Aqueduct Commission Joint Powers Agreement, subject to non-substantive changes.

10. <u>ON CALL ENVIRONMENTAL CONSULTANT SELECTION – COREY /</u> WELCH / SANCHEZ / WEGHORST

Recommendation: That the Board authorize the General Manager to execute Professional Service Agreements with ESA, LSA, Dudek and Psomas to provide on-call CEQA/NEPA services, for the next four years, for not-to-exceed amounts of \$400,000 each and with Harmsworth Associates, Psomas and ESA to provide on-call monitoring and permitting services, for the next four years, for not-toexceed amounts of \$400,000 each.

CLOSED SESSION

11. A. CONFERENCE WITH REAL PROPERTY NEGOTIATORS- Pursuant to Government Code Section 54956.8:

Property: Assessor's Parcel Numbers 105-361-07 and 105-361-09

Agency Negotiator: Paul Cook, General Manager; Paul Weghorst, Executive Director of Water Resources; and Rob Jacobson, Director of Treasury & Risk Management

Negotiating Parties: David S. Belna, Trustee of the David S. Belna Trust Dated May 28, 1998; David Belna, Successor Trustee of the Belna Family Trust Dated May 16, 1986; Paul F. Belna, Trustee of the Paul F. Belna Trust Dated September 12, 1996, Steven Belna, Trustee of the Steven Belna Trust Dated April 27, 2001; Thomas H. Hale and Mary C. Hale as Trustees for the Hale Family Revocable Trust 2011; Jill Richmond, Trustee of the Richmond Family Trust Dated April 16, 1980; Ron Martinez, Trustee of the Wilkes Family Trust Dated July 11, 1989.

Under negotiation: Price and Terms of Payment

CLOSED SESSION (Continued)

B. CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8:

Property: Assessor's Parcel Number 842-061-04

Agency Negotiator: Paul Cook, General Manager; Paul Weghorst, Executive Director of Water Resources; and Rob Jacobson, Director of Treasury & Risk Management

Negotiating Parties: Linda U. Laval Living Trust, Mark U. Parker Living Trust, Steven U. Parker, Sr. Living Trust

Under negotiation: Price and Terms of Payment

C. CONFERENCE WITH REAL PROPERTY NEGOTIATORS – Pursuant to Government Code Section 54956.8:

Property: Assessor's Parcel Numbers 104-119-56, 104-043-59, 105-391-36, 104-118-78, 104-119-53, 104-118-98 and 104-119-55

Agency Negotiator: Paul Cook, General Manager; Paul Weghorst, Executive Director of Water Resources; and Rob Jacobson, Director of Treasury & Risk Management

Negotiating Parties: The Irvine Company

Under negotiation: Price and Terms of Payment

OTHER BUSINESS

- 12. Directors' Comments
- 13. Adjourn

<u>Availability of agenda materials</u>: Agenda exhibits and other writings that are disclosable public records distributed to all or a majority of the members of the above-named Committee in connection with a matter subject to discussion or consideration at an open meeting of the Committee are available for public inspection in the District's office, 15600 Sand Canyon Avenue, Irvine, California ("District Office"). If such writings are distributed to members of the Committee less than 72 hours prior to the meeting, they will be available from the District Secretary of the District Office at the same time as they are distributed to Committee Members, except that if such writings are distributed one hour prior to, or during, the meeting, they will be available at the entrance of the meeting room at the District's Operations Committee Room at 3512 Michelson, Irvine, California. The Irvine Ranch Water District's Committee Room is wheelchair accessible. If you require any special disability-related accommodations (e.g., access to an amplified sound system, etc.), please contact the District Secretary at (949) 453-5312 during business hours at least seventy-two (72) hours prior to the scheduled meeting.

February 18, 2020 Prepared by: M. Cortez / E. Akiyoshi/ K. Lew / R. Mori Submitted by: K. Burton Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

UPCOMING PROJECTS STATUS REPORT

SUMMARY:

A status report of Irvine Ranch Water District's Upcoming Projects is presented to the Committee for information.

BACKGROUND:

The information, which is attached as Exhibit "A", is a status report submitted quarterly to the Committee for review.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Upcoming Projects Status Report

EXHIBIT "A"

IRWD UPCOMING PROJECTS STATUS REPORT

	Start	Start	Construction	Construction
Project Name	Planning	Design	Award	Final Acceptance
Turtle Ridge DW, RW Pipeline Rehabilitation			Winter 2020	
University Drive Widening Appurtenance Relocations (RA w/ Irvine)				Spring 2020
MWRP Tertiary Filter Rehabilitation			Spring 2020	
MWRP MBR Fall Protection		Winter 2020	Spring 2020	
MWRP Primary Tanks Replacement Covers			Spring 2020	
Culver and University Intersection DW Pipeline Relocation			Winter 2020	Spring 2020
MWRP Compressed Natural Gas Fueling Station			Summer 2020	
San Joaquin Reservoir Filtration Facility			Summer 2020	
HATS Diversion Structure Relining		Winter 2020		
Aliso Creek Remediation			Spring 2020	
2019 Vault Lid Replacement			Spring 2020	
Sewer Rehabilitation in Pelican Hill Golf Club				Summer 2020
Bonita Canyon Drive Zone D to B PRV Supply Line Replacement				Spring 2020
Ladd Canyon Road DW Pipeline Replacement				Winter 2020
Lake Forest Woods Sewer Improvements			Spring 2020	
Santiago Canyon Pump Station Improvements			Winter 2020	Winter 2021
MWRP Emergency Recycled Water Diversion to San Diego Creek				Winter 2020
Sewer Siphon Improvements			Winter 2020	Winter 2021
Baker Campus Entrance Improvements			Winter 2020	Spring 2020
Wells 5, 14 and 16 Rehabilitation				Spring 2020
MWRP Odor Scrubber Platforms				Spring 2020
MWRP Headworks Screening Area Diverter Chute and Odor Scrubber Area Paving			1	Spring 2020
DATS Miscellaneous Repairs		Winter 2020	Spring 2020	Fall 2020
Bake Parkway Zone 5-4 PRV and Pipeline				Summer 2020
Baker WTP Hydrochloric Acid Scrubber Evaluation			Spring 2020	
Lake Forest Zone C Pipeline			Summer 2020	Spring 2021
3.7 MG Zone 1 Reservoir				Spring 2020
Eastwood Zone A-B BPS and Zone A-C BPS				Summer 2020
Zone A-B and Zone A-C BPS Offsite Pipelines and ILP Bottom Drains				Summer 2020
Zone A to Rattlesnake Reservoir BPS			Summer 2020	Winter 2023
Lake Forest Zone B-C BPS			Winter 2021	
Baker WTP Softened Water Analysis		Winter 2020	Summer 2020	
Serrano Creek Outlet Structure Improvements			Summer 2020	
ILP North Conversion - Reservoir				Winter 2020
Sewage Treatment Plant Master Plan		Fall 2020		
PDF Sodium Hypochlorite Storage and Feed System			Winter 2020	Summer 2021
Santiago Creek Dam Sloped Outlet			Fall 2021	
Santiago Creek Dam Spillway Replacement		Winter 2020		

Draiget Name	Start	Start	Construction	Construction
Project Name	Planning	Design	Award	Final Acceptance
Santiago Canyon Fleming Zone 8 Tank and Zone 8-9 BPS			Summer 2021	
MWRP Biosolids and Energy Recovery Facilities				Fall 2020
Syphon Reservoir Improvements		Summer 2020		
Syphon Reservoir Geotechnical Investigation				Spring 2020
Baker WTP Solar Array				Winter 2020
MWRP Unit Substation T-1 Replacement			Winter 2020	Winter 2021
PA 1, Orchard Hills Neighborhood 3 RW (RA w/ICDC)				Summer 2020
PA 6, Neighborhood 5B and C Phase 2 RW (RA w/ICDC)				Summer 2020
PA 12, Innovation Park DW and RW (RA w/ICDC)				Fall 2020
PA 12, Innovation Park DW (RA w/ICDC)				Fall 2020
PA 1, Jeffrey Road Extension RW (RA w/CDC)			Summer 2020	
Tustin Legacy, Moffett at Peters Canyon Channel DW, RW (RA w/Tustin)				Summer 2020
Tustin Legacy, Flight Drive RW (RA w/Tustin)				Summer 2020
Tustin Legacy, Neighborhood South Phase 1, S (RA with/Tustin)				Spring 2021
PA 51, Marine Way DW, RW (RA w/Heritage Fields)				Summer 2020
PA 51, South C St and LY St, S, RW (RA w/Heritage Fields)				Summer 2020
PA 51, Alton Pkwy from Technology to Muirlands, DW S, RW (RA w/Heritage Fields)				Summer 2020
PA 51, Marine Way from Barranca Pkwy to Alton Pkwy, DW S, RW (RA w/Heritage Fields)				Summer 2020
PA 51, Alton Interceptor Sewer (RA w/Heritage Fields)				Summer 2020
PA 51, Marine Way from Alton to Barranca Sewer (RA w/Heritage Fields)				Summer 2020
PA 51, Sociable from Z St to B St, RW (RA w/Heritage Fields)				Summer 2020
PA 51, GP1 St DW, S, RW (RA w/Heritage Fields)				Summer 2020
PA 51, GP2 St, DW, S, RW (RA w/Heritage Fields)			l	Summer 2020
PA 51, Magnet from Ridge Valley to Bosque RW (RA w/Heritage Fields)				Summer 2020
PA 51, Cadence South DW, S, RW (RA w/Heritage Fields)				Summer 2020
PA 51, District 5 A St DW, RW (RA w/Heritage Fields)				Summer 2020
PA 51, Chinon from Cadence South to Cadence (RA w/Heritage Fields)				Summer 2020
PA 51, Marine Way Reach C Sewer RW (RA w/Heritage Fields)				Summer 2020
PA 51, District 5, F and N St DW, RW				Fall 2020
PA 51, District 5, E St RW (RA w/Heritage Fields)				Fall 2020
PA 51, District 5, Astor DW, RW (RA w/Heritage Fields)				Fall 2020
PA 51, District 5, Merit DW, RW (RA w/Heritage Fields)				Fall 2020
PA 51, District 5, BB St RW (RA w/Heritage Fields)			1	Fall 2020
PA 51, District 5, P St and Cadence DW, RW (RA w/Heritage Fields)				Fall 2020
PA 51, Marine Way from Alton Pkwy to Bake Pkwy DW, RW (RA w/Heritage Fields)				Summer 2021
Serrano Summit Phase 2 DW, RW				Summer 2020
Update to Replacement Planning Model, Phase 2	In-Process			
Criticality Based Pump Station Capital Improvement Program	Winter 2020			

IRWD UPCOMING PROJECTS STATUS REPORT

Drainet Name	Start	Start	Construction	Construction
Project Name	Planning	Design	Award	Final Acceptance
Criticality Based Linear Asset Capital Improvement Program	Fall 2020			
Tustin Legacy / W51 / W52 Treatment Alternatives	In-Process			
Phase 2 Water Demand Factor Calibration	Fall 2020			
Non-Potable and Potable Hydraulic Model Updates	Winter 2020			
Updates to Water Resources Master Plan for 2020 Urban Water Management Plan	Fall 2020			
Sewer Lift Station Peak Wet Winter Flow Analysis	Spring 2020			
			Category	Months
			Winter	Jan. Feb. & Mar.
			Spring	Apr. May & June
			Summer	Jul. Aug. & Sep.
			Fall	Oct. Nov. & Dec.

IRWD UPCOMING PROJECTS STATUS REPORT

February 18, 2020 Prepared by: L. Oldewage/M. Dryzmykowski Submitted by: J. Colston / K. Burton Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM ACCREDITATION STANDARD UPDATE

SUMMARY:

This item is to the update the Engineering and Operations Committee on the issues, current situation and potential future impacts to IRWD resulting from the State Water Resources Control Board's Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program's (ELAP) proposed regulations to update the State's accreditation standard and fees.

BACKGROUND:

In 1988 the California Department of the Public Health's (CDPH) Environmental Laboratory Improvement Act (ELIA) became law and established ELAP to provide accreditation to laboratories in California. In 1994, the Environmental Laboratory Accreditation Act (ELAA) and California Code of Regulations, Title 22 were codified to provide the authority to establish a unified program in the State to approve laboratories reporting data to a variety of regulatory programs; the ELAA is administered by ELAP.

The core function of an accreditation program is to ensure environmental laboratories report reliable, accurate, precise and comparable data produced using approved analytical methods under a quality assurance program that meets the program's standard. This data is essential to ensure a safe water supply, to support regulatory decision making for a broad range of environmental programs, and to demonstrate compliance with the District's Master Reclamation Permit for both the Michelson and Los Alisos Water Recycling Plants. The State also enforces a number of federal regulations, including the Safe Drinking Water Act (SDWA), the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA) through primacy granted by the United States Environmental Protection Agency (EPA). Therefore, ELAP accreditation is required for all laboratories reporting data for State and Federal regulatory programs.

In 2015, California moved the State's drinking water program and ELAP from CDPH to the State Board DDW with a new Director managing the program as the quality, competency and consistency of laboratory audits needed to be addressed. An expert panel was convened to review the existing accreditation program and make recommendations for updates. The panel reviewed existing consensus standards and the option for a state-specific standard and concluded ELAP should adopt a consensus standard, specifically the National Environmental Laboratory Accreditation Committee's (NELAC) Institute (TNI) Standard (2016). ELAP has published a third draft of the proposed regulation adopting the 2016 TNI Standard, Revision 2.1, Volume 1, with modifications. The first significant modification will require ELAP certified laboratories to complete one round, not the normal two, of Proficiency Testing (PT) samples each year addressing the administrative bottleneck in the ELAP. The second significant modification allows alternatives to the TNI education requirements for technical personnel allowing for

Engineering and Operations Committee: Environmental Laboratory Accreditation Program Accreditation Standard Update February 18, 2020 Page 2

possession of professional certification in-lieu of a college degree in a scientific field. This will allow current staff at smaller agency laboratories to continue operation. Due to these modifications of the adopted TNI standard, ELAP certified laboratories will not be able to claim official TNI certification under the proposed program (unless they voluntarily comply with the additional requirements).

ELAP projects the new regulations will be adopted by summer or fall of 2020. Enforcement of stricter PT sample interpretation and enforcement is slated for immediate implementation and laboratories will have three years to meet compliance with the other final accreditation standards.

When ELAP moved from CDPH to DDW a large structural deficit in the budget was identified that previously was funded through CDPH drinking water program general funds. DDW began incrementally increasing fee amounts in the existing fee structure to fund the deficit, but the current structure is considered inequitable with large public and commercial laboratories subsidizing smaller entities. ELAP is designated as a self-funding program and is also preparing regulations on a parallel track with the accreditation standard to update the fee structure. This shift of the fee burden from larger to smaller laboratories may result in some smaller entities ceasing operation.

The proposed regulations, which incorporate the modified 2016 TNI Standard, will significantly impact all environmental laboratories doing business in the state that are not already TNI certified. Most major private contract laboratories are already TNI certified to facilitate doing business nationally. Small publicly owned treatment works and other agency laboratories' major concern is that the administrative overhead required by the TNI Standard will be an unsustainable burden forcing those laboratories to cease generating data for regulatory reporting and perform analyses for process control only, or to cease operation all together. This may also challenge existing private contract laboratory available capacity.

The administrative burden exists because the TNI Standard provides formalized components to areas which had far less or no standardization in the past. The current system did not include a quality management system (e.g. document control, complaints, review of non-conformances, preventative and corrective actions, internal audits or annual management reviews); ethics and data integrity policy requirements; data traceability requirements; method validation requirements; sample handling policies or enforcement like the TNI system requires. These items are important because they reduce misinterpretation and confusion, and ultimately help in the goal of providing both internal and external customers reproducible data of known and documented quality.

IRWD Water Quality Laboratory:

The IRWD Water Quality Department has already taken steps to update the documentation and other procedures to be compliant with the proposed standard. In this process, additional responsibilities have already been placed on all water quality staff. Continued program implementation and oversight will reside with the QA/QC Compliance Administrator and staff in conjunction with the Water Quality Manager and Laboratory Supervisors.

Engineering and Operations Committee: Environmental Laboratory Accreditation Program Accreditation Standard Update February 18, 2020 Page 3

Reviews, both internally and from a gap analysis (IRWD current practices to the 2016 TNI Standard), performed by ELAP's third-party assessor during the most recent routine onsite assessment have determined that many existing practices are substantially compliant, but there remains work to do in both the implementation and tracking phases of implementation.

Staffing – The Laboratory QA Specialist position was upgraded to Quality Assurance Compliance Administrator directly reporting the Director of Water Quality and Regulatory Compliance to meet the TNI Quality Assurance Manager requirement.

Procedures – The laboratory's Quality Manual has been revised to include all of the elements required by the 2016 TNI Standard as modified in the draft regulation. All of the analytical Standard Operating Procedures have been updated to a compliant format with the required content. Staff have also made substantial effort to document non-analytical procedures in new protocols.

Fees – The Water Quality Department has budgeted for the recent incremental fee increases.

Equipment – The laboratory instrumentation and equipment are current and will not require significant replacement costs. The Laboratory Information Management System (LIMS) vendor is actively implementing updates and adding features to help their clients meet the standard.

Readiness – ELAP proposes adoption in the summer or fall of 2020 after which laboratories will have three years in which to become fully compliant. Next steps hinge directly on staffing for the QA/QC Compliance group. Staff is recommending one new qualified technical analyst under the supervision of the QA/QC Administrator to begin the annual internal bench test audits to assist in developing Corrective Action Reports and assist with more formal document control activities. IRWD expects to remain certified by the State throughout the process as staff plans to remain ahead of requirements.

FISCAL IMPACTS:

The new standard (as proposed in the third draft of the regulations) will have the following fiscal impacts:

Staffing – New quality management system requirements for bench level audits and other reviews, and additional record keeping will likely require a regular fulltime staff under the QA/QC Compliance Administrator. Additionally, the laboratory will become more dependent on the LIMS to automate and electronically store a broader range of records. LIMS administration is currently handled as a task by the Water Quality Manager, but management and administration of the LIMS and other laboratory applications will likely require one regular fulltime staff and some additional contracted support from the vendor. The Water Quality Manager will then take on new administrative tasks required.

Equipment – Some additional support equipment will be needed to facilitate the cradle-to -grave tracking of equipment and reagents used to analyze each sample submitted to the laboratory. Dedicated operating supplies and minor general plant capital equipment for specific tasks and

Engineering and Operations Committee: Environmental Laboratory Accreditation Program Accreditation Standard Update February 18, 2020 Page 4

analyses will greatly simplify record keeping. General plant capital funds are already budgeted in the current two year budget cycle.

Fees – The proposed changes to the program's overall fee structure will likely lead to a reduction in the annual accreditation fee paid by the District, but a new on-site assessment charge every two years increases the overall costs. Current program cost is approximately \$15,000 annually. The annual accreditation cost under the proposed ELAP fee structure is \$10,400. The estimated site assessment fee every two years is approximately \$12,000.

ENVIRONMENTAL COMPLIANCE:

Not Applicable.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

None.

February 18, 2020 Prepared by: E. Akiyoshi Submitted by: P. Weghorst Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

IRWD PARTICIPATION IN UCI RESEARCH PROJECTS

SUMMARY:

Staff has been working with the University of California at Irvine (UCI) to increase collaboration on research projects of mutual interest. The following is an overview of 1) an interdisciplinary center that has been established in the UCI School of Social Ecology called Water UCI, and 2) two research projects that will be implemented by the center in collaboration with IRWD.

BACKGROUND:

IRWD has a long-standing relationship with UCI that includes cooperating in the implementation of research projects, supporting student internship programs, implementing water conservation programs, and maximizing the use of recycled water. Over the past year, staff has been working with UCI to increase the level of collaboration with IRWD on research projects of mutual interest. As a result of these efforts, IRWD will be participating in two research projects being conducted by an interdisciplinary center at the University.

Overview of Water UCI:

In 2014, UCI formed an interdisciplinary center in the UCI School of Social Ecology called Water UCI. This center was formed to encourage collaboration among UCI faculty, students and researchers, and to engage with regional and global organizations (including water agencies and non-governmental organizations) on water and water-energy nexus issues.

Recently, Water UCI established an Industry-University Cooperative Research Center (IUCRC) in which IRWD is becoming a member. The purpose of the IUCRC is to perform cutting-edge research in science, engineering and technology areas of interest to water agencies in the Orange County area that are also of interest to other coastal areas. IRWD's participation has been approved in the IUCRC in the amount of \$50,000 each for Fiscal Years 2020-21 and 2021-22. In the near future, Water UCI expects that the National Science Foundation (NSF) will assist with funding the research being conducted by the IUCRC.

PFAS-Related Research:

The presence of per- and polyfluoroalkyl substances (PFAS) in groundwater supplies in portions of Orange County and other areas of California (and across the United States) has led to increased monitoring of groundwater wells and other sources of potable water. It is expected in the near future that monitoring of PFAS in wastewater plant influent and effluent could become a state-imposed requirement.

Engineering and Operations Committee: IRWD Participation in UCI Research Projects February 18, 2020 Page 2

Many sewage treatment agencies have already tested for PFAS concentrations and determined that sewersheds upstream of treatment plants are contributing to PFAS detections in plant influent. Identifying the origins of these substances and whether certain raw wastewater inputs are responsible for a disproportionate share of the contribution are critical questions for the water industry. Improved understanding of the sources could inform potential source control measures that could have implications for both water reuse and environmental discharges of treated wastewater.

The IUCRC will be conducting research that will develop and implement a methodology for sewershed analysis to identify raw wastewater sources of PFAS that can be replicated elsewhere in California. The proposed scope of work for this research is attached as Exhibit "A". The research will identify industrial, commercial and residential sources of PFAS in a representative sewershed in Orange County. At the Committee meeting, staff will provide information related to the status of this PFAS related research.

IRWD is currently serving as a technical advisor for the implementation of this PFAS-related research, in conjunction with Orange County Water District, Santa Margarita Water District, and Moulton Niguel Water District. The National Water Research Institute will be serving as an advisor to the IUCRC to help avoid duplications of efforts in the research community.

Research on Climate Impacts to Infrastructure:

Water UCI has recently submitted a request for funding from the California Strategic Growth Council to conduct research related to developing adaptive strategies toward climate-ready infrastructure systems in California. The Council is a cabinet level committee that is tasked with among other things, improving water and air quality and advancing priorities of the State's climate adaptation strategy.

At Water UCI's request, IRWD submitted a letter of support for this research proposal. Staff expects that elements of the research related to rising seawater elevations could result in information important to future IRWD infrastructure planning efforts. Should the research funding request be successful, IRWD expects to collaborate with the Department of Civil and Environmental Engineering on the research. An overview of the proposed research is provided as Exhibit "B". At the Committee meeting, staff will provide information related to the status and importance of this infrastructure related research.

FISCAL IMPACTS:

The Board of Directors has approved a budget for IRWD's participation in the IUCRC in the amount of \$50,000 each for Fiscal Years 2020-21 and 2021-22. Funding for FY 2020-21 will be used in the PFAS-related research described above. At the present time, staff does not anticipate a need to contribute funding to the research related to climate impacts on infrastructure.

ENVIRONMENTAL COMPLIANCE:

The research described above is not subject to the California Environmental Quality Act.

Engineering and Operations Committee: IRWD Participation in UCI Research Projects February 18, 2020 Page 3

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

- Exhibit "A" Proposed Scope of Work for Research Related to PFAS Sources and Loading at Wastewater Treatment Plants
- Exhibit "B" Overview of Research Related to Climate Change Impacts to California Infrastructure Systems

EXHIBIT "A"

Proposed Scope of Work for Research Related to PFAS Sources and Loading at Wastewater Treatment Plants UCI Industry-University Research Center

Project: Perfluorinated compound sources and loading at wastewater treatment plants – a sewershed-scale analysis

Background: Although wastewater treatment plants (WWTPs) are not themselves a source of per- and polyfluoroalkyl substances (PFAS), these chemicals are introduced to WWTPs from the sewer collection system at the WWTP headworks and are known to subsequently enter the water cycle via discharges of conventionally treated wastewater effluent to the environment, use of tertiary treated wastewater as recycled water, and via discharges from landfills and locations where PFAS were used outdoors. While certain PFAS have been identified as constituents in a number of consumer products, little is known about the specific source inputs of PFAS to WWTPs within a sewershed, which typically has commercial, industrial and residential inputs. Because PFAS, and PFAS precursors that are converted to PFAS during wastewater treatment, may enter WWTPs via different raw wastewater streams, identifying the origins of these substances and whether certain raw wastewater inputs are responsible for a disproportionate share of the contribution are critical questions for the water industry. Improved understanding of the sources to inform potential source control measures has implications for both water reuse (e.g., groundwater recharge, future potential direct potable reuse or direct use of tertiary treated wastewater) and environmental discharges of treated wastewater.

Goals:

- 1. Develop, and implement, a recommended methodology for sewershed analysis to identify raw wastewater sources of PFAS, that can be replicated elsewhere for PFAS or other chemicals of emerging concern (CECs).
- 2. Use such an approach to identify the primary sources of PFAS loading to WWTPs [i.e., industrial, commercial, or residential (including sub-contributions thereof, such as residential grey water, black water, etc.)] via PFAS monitoring of sewershed(s) and discharges to sewershed(s).

The project will require close collaboration with a wastewater agency or agencies.

Suggested tasks:

- 1. Develop a procedure and framework for sewershed analysis. The primary goal of this task is to develop a strategy that can be implemented in the Orange County (OC) (and other) sewersheds. The approach developed should allow for a better understanding of the loading of PFAS to WWTPs via sewershed inputs to the WWTP, and be generally applicable to other CECs if implemented in the future by utilities for other target compounds.
- 2. Sample raw wastewater from multiple regions in at least one OC sewershed in cooperation with local water/wastewater agencies to better understand PFAS loading and origin. The sewershed(s) to be sampled will be decided upon via researcher and Industry Advisory Board discussion after the project award. Sampling should include the WWTP influent location and up-sewer into major trunklines and selected sewer pipelines that feed those trunklines, focusing for example on residential vs. industrial (/commercial) areas. A range of PFAS should be included in the analysis, including short and long-chained compounds (including current suggested candidates for the latest EPA Contaminant Candidate List/DDW list of nine PFAS compounds that have been detected in California as part of their statewide investigation) and ideally, precursors (e.g., total organic precursor analysis; emerging methods should be reviewed). Sampling and analytical

methods should be justified by grounding in previous studies. If budget allows for sampling sewersheds from multiple WWTPs, WWTPs with different characteristics (capacity, inputs, social demographics, etc.) should be sampled. Note: Though the sewer system is the focus of the proposed study, sampling within the WWTP (e.g., WWTP effluent) may be sampled, however this work within the WWTP should be limited due to similar research efforts already underway in California.

- 3. Sample different greywater and blackwater streams within representative homes and/or businesses. Justify household selection (e.g., social demographics). Building on a similar study by Zeng et al. ¹, raw wastewater from different residential streams, such as those coming from a laundry washing machine, shower, kitchen sink, dishwasher etc. may be sampled to determine their individual and relative contributions to PFAS loading. Blackwater (i.e., toilet wastewater) should be included to compare relative loading with greywater streams for PFAS contributions.
- 4. Once certain greywater/blackwater streams have been identified as more abundant PFAS sources, potentially conduct additional tests or follow-up to identify what specifically is contributing the PFAS/precursors to the wastewater (e.g., specific consumer products).
- 5. Additional CECs may be included in the study, pursuant to budgetary constraints. Given the effort and coordination involved in sewershed sampling and residential analysis, it may be worthwhile to include different CECs at the same time.

Timeline, deliverables and budget: The duration of the project will be one year. The project PI shall provide brief quarterly status reports as well as a year-end final report and presentation. The budget for this project is approximately \$140K. However, additional funding may be available for sampling of additional utilities' WWTPs/systems. All of the above suggested tasks (i.e., both sewer collection system and household sampling) are of high interest, but subject to available budget. Thus, proposals may suggest alternative strategies such as limiting the scope of sampling for each major task; proposing work in two phases (e.g., Year 1, Year 2, with Year 2 funding not guaranteed and subject to Year 1 findings), or other novel strategies.

Reference:

1. Zeng, T.; Mitch, W. A., Contribution of N-Nitrosamines and Their Precursors to Domestic Sewage by Greywaters and Blackwaters. *Environ Sci Technol* **2015**, *49* (22), 13158-67.

Exhibit " B"

1

Overview of Proposed Water UCI Research Related to Mapping Climate Change Impacts on California Infrastructure Systems

In the past decades, the anthropogenic emissions in the atmosphere has increased triggering more natural hazards with cascading effects that cause damages to infrastructure such as leaves, dams, roads and energy infrastructure systems. Furthermore, a combination of climate hazards (e.g., high/low precipitation, high/low temperatures, wildfires, sea level rise, flooding) may cause a significant impact on infrastructure systems and society, though individual climatic events involved may not be severe extremes themselves. The changes in the climate extremes and incorporating climate change impacts on infrastructure have been recognized by California State Legislature as an emerging problem through AB-2800 (Quirk). The goal of AB-2800 is to achieve a set of climate adaptive strategies and guidelines to ensure safety and durability of infrastructure in the future (the PI is a member of the AB 2800 Climate-Safe Infrastructure Working Group). The main roadblock to ensure the above necessity is to define a framework for linking climate extremes to exposure of infrastructure systems. The overarching goal of this project is to use historical observations and future projections to provide a general tool for assessing the exposure of infrastructure systems under single or multiple climatic drivers, with a focus on the water, energy and transportation sectors. We propose integrating the final products (maps showing climate change impacts on California infrastructure systems) into Cal-Adapt. This will add a new dimension to Call-Adapt through moving toward potential infrastructure impact mapping for management and decision-making. The proposed research will address the following objectives:

(OB1) Investigating climate-induced stressors on California infrastructure systems, i.e. energy and transportation sectors, resulting from a single climatic extreme or concurrent/consecutive climatic extremes.

(OB2) Quantifying the exposure of infrastructure systems as a consequence of single or multiple natural hazards under uncertainty.

(OB3) Providing infrastructure exposure maps in Geographic Information System (GIS) friendly formats for dissemination through Cal-Adapt.

IRWD Involvement:

IRWD's role will be advisory in nature and staff anticipates consulting with the PI as the research team tailors the outputs to the needs of the supporting agencies like IRWD."

February 18, 2020 Prepared by: J. Corey / K. Welch Submitted by: F. Sanchez / P. Weghorst Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

SYPHON RESERVOIR IMPROVEMENT PROJECT MITIGATION UPDATE

SUMMARY:

Irvine Ranch Water District is coordinating with representatives from the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to obtain the required environmental permits and to develop a mitigation plan for the proposed Syphon Reservoir Improvement Project. At the Committee meeting, staff will provide an update on the coordination efforts and conceptual plans that have been developed to mitigate impacts to sensitive habitat that surrounds Syphon Reservoir. Staff will also describe how the potential acquisition of land and mitigation rights could help facilitate implementation of the plan.

BACKGROUND:

IRWD has been working with consultants at Environmental Science Associates (ESA) on the preparation of an Environmental Impact Report (EIR) and permitting for the Syphon Reservoir Improvement Project. The EIR would provide environmental compliance to increase IRWD's seasonal recycled water storage capacity by approximately 4,100 acre-feet (AF). IRWD proposes to increase the Syphon Reservoir storage capacity by replacing the existing 59-foot tall engineered dam with a new 136-foot engineered dam. The final useable storage capacity for Syphon Reservoir would be approximately 5,000 AF. A location map of Syphon Reservoir is provided as Exhibit "A".

Included with the acquisition of Syphon Reservoir, IRWD also acquired all of the previously mitigated land surrounding the reservoir site that was associated with the development of the Eastern Transportation Corridor by the Transportation Corridor Authority. The grant deed for the surrounding property incorporates use restrictions for the previously mitigated areas. Exhibit "B" depicts the Syphon Reservoir area and surrounding area with various plant communities identified.

IRWD and ESA have been coordinating with representatives from USFWS and CDFW (Resource Agencies) to discuss expected project impacts to jurisdictional areas and habitats as well as the Resource Agencies' concerns. In December 2019, the Resource Agencies provided staff with an initial evaluation of the expected mitigation requirements to account for project impacts to upland habitat types. These discussions and evaluation have resulted in the development of conceptual mitigation plans.

Mitigation Plan Concepts:

Syphon Reservoir is located within the Orange County Central / Coastal Natural Communities Conservation Plan (NCCP) Reserve. As a participatory member of the NCCP, IRWD has 53 acres of in-reserve coastal sage scrub (CSS) take credits, which can be used to offset impacts Engineering and Operations Committee: Syphon Reservoir Improvement Project Mitigation Update February 18, 2020 Page 2

to CSS in the Reserve. In September 2019, staff and environmental consultants at ESA provided the Resource Agencies with the estimated acreage within the NCCP and previously restored grant deed areas that would be impacted from the proposed Project. The estimated acreage is 48.45 acres. At that time, staff informed USFWS and CDFW that IRWD intends to utilize 34 acres of its in-reserve CSS take credits for the Syphon Reservoir Improvement Project. IRWD would retain the remaining 19 acres of credits for future projects which would be located in the NCCP Reserve.

Based on the Resource Agencies' assessed environmental value of the impacted vegetation and acreage, as well as consideration of using 34 acres of in-reserve CSS take credits, the Resource Agencies provided an evaluation of the required mitigation utilizing different ratios to compensate for impacts to covered species and sensitive habitat. The Resource Agencies' evaluation addressed the need to provide for past restoration efforts and to adequately replace any lost habitat that was protected by the grant deed. In the evaluation, the Resource Agencies determined that Project impacts would require 122.37 acres of CSS mitigation as shown in Exhibit "C". IRWD's use of 34.38 acres of in-reserve take credits reduces the mitigation ratio from 4:1 to 2:1.

In addition to the 34 acres of take credits, the conceptual mitigation plan would require acquisition of mitigation lands, the purchase of mitigation rights and the restoration of CSS. The Resource Agencies indicated that on-site enhancement of previously mitigated land is preferable and would receive a more favorable mitigation ratio than off-site restoration. Staff has indicated to the Resource Agencies its intent to explore various mitigation options in the development of the conceptual mitigation plan, which may include a combination of on-site restoration and the conservation and/or restoration of acquired lands or mitigation rights. At the Committee meeting, staff will provide additional information on the potential acquisition of land and mitigation rights, as well as potential conservation and restoration opportunities that could help facilitate implementation of the plan.

Last month, staff and ESA informed the Resource Agencies that IRWD is exploring incorporating passive recreational components (e.g., walking/jogging trail, fishing, etc.) into the proposed project. Preliminary estimates prepared by ESA indicate that passive recreational components would result in additional acres of impacts to CSS. Discussions about the passive recreational components and associated CSS mitigation are ongoing with the Resource Agencies. Potential impacts to riparian and wetland habitat and the associated mitigation requirements are being addressed separately with the Resource Agencies.

FISCAL IMPACTS:

Project 03808, Syphon Reservoir Improvement Project, is included in the FY 2019-21 Capital Budget as a flagged project. At this time, the existing budget and expenditure authorizations are sufficient to fund the mitigation/permitting work. Staff will return to the Committee and Board to request additional budget for potential land and mitigation right acquisitions related to the proposed mitigation plan.

Engineering and Operations Committee: Syphon Reservoir Improvement Project Mitigation Update February 18, 2020 Page 3

ENVIRONMENTAL COMPLIANCE:

The Syphon Reservoir Improvement Project is subject to the California Environmental Quality Act (CEQA). IRWD is preparing an EIR for the project, in compliance with CEQA, California Code of Regulations Title 14, Chapter 3, Article 6, Section 15070.

RECOMMENDATION:

Receive and file.

LIST OF EXHIBITS:

Exhibit "A" – Site location map: Syphon Reservoir Exhibit "B" – Syphon Reservoir, Surrounding Property and Plant Communities Exhibit "C" – USFWS and CDFW Mitigation Estimate

EXHIBIT "A"



SOURCE: ESRI, 2016; OC LAFCO, 2018

IRWD Syphon Reservoir

Figure 1-1 Project Location

ESA

Exhibit "B" Syphon Reservoir, Surrounding Property and Plant Communities



SOURCE: ESRI, 2016, ESA, 2019.

ESA

EXHIBIT "C"

USFWS/CDFW Mitigation Package Offered

• Mitigation Properties:

- 1. Land Acquisition
- 2. Mitigation Rights Acquisition
- 3. CSS Restoration
- Assumed IRWD will use ~34.38 acres of in-Reserve "take" credits
- Requires 122.373 acres mitigation (see Table below)

	Impacts (ac)	Ratio	Estimated Mitigation (ac)
CSS and Grassland/CSS (Credits used)	34.38	*2:1	68.76
CSS and Grassland/CSS	13.18	*4:1	52.72
Sumac Chaparral	0.893	*1:1	0.893
Total	48.453		122.373



February 18, 2020 Prepared and submitted by: K. Burton Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT <u>AMENDMENT NO. 9</u>

SUMMARY:

IRWD and County of Orange executed an agreement in February 2020 to transfer the County's 1.0 cubic feet per second (cfs) capacity in Reach 1U and 1.06 cfs capacity in Reaches 2U, 3U and 4U of the Baker Pipeline to IRWD. Amendment No. 9 to the Santiago Aqueduct Commission (SAC) Joint Powers Agreement recognizes the transfer of capacity and the resulting allocation of costs of maintenance, capital repairs and capital improvements to the Baker Pipeline. Amendment No. 9 also removes the County as a represented agency of the Santiago Aqueduct Commission. Staff recommends that the Board approve Amendment No. 9 to the SAC Joint Powers Agreement, subject to non-substantive changes.

BACKGROUND:

IRWD and the County of Orange executed an Assignment and Assumption Agreement (attached as Exhibit "A") in February 2020 to transfer the County's 1.0 cfs capacity in Reach 1U and 1.06 cfs capacity in Reaches 2U, 3U and 4U of the Baker Pipeline to IRWD. The transfer of capacity rights and the resulting allocations of maintenance, capital repairs, and capital improvement costs became effective February 11, 2020.

The intent of Amendment No. 9 (attached as Exhibit "B") to the SAC Joint Powers Agreement is to memorialize the effect of the Assignment and Assumption Agreement and acknowledge that each of the SAC member and represented agencies not participating in the Assignment and Assumption Agreement will retain the same capacity rights identified in Amendment No. 8 to the SAC Joint Powers Agreement. Additionally, Amendment No. 9 removes the County of Orange as a represented agency of SAC.

The capacity of each SAC member and represented agency in each reach of the Baker Pipeline is shown in Exhibit "A" of Amendment No. 9. The maintenance, capital repair and capital improvement cost shares for each member and represented agency in each reach, and for the Baker Pipeline as a whole, are shown in Exhibit "B" of Amendment No. 9. The capacities and allocation of costs of maintenance, capital repairs and capital improvements of the non-participating Assignment and Assumption Agreement SAC member and the represented agencies remain unchanged from Amendment No. 8.

Amendment No. 9 has been reviewed by IRWD's legal counsel and was recommended for approval by SAC on December 19, 2019.

Engineering and Operations Committee: Santiago Aqueduct Commission Joint Powers Agreement Amendment No. 9 February 18, 2020 Page 2

FISCAL IMPACTS:

Effective February 11, 2020, the allocation of costs for maintenance, capital repairs and capital improvements will be allocated between the participating member agencies and represented agencies as shown in Exhibit "B". IRWD's capacity purchase will have an added annual maintenance cost of approximately \$1,250.

ENVIRONMENTAL COMPLIANCE:

This activity is exempt from the California Environmental Quality Act (CEQA) as authorized under the California Code of Regulations, Title 14, Chapter 3, Section 15306 which provides exclusion for projects involving basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

RECOMMENDATION:

That the Board approve Amendment No. 9 to the Santiago Aqueduct Commission Joint Powers Agreement, subject to non-substantive changes.

LIST OF EXHIBITS:

- Exhibit "A" Assignment and Assumption Agreement between Irvine Ranch Water District and the County of Orange
- Exhibit "B" Amendment No. 9 to the Santiago Aqueduct Commission Joint Powers Agreement

EXHIBIT "A"

ASSIGNMENT AND ASSUMPTION AGREEMENT

This ASSIGNMENT AND ASSUMPTION AGREEMENT ("Agreement") is dated _______, 2020 (the "Effective Date") and is between IRVINE RANCH WATER DISTRICT, a California water district, organized under Division 13 of the California Water Code ("IRWD"), and the County of Orange ("County"). IRWD and County are each a "Party" and together are the "Parties."

On or about April 13, 1961, the Los Alisos Water District, the El Toro Water District, and the Orange County Municipal Water District entered into the Santiago Aqueduct Commission Joint Powers Agreement (the "JPA"). The JPA created the Santiago Aqueduct Commission ("Commission") to construct, maintain, repair and manage the Santiago Aqueduct ("Aqueduct", also known as the "Baker Pipeline"), which would transmit water to the parties to the JPA.

The JPA was amended eight times, by: Amendment to the JPA (on or about September 11, 1961); Amendment No. 2 to the JPA (on or about January 1, 1978)("Amendment 2"); Amendment No. 3 to the JPA (on or about January 13, 1978); Amendment No. 4 to the JPA (on or about September 1, 1981); Amendment No. 5 to the JPA (on or about October 22, 1986); Amendment No. 6 to the JPA (on or about July 8, 1999); Amendment No. 7 to the JPA (on or about June 19, 2014); and Amendment No. 8 to the JPA (dated March 21, 2019). These Amendments, along with all exhibits and attachments thereto, are collectively identified in this Agreement as the "Amendments." Amendment 2 added IRWD as a party and as a member of the Commission and acknowledged that the County was a party to the JPA with respect to certain matters and was represented on the Commission by the Municipal Water District of Orange County. That amendment, and various other leases and subleases issued pursuant to the Amendments, granted the Parties certain rights and obligations with respect to the construction, maintenance, operation of water lines to be constructed parallel to the Aqueduct to supply water to, among others, the Parties. Pursuant to the JPA Amendments, the County possesses 1.0 cfs capacity in Reach 1U of the Aqueduct, and 1.06 cfs of capacity in each of Reaches 2U, 3U, and 4U of the Aqueduct (together the "County Capacity Rights").

The Parties intend by this Agreement for the County to assign and transfer the County Capacity Rights, and any related rights and obligations under the JPA, memoranda of understanding, related agreements, the Amendments, and any other leases or subleases related thereto, to IRWD for valuable consideration.

The Parties therefore agree as follows:

1. <u>Assignment</u>. In exchange for IRWD's payment to the County of the sum of \$227,790 (the "**Transfer Fee**") concurrent with the delivery of this Agreement, the County hereby assigns and transfers to IRWD all of the County's right, title, interest and obligations under the JPA and the Amendments including the County Capacity Rights (collectively, the "**County Interest**") effective as of the Effective Date. Upon assignment and transfer of the County Interest as set forth in this section, IRWD accepts from the County all such County Interest, subject to the terms and conditions set forth in this Agreement.

2. <u>Related Approvals.</u> The Parties are not aware of any other approvals, acknowledgements, actions, confirmations, notices, consents or permissions required to be obtained or given in order for the County Capacity Rights and County Interest to transfer to IRWD (collectively "**Approvals**"). However, the Parties acknowledge that the Commission members intend to amend the JPA to account for the effect of this Agreement on the ownership of capacity within the Aqueduct. In the event Approvals are required, then IRWD will notify County and use its best efforts to obtain the Approvals on behalf of the Parties, at its own expense. The County agrees to reasonably cooperate with IRWD's efforts.

3. <u>Assumption</u>. IRWD assumes and agrees to perform and fulfill all the terms, covenants, conditions, and obligations required to be performed and fulfilled by the County under the JPA and the Amendments.

4. <u>Assignor Representations</u>. The County represents that, to the County's knowledge, (a) the County has not previously transferred or assigned any portion of the County Interest (including the County Capacity Rights), (b) the County has not amended, modified or terminated the JPA or the Amendments except as set forth therein, and (c) the County has not breached the JPA or the Amendments.

As-Is; Where-Is. Except as otherwise set forth in Section 4 above, IRWD 5. acknowledges and agrees that it is accepting the assignment and conveyance of the County Interest based solely upon IRWD's inspection and investigation of the same and all documents related thereto, or its opportunity to do so, and the County Interest is assigned in an "AS IS, WHERE IS" condition, without relying upon any representation or warranties, express, implied or statutory, of any kind. Except for a breach or misrepresentation caused exclusively by the County, in the event the Parties receive a third-party claim or demand related to this Agreement, or in the event the Parties are named in an action by a third party for issues related to this Agreement, the Parties shall notify the other of such event(s) and IRWD shall represent the County in any legal action unless the County undertakes to represent itself as co-defendant, in which event IRWD shall pay to County its litigation expenses, costs and attorneys' fees. In the event the Parties suffer any losses, damages, costs, charges, or expenses, including reasonable attorney's fees related to an action arising out of or related to this Agreement (except for litigation arising out of or related to a breach or misrepresentation caused exclusively by the County), and if judgment is entered against County and IRWD, an apportionment of liability to pay such judgment shall be made by a court of competent jurisdiction. Neither Party shall request a jury apportionment. Notwithstanding anything to the contrary, the County's aggregate liability in connection with this Agreement shall not exceed the amount of the Transfer Fee.

6. <u>Successors and Assigns</u>. This Agreement will be binding on and inure to the benefit of the Parties, their heirs, executors, administrators, successors in interest, and assigns.

7. <u>Choice of Law and Venue</u>. All matters relating to this Agreement are governed by the laws of the State of California, and venue for any action related to the Agreement shall be the Superior Court of Orange County.
8. <u>Notice</u>. Any notice will be deemed given by depositing it in the United States Mail, first class, return receipt requested, or by courier or overnight delivery service and addressed as follows:

If to IRWD:

Irvine Ranch Water District 16500 Sand Canyon Avenue P.O. Box 5700 Irvine, CA 92619-7000 Attn: Paul A. Cook, General Manager

If to the County:

County of Orange Sheriff's Department Attn: Director of Research and Development 431 The City Drive South Orange, CA 92868

With a copy to:

County of Orange Executive Office Attn: Chief Real Estate Officer 333 W. Santa Ana Boulevard, 3rd Floor Santa Ana, CA 92701

9. <u>Amendment</u>. Any amendment or modification of this Agreement must be written and properly executed by both Parties.

10. <u>Interpretation</u>. Each Party has participated in negotiating and drafting this Agreement, so if an ambiguity or a question of intent or interpretation arises, this Agreement is to be construed as if the Parties had drafted it jointly, as opposed to being construed against a party because it was responsible for drafting one or more provisions of this Agreement.

11. <u>Further Assurances.</u> The Parties shall take such actions, or execute, acknowledge and deliver, or obtain the execution, acknowledgment, and delivery of such instruments as are reasonably necessary, appropriate or desirable to give effect to the provisions of this Agreement.

12. <u>Entire Agreement</u>. This Agreement constitutes the entire agreement between the Parties regarding the County's assignment and IRWD's assumption of all of the County Interest. This Agreement supersedes all prior or contemporaneous agreements, commitments, conditions, discussions, instruments, offers, promises and/or proposals between the Parties regarding the County's assignment and IRWD's assumption of all of the County Interest, whether oral or written.

13. <u>Authority</u>. The Parties represent that the individuals executing this Agreement have the legal power, right and actual authority to bind that Party to the terms and conditions of this Agreement.

IRWD and the County are signing this Agreement to be effective as of the Effective Date.

COUNTY OF ORANGE, a political subdivision of the State of California

By:

Chairwoman of the Board of Supervisors Orange County, California

Signed and certified that a copy of this document has been delivered to the Chair of the Board per Government Code Section 25103, Resolution 79-1535.

ATTEST:

Robin Stieler Clerk of the Board of Supervisors Orange County, California

APPROVED AS TO FORM Office of the County Counsel Orange County, California

By: Deputy County Counsel

IRVINE RANCH WATER DISTRICT

By:

Paul A. Cook, General Manager

APPROVED AS TO FORM: Hanson Bridgett LLP

By: General Counsel

A - 4

EXHIBIT "B"

AMENDMENT NO. 9 TO THE SANTIAGO AQUEDUCT COMMISSION JOINT POWERS AGREEMENT

This Amendment No. 9 to the Santiago Aqueduct Commission Joint Powers Agreement ("Amendment No. 9") is effective July 1, 2020, and is between the following six member agencies of the SANTIAGO AQUEDUCT COMMISSION (the "Commission") created by a Joint Powers Agreement dated September 11, 1961 (as amended, the "Joint Powers Agreement"):

EL TORO WATER DISTRICT;
IRVINE RANCH WATER DISTRICT ("IRWD") on its own behalf and as assignee of the County of Orange (the "County");
MOULTON NIGUEL WATER DISTRICT;
MUNICIPAL WATER DISTRICT OF ORANGE COUNTY (formerly known as Orange County Municipal Water District) ("MWDOC") on behalf of represented agency EAST ORANGE COUNTY WATER DISTRICT ("EOCWD");
SANTA MARGARITA WATER DISTRICT; and
TRABUCO CANYON WATER DISTRICT (formerly known as Santa Ana Mountains County Water District).

The member agencies are also sometimes referred to as the "**Parties**." EOCWD is a "**represented agency**" but is not a member agency.

The Joint Powers Agreement has been previously amended by the following amendments: the first Amendment (December 20, 1974); Amendment No. 2 (January 13, 1978); Amendment No. 3 (November 1, 1978); Amendment No. 4 (September 1, 1981); Amendment No. 5 (October 22, 1986), Amendment No. 6 (July 8, 1999); Amendment No. 7 (June 19, 2014), and Amendment No. 8 (March 21, 2019).

The Joint Powers Agreement (as amended) establishes certain hydraulic grade lines and capacity rights for the member agencies and represented agencies in the various reaches of the Santiago Aqueduct, also known as the Baker Pipeline. The costs of maintenance, capital repairs, and capital improvements to the Baker Pipeline are allocated to the member agencies and represented agencies in proportion to each party's capacity rights in each reach as compared with the total capacity for each reach and in proportion to the length of each reach as compared with the entire length of the Baker Pipeline.

Capacity rights in the Baker Pipeline have been transferred among various member agencies and represented agencies, as previously reflected in the tables set forth in Amendment No. 8.

In 2020, IRWD and the County executed an *Assignment and Assumption Agreement* (the "**Transfer Agreement**") to transfer the County's capacity in the Baker Pipeline to IRWD. The transfer of capacity rights and the resulting allocations of maintenance, capital repairs, and capital improvement costs became effective as of February 11, 2020. The Parties intend by this

Amendment No. 9 to memorialize the effect of the Transfer Agreement and acknowledge that each of the Parties and represented agencies not participating in the Transfer Agreement will retain the same capacity rights identified in Amendment No. 8.

Therefore, the Parties amend the Joint Powers Agreement as follows:

SECTION 1. <u>Exhibit A</u> to this Amendment No. 9 identifies the capacities and hydraulic grade lines in the Baker Pipeline resulting from the Transfer Agreement. <u>Exhibit B</u> to this Amendment No. 9 identifies the corresponding allocation of costs of maintenance, capital repairs, and capital improvements for each reach of the Baker Pipeline and the Baker Pipeline in its entirety. Both exhibits are incorporated by reference into the Joint Powers Agreement and replace and supersede the prior Exhibits A and B.

SECTION 2. In order to reflect the transfer of the County's capacity to IRWD, the first two paragraphs of Section 3 of the Joint Powers Agreement, as amended by Amendment No. 8, are amended to read as follows:

"The Commission shall consist of six (6) regular members, one (1) regular member to be selected by each of the following member agencies:

El Toro Water District; Irvine Ranch Water District; Moulton Niguel Water District; Municipal Water District of Orange County; Santa Margarita Water District; and Trabuco Canyon Water District.

The Commission shall maintain and operate the Baker Pipeline. Each member agency shall have one vote. MWDOC shall represent itself and EOCWD. Each member agency may appoint two alternate members, designated a first alternate member and a second alternate member, to the Commission."

SECTION 3. The Parties shall execute this Amendment No. 9 in duplicate, each identical duplicate of which will be considered an original.

[Signatures appear on following pages.]

The Parties have executed this Amendment No. 9 on the dates set forth below.

DATED: _____

EL TORO WATER DISTRICT

By: _____ President

By: ______ Secretary

APPROVED AS TO FORM: Redwine and Sherrill, LLP

By: _____ District Counsel

DATED: _____

IRVINE RANCH WATER DISTRICT

By: _____ President

By: _______Secretary

APPROVED AS TO FORM: Hanson Bridgett, LLP

By: _____ District Counsel

DATED:	MOULTON NIGUEL WATER DISTRICT
	By: President
APPROVED AS TO FORM: Best Best & Krieger LLP	By: Secretary
By: District Counsel	
DATED:	MUNICIPAL WATER DISTRICT OF ORANGE COUNTY
	By: President

By: ______Secretary

APPROVED AS TO FORM: Best Best & Krieger, LLP

By: ______ District Counsel

DATED: _____

SANTA MARGARITA WATER DISTRICT

By: ______ President

By: _______Secretary

APPROVED AS TO FORM: Best Best & Krieger, LLP

By: _____ District Counsel

DATED: _____

TRABUCO CANYON WATER DISTRICT

By: ______ President

By: _____

Secretary

APPROVED AS TO FORM: Atkinson, Andelson, Loya, Ruud & Romo, LLP

By: _____ District Counsel

EXHIBIT A

SANTIAGO AQUEDUCT COMMISSION BAKER PIPELINE PIPELINE CAPACITIES

	Reach 1U	Reach 2U	Reach 3U	Reach 4U	Reach 5U
Length (LF)	9,400	10,425	7,950	28,500	6,070
HGL Elevation at End of Reach ¹	816	788	770	703	690
Agency	CFS	CFS	CFS	CFS	CFS
East Orange County Water District	10.00	-	-	-	-
Irvine Ranch Water District ²	50.00	15.65	11.60	11.60	10.50
Santa Margarita Water District	13.00	13.08	13.05	13.05	13.00
Trabuco Canyon Water District	8.00	8.05	8.03	8.03	8.00
EI Toro Water District	5.00	5.00	5.00	5.00	5.00
Moulton Niguel Water District	13.00	13.00	13.00	13.00	13.00
Total Capacity	99.00	54.78	50.68	50.68	49.50

¹ Beginning HGL elevation of 832 at OC-33

² Includes IRWD purchase of County of Orange capacity in Reaches 1U, 2U, 3U, and 4U. All other capacities remain unchanged from JPA Amendment No. 8.

EXHIBIT B

PIPELINE CAPACITIES MAINTENANCE, CAPITAL REPAIR, AND CAPITAL IMPROVEMENT SHARE, TOTAL AND BY REACH

	Reac	h 1U	Reac	:h 2U	Reac	h 3U	Reach	n 4U	Reac	h 5U	Total Pi	ipeline
Length (LF)	9,40	00	10,4	425	7,9	50	28,5	00	6,0	70	62,3	845
	Capacity Length	%										
East Orange County Water District	94,000	9.53%	-	-	-	-	-	-	-	-	94,000	2.58%
Irvine Ranch Water District	470,000	50.79%	163,152	28.85%	92,220	23.06%	330,600	23.06%	63,735	21.22%	1,119,707	30.68%
Santa Margarita Water District	122,200	13.35%	136,359	23.65%	103,747	25.61%	371,925	25.61%	78,910	26.26%	813,141	22.28%
Trabuco Canyon Water District	75,200	8.15%	83,921	14.64%	63,839	15.81%	228,855	15.81%	48,560	16.16%	500,375	13.71%
El Toro Water District	47,000	5.05%	52,125	9.13%	39,750	9.87%	142,500	9.87%	30,350	10.10%	311,725	8.54%
Moulton Niguel Water District	122,200	13.13%	135,525	23.73%	103,350	25.65%	370,500	25.65%	78,910	26.26%	810,485	22.21%
Total	930,600	100%	571,082	100%	402,906	100%	1,444,380	100%	300,465	100%	3,649,433	100%

Note: This page is intentionally left blank.

February 18, 2020 Prepared by: J. Corey / K. Welch Submitted by: F. Sanchez / P. Weghorst Approved by: Paul A. Cook

ENGINEERING AND OPERATIONS COMMITTEE

ON-CALL ENVIRONMENTAL CONSULTANT SELECTIONS

SUMMARY:

Irvine Ranch Water District uses Professional Service Agreements to secure on-call environmental compliance and permitting services pursuant to the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and other regulatory requirements. Staff has solicited and evaluated proposals from firms to perform future on-call environmental and permitting services. Staff recommends that the Board authorize the General Manager to:

- Execute Professional Services Agreements for on-call CEQA/NEPA services, to be provided for the next four years, with Environmental Science Associates (ESA), Dudek, LSA Associates, Inc. (LSA) and Psomas for \$400,000 each; and
- Execute Professional Services Agreements for on-call permitting services, to be provided for the next four years, with Harmsworth Associates, ESA and Psomas for \$400,000 each.

BACKGROUND:

On-Call CEQA/NEPA Services:

IRWD must comply with the requirements of CEQA for all project activities. Where federal government action or funding is involved, compliance with NEPA is required. The use of on-call Professional Services Agreements for CEQA/NEPA work allows staff to efficiently address environmental review requirements for projects. The types of tasks performed under on-call CEQA/NEPA Professional Services Agreements include general consultations and the preparation of Negative Declarations, Mitigated Negative Declarations, Environmental Impact Reports, Addenda, Environmental Assessments, and Findings of No Significant Impact. Over the last three years, approximately \$466,405 of CEQA/NEPA services were obtained on an on-call basis under agreements with environmental consultants at ESA, LSA and Psomas.

On-Call Biological Monitoring and Permitting Services:

IRWD must also comply with statutes, regulations, policies, and programs that require permitting to carry out new projects, conduct operations and maintenance activities, and to address emergency conditions. The use of on-call Professional Service Agreements for biological monitoring and permitting services allows IRWD to task consultants with time-sensitive activities. The majority of the tasks performed under on-call monitoring and permitting Professional Services Agreements include biological surveys, preparation of regulatory agency permit applications, wetland delineations and jurisdictional delineations, and mitigation monitoring. Over the last three years, approximately \$302,000 of monitoring and permitting services were obtained on an on-call basis under agreements with Harmsworth Associates and Glen Lukos Associates.

Engineering and Operations Committee: On-Call Environmental Consultant Selections February 18, 2020 Page 2

Future On-Call Requirements:

In order to estimate future on-call CEQA/NEPA and permitting needs, staff reviewed past utilization of on-call consultants. Next, staff reviewed the capital budget for the next several years and determined that numerous future projects will result in an increased need for the preparation of environmental documents for CEQA/NEPA compliance. Additionally, numerous existing and future capital projects will result in an increased need for multi-year mitigation monitoring reporting and permitting assistance. Based on these expectations, staff has estimated future on-call CEQA/NEPA and permitting needs for the next four years.

Staff recommends that Professional Service Agreements be awarded to a total of five firms to provide on-call services for the next four years. Four of the firms are recommended to provide CEQA/NEPA services under agreements for amounts up to \$400,000 each, and three of the firms are recommended to provide monitoring and permitting services under agreements for amounts up to \$400,000 each. Under these agreements, staff will issue project specific task orders based on negotiated scopes of work, cost estimates and schedules for projects that have existing approved budgets.

Consultant Selections:

A Request for Proposals (RFP) for on-call CEQA/NEPA services was distributed to four environmental consulting firms. Proposals to provide on-call CEQA/NEPA consulting services were received from ESA, LSA, Dudek and Psomas. Within the RFP, the consultants were asked to demonstrate:

- A thorough understanding of CEQA and NEPA and associated processes;
- A broad expertise and experience in performing CEQA/NEPA analysis and review work;
- A history of successful CEQA/NEPA activities on behalf of its clients; and
- A long-standing working relationship with the natural resources agencies and their representatives.

A separate RFP for on-call monitoring and permitting services was distributed to four environmental consulting firms. Proposals for providing on-call monitoring and permitting services were received from Harmsworth Associates, ESA and Psomas. Glenn Lukos Associates declined to submit, citing limited firm resources. The monitoring and permitting RFP asked the consultants to:

- Demonstrate an understanding of the processes of natural resources, wildlife and regulatory requirements as well as the agencies with jurisdiction over permits and mitigation requirements;
- Commit to responding to requests for service from IRWD in a timely and cost-effective manner; and
- Document their knowledge and experience with endangered species issues and regulations, mitigation monitoring and reporting, IRWD's Natural Treatment System and the Natural Community Conservation Plan.

Engineering and Operations Committee: On-Call Environmental Consultant Selections February 18, 2020 Page 3

Staff reviewed and evaluated each of the consultants' proposals and recommends that Professional Services Agreements be awarded for CEQA/NEPA services to ESA, LSA, Dudek and Psomas for \$400,000 each. Staff also recommends that Professional Services Agreements for biological monitoring and permitting services be awarded to Harmsworth Associates, Psomas, and ESA for \$400,000 each. The duration of each agreement will be four years.

Each recommended firm has demonstrated extensive knowledge and experience with CEQA, NEPA, monitoring and permitting requirements. Each firm has committed to staff availability on an on-call basis and demonstrated excellent project team qualifications. Each firm has also demonstrated previous experience assisting IRWD with various CEQA/NEPA and permitting projects. A CEQA/NEPA services assessment matrix based on evaluation of the proposals is provided as Exhibit "A" and an assessment matrix for Monitoring and Permitting services is provided as Exhibit "B." Pertinent sections of the CEQA/NEPA proposals from the recommended firms of ESA, LSA, Psomas, and Dudek are included as Exhibits "C," "D," "E," and "F," respectively. Pertinent sections of the Monitoring and Permitting proposals from the recommended firms of Harmsworth Associates, ESA, and Psomas are included as Exhibits "G", "H", and "I" respectively.

FISCAL IMPACTS:

No new project budgets are required in executing these Professional Services Agreements. Task orders for specific projects with existing approved budgets will be issued to the consultants under the terms of the agreements and negotiated scopes of work, costs and schedules.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

RECOMMENDATION:

That the Board authorize the General Manager to execute Professional Service Agreements with ESA, LSA, Dudek and Psomas to provide on-call CEQA/NEPA services, for the next four years, for not-to-exceed amounts of \$400,000 each and with Harmsworth Associates, Psomas and ESA to provide on-call monitoring and permitting services, for the next four years, for not-to-exceed amounts of \$400,000 each.

LIST OF EXHIBITS:

- Exhibit "A" CEQA/NEPA Services Evaluation Matrix
- Exhibit "B" Monitoring and Permitting Services Evaluation Matrix
- Exhibit "C" ESA Proposal for On-Call CEQA/NEPA Services
- Exhibit "D" LSA Proposal for On-Call CEQA/NEPA Services
- Exhibit "E" Psomas Proposal for On-Call CEQA/NEPA Services
- Exhibit "F" Dudek Proposal for On-Call CEQA/NEPA Services
- Exhibit "G" Harmsworth Associates Proposal for On-Call Monitoring and Permitting Services
- Exhibit "H" ESA Proposal for On-Call Monitoring and Permitting Services
- Exhibit "I" Psomas Proposal for On-Call Monitoring and Permitting Services

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EXHIBIT "A"

2020 ON-CALL CEQA / NEPA CONSULTATION SERVICES EVALUATION MATRIX

ltem	Description	Weights	LSA	ESA	Psomas	Dudek
Α	Demonstration of CEQA/NEPA Skills and Rates					
1	Understanding of IRWD's Needs	20%	4	1	3	2
2	Demonstration of CEQA Skills and Abilities	20%	4	1	3	2
3	Demonstration of NEPA Skills and Abilities	20%	4	1	3	2
4	Provided Staff Rates Consistent with Skills and Abilities Over Range of Staff on Project	20%	3	2	1	4
5	Demonstrated Ability to Coordinate with Other Consultants / Engineers	10%	4	1	2	3
6	Demonstrated Experience with MMRP's	10%	4	1	2	3
	Weighted Score	30%	3.8	1.2	2.4	2.6
в	DEMONSTRATION OF PROJECT SCOPING. COST ESTIMATING, AND SCHEDULING					
1	Demonstrated Knowledge of Scope of Work	33.33%	4	1	3	2
2	Demonstrated Knowledge of Cost Estimates	33.33%	4	1	2	3
3	Demonstrated Knowledge of Project Schedules	33.33%	3	1	4	2
	Weighted Score	30%	3.7	1.0	3.0	2.3
С	QUALIFICATION AND EXPERIENCE					
1	Principal in Charge		Nicole Dubois MS, 18 yrs	Tom Barnes BA, 25+ yrs exp.	Jim Hunter BS, 34 yrs	Joe Monoco MCP, AICP, 32 yrs
		20%	4.00	1.00	3.00	2.00
2	Project/Contract Manager		Nicole Dubois	Jennifer Jacobus	Jenniter Marks	Rachel Struglia
2		20%	100 NIS, 18 VIS	1 00	3 00	
3	Project Team	30%	3.00	1.00	4.00	2.00
1	Firm's Relevance Experience	20%	4.00	2.00	3.00	1.00
7	Weighted Score	20%	3.7	1.2	33	1.8
п	DEFEDENCES	20 /0	5.1	1.2	5.5	1.0
	Reference Project 1		Eastwood RW Pump Station MND	Syphon Reservoir Geotech MND/Syphon Reservoir EIR	3.7 MG Zn 1 Reservoir MND	Syphon Interim Facilities MND
	Score	50%	3	1	2	4
	Reference Project 2		San Joaquin Reservoir Filtration MND	Peters Canyon Channel Reuse Project MND	Zn A-Rattlesnake Pump Station MND	LF Sports Park EIR Addendums 1- 2
	Score	50%	4	1	2	3
	Weighted Score	20%	4	1	2	3
	COMBINED WEIGHTED SCORE	100%	3.68	1.10	2.68	2.44
Ε	OTHER					
	Multiplier		Not Listed	1.15 travel; 3%communications	Not Listed	Not Listed
	Sub Consultants		None	None	None	None
	Exceptions taken to IRWD Std. Contract		None	None	None	None
	Insurance (General Liability)		Yes	Yes	Yes	Yes
	Insurance (Professional)		Yes	Yes	Yes	Yes
	Forced Rankings: (Enter 1, 2, 3 or 4, 1 being be	st)	4	1	3	2
	FEES					

Principal in Charge	\$240	\$300	\$230	\$290	
Contract Mgr	n/a	\$240	\$165	\$290	
Associate Enviro Planner	\$190	n/a	n/a	n/a	
Sr. Enviro Planner	\$165	n/a	n/a	n/a	
Enviro Specialist V/II/I	n/a	n/a	n/a	\$180/145/130	
Managing Associate II	n/a	\$190	n/a	n/a	
Associate I	n/a	\$125	n/a	n/a	

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EXHIBIT "B"

2020 ON-CALL MONITORING & PERMITTING CONSULTATION SERVICES EVALUATION MATRIX

Item	Description	Weights	ESA	Harmsworth	Psomas
Α	Demonstration of Permitting Skills and Rates				
1	Understanding of IRWD's Needs	10%	2	1	3
2	Land Use Planning	5%	3	1	2
3	Regulatory Agency Consultation, Permit Application and Procurement	10%	2	1	3
4	Wetland Delination	10%	1	2	3
5	Biological Survey, Monitoring, Assessment	10%	2	1	3
6	Threatened & Endangered Species Regulation, Monitoring and Reporting	10%	2	1	3
7	Mitigation Monitoring and Reporting	5%	3	1	2
8	Water Quality, Stormwater Monitoring and Reporting	5%	1	2	3
9	Natural Treatment System (NTS)	10%	2	1	3
10	Natural Community Conservation Plan/Habitat Conservation Plan (NCCP)	10%	2	1	3
11	Coordination with other Consultants/Engineers	5%	2	1	3
12	Staff rates consistent with skills and abilities over range of staff on the project	10%	3	1	2
	Weighted Score	30%	1.1	0.7	1.6
в	DEMONSTRATION OF PROJECT SCOPING, COST ESTIMATING, AND SCHEDULING				
1	Demonstrated Knowledge of Scope of Work	33.33%	1	2	3
2	Demonstrated Knowledge of Cost Estimates	33.33%	3	1	2
3	Demonstrated Knowledge of Project Schedules	33.33%	2	1	3
	Weighted Score	30%	2.0	1.3	2.7
С	QUALIFICATION AND EXPERIENCE				
			Jennifer Jacobus	Rod Harmsworth	Ann Johnson
1	Principal / Director		Ph.D, 16+ yrs exp	Ph.D, 40+ yrs exp	BA, 31 yrs. exp
		20%	3.00	1.00	2.00
	Project Manager		Scott Holbrook	Paul Galvin	Amber Heredia
2			BA, 28+ yrs exp	MS, 25+ yrs exp	MS, 23 yrs exp
		30%	2.00	1.00	3.00
3	Project Team	30%	3.00	1.00	2.00
4	Firm's Relevance Experience	20%	2.00	1.00	3.00
	Weighted Score	20%	2.5	1.0	2.5
D	REFERENCES				
	Reference Project 1		Syphon Reservoir Geotech	Signal Peak OCFA Wildfire Camera Tower Project	ILP N Conversion Project
	Score	50%	1	2	3
	Reference Project 2		IRWD-Total Nitrogen/Total Phosphorus Offset Plan	LF Zn B East Reservoir	SDC Reach II O/M Plan HMMP
	Score	50%	3	1	2
	Weighted Score	20%	2.0	1.5	2.5

	COMBINED WEIGHTED SCORE	100%	1.81	1.09	2.28
Ε	<u>OTHER</u>				
	Multiplier		1.15 - consultant services	None	None
	Sub Consultants		Yes - Alta Enviro	None	Yes - MBC Aquatics
	Exceptions taken to IRWD Std. Contract		None	None	None
	Insurance (General Liability)		Yes	Yes	Yes
	Insurance (Professional)		Yes	Yes	Yes
	Forced Rankings: (Enter 1, 2, 3 or 4, 1 b	eing best)	2	1	3

FEES

Principal	\$220	\$140	\$257
Project Manager	\$185	\$130	\$193
Managing Biologist/Sr. Biologist/Biologist	160/135/120	\$100/80/60	\$193/137/107
Sub-Consultant	Yes; WQ	n/a	Yes; WQ
	Alta \$265		MBC Aquatics \$192



EXHIBIT "C" 626 Wilshire Boulevard Suite 1100 Los Angeles, CA 90017 213.599.4300 phone 213.599.4301 fax

January 30, 2020

Fiona M. Sanchez Director of Water Resources Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Subject: Proposal for On-Call CEQA and NEPA Consultation

Dear Ms. Sanchez:

Environmental Science Associates (ESA), an employee-owned California Corporation with an office in Irvine and 18 other locations along the nation's West Coast and in Florida, is an award-winning environmental consulting firm with over 50 years of experience guiding projects through the environmental review process. Since 2009, ESA has enjoyed a solid working relationship with the Irvine Ranch Water District (IRWD or District) as a trusted California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) on-call consultant. We are pleased to present this proposal as a qualified consultant and look forward to continuing our successful work with the District.

Our proposal includes a summary of ESA's experience and capabilities to perform the types of services the District may require over the next four years. Our key strengths that set us apart are summarized below:

- ESA's focus on CEQA and NEPA compliance for water and wastewater clients is unmatched. We provide the full array of technical expertise needed to successfully prepare legally defensible environmental documentation for public utilities concerned with water supply and treatment. Our Water Group's core business is providing CEQA/NEPA compliance services to water utilities, and the entire firm is focused on environmental problem solving that expedites project implementation.
- **Experienced on-call environmental consultation providers**. We have extensive experience providing on-call environmental compliance services to public utilities in Southern California, including IRWD since 2009, the Metropolitan Water District of Southern California since 2002, California Department of Water Resources since 2006, and the Los Angeles Department of Water and Power since 2012, and Eastern Municipal Water District since 2013. We know what it takes to manage on-call contracts effectively and successfully.
- We provide exceptional Senior Managers and a deep bench of Technical Experts. ESA's senior management team led by Tom Barnes and Jennifer Jacobus, PhD, provides centralized leadership, strategic support, a commitment to quality. Our job is to understand our clients' objectives and to collaborate with them to overcome challenges. Dr. Jacobus will be the primary point of contact and responsible for quality control of all products.
- We know IRWD. As an incumbent, ESA will hit the ground running. We have learned the District's specific style, quality commitments, and cost control expectations, and we have established effective relationships with IRWD project managers. This experience brings real value to the District through strategic approaches to project implementation that minimize costs through careful staffing and scoping based on current real-world experience and institutional knowledge. ESA is committed to continuing this partnership with a strong level of excellence.

We have greatly valued our partnership with the District over the past 11+ years, and we appreciate this opportunity to be considered for another contract term. This letter is signed by Tom Barnes, who as Vice President has the authority to represent and contractually bind the firm, and Jennifer Jacobus as the proposed Client/Project Manager. Should you have any questions, please feel free to contact Jennifer at 213.599.4300 or jjacobus@esassoc.com.

Sincerely,

Tom Barnes VP, Director, Water Group

Jennih Jacom

Jennifer Jacobus, PhD Senior Managing Associate, Water Group

C - 1



Introduction

ESA is a leading planning and environmental consulting firm with offices in Irvine and 18 other locations along our nation's West Coast and in Florida. With a commitment to the principles of responsible development and environmental stewardship, we bring over 50 years of integrated experience in all aspects of project planning, regulatory compliance, and environmental analysis and assessment. ESA's mission is to assist clients with advancing sustainability through planning, program development and implementation, and technical analyses that support strategic decision making. Our professionals regularly engage with public-sector clients to act as a single source for well-reasoned and effective solutions.

ESA has provided on-call environmental services to Irvine Ranch Water District (IRWD or District) since 2009; accordingly, the staff selected for this On-Call CEQA and NEPA Consultation contract have an extensive portfolio of experience supporting the District with environmental compliance for small projects. As a foundation of our business, ESA is an expert in the development of California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) compliance documents for municipal utilities, particularly Initial Studies, Addenda, Negative Declarations, Mitigated Negative Declarations (MNDs), and Environmental Impact Reports (EIRs). We also provide a full range of support services, including preparation of stand-alone technical studies and constraints analyses, biological and cultural surveys, water quality assessments, permit compliance, and construction monitoring. Our team is composed of scientists, planners, and engineers encompassing a wide diversity of specialties in the fields of biology, ecology, geology, hydrology, water quality, archaeology, architectural history, paleontology, air quality, greenhouse gases and climate change, noise, traffic management, city planning, and environmental sciences.

ESA's Commitment to IRWD

- We are committed to quality assurance and quality control. We understand that our value is tied directly to the quality of our analysis and documentation. As described in **Section 2**, ESA implements a strict QA/QC Plan. Document reviews for substance, style, errors, and completeness are essential for successful projects.
- We are committed to effective cost controls and pricing efficiency. We understand from experience that cost controls are a key feature of our scope and fee preparation process and that costs are related to scope of services, staff, and time needed to accomplish the task. We recognize the need to review scopes of work to ensure that they meet the District's objectives as efficiently as possible. We are committed to proactively recommend places where efficiencies can be gained, including staffing and duration of effort, but also assure corners are not cut where the process demands more robust support.
- We are committed to close communication with IRWD staff. We understand from experience the necessity of elevating information to management staff expeditiously. Managing risks through unhesitating communication fosters trust in the team.

Section 1: Scope of Work

The following scope of work outlines the tasks necessary to provide IRWD with on-call professional services for CEQA and NEPA analysis and compliance as requested in the RFP.

Task 1: CEQA

We understand IRWD has upcoming small-scale projects that could be implemented over the next four years. IRWD needs a firm that can respond quickly and efficiently to produce cost-effective, high-quality environmental documentation in compliance with CEQA. ESA's Southern California Water Group (ESA Water) specializes in impact assessments for the construction and operation of water infrastructure projects, including wells, pipelines, pump stations, storage tanks, and reservoirs. Providing CEQA compliance in the form of Addenda, Negative Declarations, and MNDs for these types of projects is our primary business. ESA provides full-service environmental support that includes in-house capabilities to perform technical studies, such as air emissions models; greenhouse gas (GHG)

1

emissions analyses; noise models; biological surveys and monitoring; cultural resources surveys, monitoring, and Tribal consultations, historic architectural assessments; and visual simulations.

ESA's biologists have specialized experience working on projects within Orange County and the **Orange County Natural Community Conservation Plan (NCCP)/HCP**. ESA's biology team is currently assisting IRWD with NCCP coordination for the Syphon Reservoir Improvement Project, meeting with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) to negotiate a mitigation plan. Also, our Southern California Cultural Resources Group is extremely knowledgeable about **Assembly Bill 52 (AB52)**, which was signed into law in September 2014 and requires lead agencies to consider the effects of projects on Tribal cultural resources and to conduct consultation with federally and non-federally recognized Native American Tribes early in the environmental planning process. ESA will assist the District with implementing this process and will ensure that CEQA/NEPA documents appropriately include the outcome of the AB52 consultation. This could include preparation of draft AB52 consultation letters for submission to Tribes that have requested consultation with IRWD.

Task 2: NEPA

We understand IRWD needs a firm that provides high-quality environmental documentation that complies with NEPA to satisfy the requirements of potential partner funding entities. ESA regularly produces joint CEQA/NEPA documents and stand-alone CEQA-Plus or NEPA documents. We have recent experience working with staff at the State Water Resources Control Board (SWRCB), Regional Water Quality Control Board, U.S. Bureau of Reclamation (Bureau), and U.S. Environmental Protection Agency (USEPA), to prepare CEQA-Plus and NEPA documents for projects that either will be located on federal lands or will be receiving federal funding. In particular, ESA assisted IRWD with preparation of the Stockdale Integrated Banking Project EIR, which required coordination with the Bureau due to federal funding for the wells on Stockdale West. Our Project Manager, Dr. Jennifer Jacobus (see Section 2 for more information), also assisted Palmdale Recycled Water Authority with environmental documentation requirements to complete its State Revolving Fund (SRF) application for its Recycled Water Facilities Plan, for which ESA also prepared the Initial Study/MND. Currently, Jennifer is coordinating with the SWRCB to prepare an Addendum to update the Initial Study/MND since the supporting CEQA document is five years old. In addition, Jennifer and Principal-in-Charge, Tom Barnes have experience working with the USEPA to prepare Environmental Assessments (EAs) and Environmental Information Documents (EIDs) to satisfy USEPA's NEPA requirements where funding is the federal nexus. We have good working relationships with staff at federal agencies that are common funding sources, and we understand their specific NEPA compliance requirements. For example, the Bureau typically suggests preparation of a CEQA-Plus document with robust supporting cultural and biological technical studies that meet their requirements for federal cross-cutter consultation, such as State Historic Preservation Office and USFWS consultation.

Task 3: Staff Rates

The hourly rates for all staff and services resulting from this contract are provided in **Section 5**. Charges for time spent on project management, consultation, meetings, field work, data analysis, report preparation and review, travel time, etc., will be made at the Category Rates set forth in Section 5. Rates for non-labor expenses, such as reimbursable expenses and equipment usage are also provided in Section 5. **Table 2-1** provides the labor categories for key staff that correspond to those provided in Section 5.

Task 4: Project Task Item Estimates

Our typical on-call services contracts require us to prepare scopes of work, cost estimates and schedules for projects as they arise. Level-of-effort estimates are developed by our project management team in coordination with technical staff as necessary. Staff are assigned based on project requirements. For IRWD, each new project will be established under this On-Call CEQA and NEPA Consultation master contract and IRWD's Purchase Order. Upon request, ESA will prepare and submit a scope of work, schedule, and budget to the District for new projects as they arise within one to two days, depending on the nature of the work. Longer timeframes may be required for larger jobs. The costs

C - 3



associated with preparing scope/schedule/budget packages will be ESA's responsibility. With District approval of the scope and fee, ESA will begin work on new projects immediately following a notice to proceed.

Task 5: Team Experience

ESA has over 50 years of experience in the environmental consulting business. We have excellent knowledge of the business locally, statewide, and nationally. Please refer to **Section 2** for summaries of the experience, education, and skills of the key staff on the ESA Team proposed for this On-Call CEQA and NEPA Consultation contract. Additional details about each team member are provided in the resumes attached as **Appendix A**.

Task 6: Project Coordination

ESA has developed and nurtured a vast network of clients and consultants with which we regularly work and coordinate to accomplish tasks at hand. In accordance with our focus on client satisfaction, ESA will team with other consultants or agencies in order to provide the best technical or regulatory expertise required to meet project objectives and provide services that are in the best interest of our clients. ESA regularly teams with planning firms, engineering firms, and specialty firms offering niche technical expertise, such as traffic/transportation and groundwater services. For example, ESA has successfully teamed in the past with **Fehr & Peers** and **KOA Corporation** to provide traffic studies for a number of recent projects. Notably, Fehr & Peers is ESA's subconsultant for IRWD's Syphon Reservoir Improvement Project and KOA Corporation is our subconsultant on DWR's Lake Perris Emergency Release Facility Project EIR. We often employ **Ninyo & Moore** for geotechnical and environmental hazards/hazardous materials consulting needs.

In addition, Tom and Jennifer regularly coordinate with consultants hired by our clients to prepare technical analyses and engineering design. For example, ESA has repeatedly worked with **Todd Groundwater** as well as **Tom Harder & Associates** to evaluate impacts of groundwater recharge projects (e.g., IRWD's Stockdale Integrated Banking Project EIR, and the Onyx Ranch South Fork Valley Water Project EIR for Rosedale-Rio Bravo Water Storage District). ESA is also coordinating with **HDR** and **Fiona Hutton & Associates** for IRWD's Syphon Reservoir Improvement Project. To facilitate coordination of teams comprised of multiple consultants and agencies, ESA uses regularly scheduled conference call meetings to maintain focus of analyses, provide a forum for information exchange, and maintain compliance with project schedules.

As an integral part of our project management services, we provide senior project strategy consultation with the IRWD management team and regulatory agencies. ESA provides senior experience in consulting with the USFWS, the U.S. Army Corps of Engineers, the Bureau, the USEPA, the CDFW, the Santa Ana Regional Water Quality Control Board, the South Coast Air Quality Management District, and the local cities and county agencies, including Flood Control Districts and the Public Works Departments.

Task 7: Mitigation Monitoring and Reporting

As part of a typical scope of work for environmental compliance, ESA includes development of the Mitigation Monitoring and Reporting Program (MMRP) as required by CEQA. If requested by IRWD under this contract, ESA will implement the MMRPs associated with projects, including preparation of a reporting program binder designed to track the implementation and completion of each required mitigation measure, management of periodic monitoring activities and required field surveys, and preparation of periodic reports to document ongoing activities and eventual completion of the MMRP. ESA has staff that specialize in construction monitoring in both our Biological Resources & Land Management Group and Cultural Resources Group. ESA Water also has extensive experience with Metropolitan Water District of Southern California (Metropolitan) implementing the MMRPs for various projects as part of an on-call services contract. Examples of our mitigation monitoring experience are included in **Section 2**.

Task 8: References

As stated in the RFP, in lieu of reference letters, ESA is providing a summary of work completed for IRWD projects and associated IRWD staff members. The ESA Team, in particular our Management Team of Tom and Jennifer, has completed the projects listed below in **Table 1-1**. This includes work completed under our previous on-call master contracts with IRWD as well as individual project contracts. **Table 1-1** identifies the IRWD staff that were involved in each project. These staff members can speak to the excellence of our work. The projects are further described in **Table 3-1**. Additional references for water agencies other than IRWD are listed in **Table 3-2**.

Project	Staff
Syphon Reservoir Geotechnical Investigations Project Initial Study/MND	Paul Weghorst, Fiona Sanchez, Jo Ann Corey, Scott Toland, Beth Beeman
San Diego Creek Water Rights Petition Initial Study/ND	Fiona Sanchez, Jo Ann Corey, Kellie Welch, Ian Swift, Lyndy Lewis
Baker Water Treatment Plant Solar Project Addendum	Paul Weghorst, Fiona Sanchez, Jo Ann Corey, Kellie Welch, Ray Bennett, Richard Mori
Stockdale Integrated Banking Project EIR	Paul Weghorst, Fiona Sanchez, Kellie Welch, Jo Ann Corey
Peters Canyon Water Capture and Reuse Pipeline Project Initial Study/MND and Construction Mitigation Monitoring	Ray Bennett, Jo Ann Corey, Paul Weghorst, Ian Swift, Joe McGehee

Table 1-1: IRWD Projects and Associated Staff Members

Section 2: Team

Our ESA Team features a select group of professionals assembled to provide IRWD with the most relevant and best combination of expertise. ESA's depth of staff gives us the ability to match the appropriate skills with the tasks at hand. The key staff identified in the Organizational Chart below would assume primary responsibility for performing the work anticipated for this contract. Biographical information follows the chart. Resumes providing further detail appear in **Appendix A**.



C - 5



Management Team

ESA is dedicating to IRWD an experienced senior Management Team from our Southern California Water Group. Tom Barnes and Jennifer Jacobus, PhD, have worked together for more than 15 years providing CEQA and NEPA compliance and permitting services exclusively to water districts, including IRWD. This senior Management Team will oversee and orchestrate ESA's comprehensive team resources as appropriate for each District task.

Tom Barnes | Principal-in-Charge



Tom is an ESA Vice President and the Director of ESA's Southern California Water Practice Group focused on providing environmental planning and management services for water and wastewater utilities in the Southern California region. He has over 25 years of experience in CEQA/NEPA analysis, project management, environmental documentation, permit review and facilitation, and data analysis. A proven project manager specializing in water projects, Tom manages on-call multi-year environmental contracts for Southern California agencies, including Metropolitan, Los Angeles

Department of Water and Power (LADWP), Orange County Sanitation District, and California Department of Water Resources (DWR). Tom served as the Project Director for all IRWD projects described in **Table 3-1**, including the current and ongoing **Syphon Reservoir Improvement Project EIR**. In addition, Tom has most recently overseen the completion of the following projects: West Basin Municipal Water District Ocean Water Desalination Project EIR; City of Ventura's Ventura Water Supply Projects EIR; and the San Gabriel River Reduced Discharge EIR for the Los Angeles County Sanitation District.

Project Availability: 5% | *Labor Category:* Senior Director III *Education:* B.A. English, University of California, Berkeley

Jennifer Jacobus, PhD | Client/Project Manager



Dr. Jennifer Jacobus is a Senior Manager in ESA's Southern California Water Group. She is an accomplished CEQA/NEPA project manager with over 16 years of professional experience and a reputation for customer service and client satisfaction. Jennifer focuses exclusively on water and wastewater clients and projects throughout Southern California. She serves as the Project Manager for ESA's on-call contracts with IRWD, Inland Empire Utilities Agency (IEUA), and Eastern Municipal Water District (EMWD). She works for several other on-call clients, including Metropolitan, DWR, and LADWP.

As a scientist with foundational training in ecology and resource management, Jennifer has a keen ability to communicate with ESA technical staff to ensure appropriate and relevant analyses across all disciplines. She also has experience working with clients' engineering design teams, to understand project features and operational criteria, and transcribes technical specifications into language that is accessible to the general public for CEQA/NEPA documents. Jennifer has acted as Project Manager for all IRWD projects described in **Table 3-1** as well, including the current and ongoing **Syphon Reservoir Improvement Project EIR**. She has also managed a full spectrum of water projects and has recently completed the environmental process for IRWD's **Syphon Reservoir Geotechnical Investigations Project Initial Study/MND** (which included USFWS and CDFW coordination and AB52 consultation), **San Diego Creek Water Rights Petition Initial Study/ND**, and **EIR Addenda for the Michelson WRP Recycled Water Bypass** and the **Baker Water Treatment Plant Solar Project**. In addition, she has recently managed and completed the City of Morro Bay's Water Reclamation Facility CEQA-Plus EIR and subsequent Addendum; and the EMWD San Jacinto Valley Enhanced Recharge and Recovery Program CEQA-Plus PEIR.

Project Availability: 30% | Labor Category: Director III

Education: Ph.D., Resource Ecology & Management, School of Natural Resources & Environment, University of Michigan; M.A., Geography, Boston University; B.A., Economics, Johns Hopkins University

Management Team Availability and Schedule

IRWD's need for on-call services over the next four years and the schedule for on-call projects will drive the team's dedication to tasks as they are identified. Both Tom and Jennifer will commit time as specific tasks warrant. ESA is committed to meeting project schedule deadlines, and we have recent experience dedicating the time needed to get

5

the job done on schedule. For example, under a previous on-call contract for IRWD, ESA completed four NOEs for IRWD's Energy Storage Systems Project within three days as requested by IRWD to meet deadlines for consideration and approval by IRWD's Board of Directors.

Jennifer will manage project schedules, including monitoring progress of technical analyses, notifying team members of deadlines ahead of time, organizing conference calls, and managing production staff. Since 2005, Tom and Jennifer have successfully partnered with IRWD to complete larger projects while also completing CEQA/NEPA compliance for small projects as an on-call contract holder (see **Table 3-1** below).

Project Controls and Invoicing

ESA engages in a proactive approach to tracking, reporting, and controlling costs so that budgets are managed effectively. The first step in managing project costs is working closely with the client to establish a clear and detailed scope, schedule, and budget. The scope of services assures the project is undertaken with maximum efficiency. ESA Water has maintained continuity in leadership and team members for its projects. This continuity assures our clients that each project benefits from the efficiencies of a familiar team and receives the budget supervision it deserves. We conscientiously advise our clients when requested to perform services outside the scope of work to protect our clients from cost overruns.

ESA uses the Deltek electronic time reporting system to monitor and track staff activities for each project and submit monthly invoices in a timely manner. This system allows real-time monitoring of labor costs, which are compiled weekly and used to measure project performance as well as percentage of completion and percentage of budget spent. Our invoices include individual staff hours per project and any reimbursable, permitting, and filing fees. We include a customized progress report with each monthly invoice, indicating activities performed for active tasks during the invoicing period, expected activities for the next monthly period, and any expected challenges or problems. Under this contract, ESA will provide separate invoices for each project, and if requested by IRWD can provide a monthly summary of the overall Purchase Order (PO) status.

Quality Control / Quality Assurance

All ESA work products are subject to a stringent Quality Assurance/Quality Control (QA/QC) Program. The Program consists of multiple levels of review, each requiring a sign-off from the manager in charge:

- 1. Independent Technical Peer Review
- 2. Project Manager Assembly and Review of Work Product
- 3. Editorial Review of Work Product
- 4. Project Director Review and Approval

This approach provides for preparation of documents that have received reviews from senior technical leaders for accuracy of content, the overall Project Manager for compliance of task objectives, a technical editor for style and readability, and a Project Director to ensure documents are legally defensible, technically accurate, and tailored to meet client needs.

Technical Team

Table 2-1 provides a summary of the key ESA technical staff proposed for this contract. These individuals will be available, as needed, depending on the scope of individual projects. Our proposed Management Team and Technical Team have an extensive history of working together on many CEQA/NEPA projects described later in this section, including IRWD projects. Full team resumes can be found in **Appendix A**.

Technical Team Availability

The ESA Team understands that the availability of team members is of importance to the District; therefore, only staff with the requisite availability to commit to this On-Call CEQA and NEPA Consultation contract's scope of services are assigned to this project. We have included a generalized time-available percentage, but recognize that the services needed under this contract will be intermittent and varied, requiring periods of 100 percent commitment of key staff until tasks are complete. The work effort for our proposed key staff members will fluctuate as individual projects

C - 7



move from one phase to another. Based on the schedule and projected staff hours for implementation of the projects under this On-Call CEQA and NEPA Consultation contract, we can confidently commit to the availability and participation by our proposed Technical Team.

In addition, ESA understands any substitution or addition of any key personnel must be requested in writing, along with a statement of qualifications and time commitment. We understand this request must be approved in writing in advance.

Name	Education	Technical Expertise
Barbra Calantas Biological Resources Availability: 10% Labor Category: Director III	B.S., Biology, University of San Diego	 Over 17 years of experience of Endangered Species Act consultation, general and focused wildlife field surveys, QA/QC for data collection procedures, and electronic data collection guidance. Expertise in overseeing as-needed contracts. Prepares a variety of environmental documents, including Section 7 and Section 10 Biological Assessments and biological reports per a variety of local municipalities' document and format guidelines.
Maile Tanaka Biological Resources Availability: 20% Labor Category: Senior Associate II	Master of Environmental Science & Management, University of California, Santa Barbara B.S., Organismic Biology, Ecology & Evolution, University of California, Los Angeles	 Over 14 years of experience surveying for sensitive floral and faunal species, botanical surveys, and jurisdictional delineations in Southern California. Prepares technical reports and impact analyses to support CEQA/NEPA documents. Well-versed with the requirements of the Orange County Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP).
Karl Fairchild Biological Resources Availability: 10% Labor Category: Associate II	M.S., Environmental Studies, California State University, Fullerton B.S., Fish and Wildlife, Oregon State University B.A., International Studies, Oregon State University	 Over 8 years of experience as a field biologist and environmental compliance monitor, including management of sensitive biological resources and monitoring on large infrastructure projects. Can identify most North American birds by sight and sound, skilled at recognizing nesting bird behavioral cues, performed trapping and relocation for sensitive mammals, and has surveyed for rare plants. Holds a current USFWS recovery permit for willow flycatcher surveys and a CDFW Memorandum of Understanding and Scientific Collecting Permit.
Michael Bever, PhD, RPA Cultural Resources and Tribal Cultural Resources Availability: 10% Labor Category: Director II	Ph.D., Anthropology, Southern Methodist University M.A., Anthropology, Southern Methodist University B.A., Anthropology, with honors, University of California, Davis	 Over 25 years of experience in cultural resources management, directing teams of specialists on projects involving a wide breadth of resource types in compliance with federal and state laws and regulations, including AB52 and tribal consultations. Has served as cultural resources task lead on dozens of tasks for on-call contracts throughout Southern California, including projects for water utilities, sewer department, and public works departments.

Table 2-1: Summary of ESA Technical Team Staff and Qualifications

Name	Education	Technical Expertise
Michael Vader Cultural and Paleontological Resources Availability: 10% Labor Category: Senior Associate II	M.A., Applied Archaeology (In Progress), California State University, San Bernardino B.A., Physical Anthropology, University of California, Santa Barbara	 Over 14 years of experience working on survey, data recovery, and monitoring projects, including a variety of energy and water infrastructure projects throughout California. Specializations include analysis of faunal remains, archaeological/paleontological/environmental compliance monitoring, as well as human osteology and bioarchaeology.
Fatima Clark Archaeological Resources Availability: 10% Labor Category: Senior Associate I	B.A., Anthropology, California State University, Fullerton	 Over 11 years of archaeological experience, including archaeological testing, site recordation, laboratory analysis, pedestrian surveys, records searches, and monitoring for a wide variety of energy, water, and road infrastructure projects. Has written CEQA-level technical reports, EIR and Initial Study sections, archaeological peer reviews, and archaeological monitoring reports. Trained in conducting paleontological surveys and monitoring and has co-authored and managed associated reports.
Shadde Rosenblum Transportation Availability: 10% Labor Category: Managing Associate III	Master of Urban and Regional Planning, University of California, Irvine B.A., International and Regional Studies, University of the Pacific	 Over 20 years of experience providing analytical and technical leadership for a variety of transportation planning projects throughout the United States. Highly skilled in project management and coordination, public outreach activities, the preparation of environmental documents following state and federal regulations, and traffic and transit operations analysis.
David Tomasko, PhD Hydrology, Water Quality Availability: 10% Labor Category: Director III	Post-doctoral Fellowship, University of Texas Marine Science Institute PhD, Biology, University of South Florida M.S., Marine Biology, Florida Institute of Technology B.S., Biology, Old Dominion University	 Over 30 years of experience with water quality assessments and the development of science-based resource management plans. Experience includes ecological assessments, including predictions of likely responses of water quality and natural resources to upgrades in treatment processes for a regional wastewater treatment plant, formation of water quality management plans, and development of pollutant load reduction goals for estuaries and coastal water bodies in the United States and abroad.
Nick Garrity, PE Hydrology, Water Quality Availability: 10% Labor Category: Director III	M.S., Civil and Environmental Engineering, University of California, Berkeley B.S., Geology– Physics/Mathematics, Brown University	 Over 20 years of experience working with river, estuarine, and coastal systems, including hydrodynamic modeling, flood hazard studies, restoration planning and design, geomorphic assessments, environmental impact assessments, and post-project monitoring and evaluation. Has managed the planning and design of multiple large- scale wetland management projects and has advanced innovative approaches to flood hazard analyses and wetland enhancement.



Name	Education	Technical Expertise
Eric Schniewind Geology, Hydrology, Hazards and Hazardous Materials Availability: 20% Labor Category: Managing Associate II	B.A., Geological Sciences, University of California, Santa Barbara	 Over 25 years of experience in geotechnical engineering, soil, and groundwater contamination investigations, environmental remediation planning and implementation, and Phase I site assessments. Responsibilities include providing geological, geotechnical, and hydrogeological technical support for CEQA/NEPA documents.
Michael Burns, CHG, CEG, PG Hazards and Hazardous Materials, Groundwater, Geology Availability: 10% Labor Category: Director II	B.S., Geology, San Jose State University	 Over 30 years of experience in the environmental and geological sciences including CEQA/NEPA assessment and impact analyses. Expert services in planning and permitting, site characterization, Superfund sites, Remedial Investigation/Feasibility Studies, waste management, litigation support, property assessments, development and redevelopment, soil and groundwater remediation, and water rights.
Sarah Spano CEQA/NEPA Availability: 40% Labor Category: Managing Associate II	B.A., Anthropology/ Archaeology, New York University (Magna Cum Laude)	 Over 8 years of experience in ESA's Water Group preparing CEQA/NEPA analysis and documentation specifically for water and wastewater projects. Provides technical evaluations of water projects and their impact on aesthetics, public services, and utilities, as well as cumulative impacts, growth, and alternatives analysis.
Katelyn Matroni CEQA/NEPA Availability: 40% Labor Category:	B.S., Environmental Management & Protection, Cal Poly San Luis Obispo	 Over 5 years of experience assisting with preparation of environmental analysis documentation and permits, ensuring compliance at the federal, state, and local level for water, wastewater, and recycled water infrastructure projects, and facilities master plans. Prepares impact analyses for aesthetics, agricultural and forestry resources, land use and planning, public services, and utilities.
Alan Sako, LEED AP BD+C Air Quality, GHG and Noise Availability: 20% Labor Category: Managing Associate II	B.S., Atmospheric, Oceanic & Environmental Science, University of California, Los Angeles	 Over 18 years of experience in preparing and managing air quality and climate change analyses, performing ambient air quality impact analyses and health risk assessments (HRAs) for CEQA and NEPA documents, and providing air quality permitting and compliance support. Experience with water infrastructure projects including facility master plans and projects spanning multiple city and county boundaries. Cross-trained in acoustical/noise modeling, and preparing hazardous materials business plans (HMBPs), risk management plans (RMPs) for hazardous substances, and offsite consequence analyses (OCAs) for hazardous substances.

Section 3: Project Experience

The table below shows a sampling of ESA's relevant and similar experience with CEQA/NEPA analysis and documentation for water/wastewater projects, including our recent experience with on-call services contracts. ESA's breadth of project experience provides IRWD with the best combination of regional perspective and local understanding for water supply and infrastructure issues. References for select contracts and projects are included in **Table 3-2**.

9

Table 3-1: Summary of Relevant Experience Relevant Projects Services Provided On-Call / As-Needed Contracts Irvine Ranch Water District (IRWD) General Environmental Services On-Call CEQA/ NEPA. CEQA/NEPA ESA has been providing on-call CEQA/NEPA services since 2009 for IRWD for an array of small On-Call Services projects. Our firm has become a trusted advisor to IRWD for environmental compliance issues; • Biological and our understanding of their agency culture results in high client satisfaction; we understand their **Cultural Surveys** need for reliability, responsiveness, and transparency to ensure projects are completed within . MMRP Implementation established budgets and schedules and to meet the expectations of its Board of Directors. . Construction Notable projects completed as part of on-call services: Monitoring San Diego Creek Water Rights Petition Initial Study/ND Section 106 Michelson WRP Recycled Water Bypass (Phase 2/3) EIR Addendum No. 4 Compliance Energy Storage Systems Project Notices of Exemption (NOEs) • Hydrological Peters Canyon Channel Pipeline Biological/Cultural Construction Monitoring Modeling Wells 21 & 22/Well TL-1 Project MND/Initial Study/EA and Addendum No.1 Baker Water Treatment Plant Solar Project EIR Addendum Financial Size: Cumulative Contract Ceiling of \$350,000 Eastern Municipal Water District (EMWD) As-Needed Environmental Services. Since 2013, . CEQA/NEPA ESA has provided EMWD with as-needed environmental services, including CEQA/NEPA On-Call Services documentation; technical studies for biological and cultural resources; air quality and climate Biological and change; noise and traffic; aesthetics; and Riverside County MSHCP compliance. Recent projects **Cultural Services** include: Bureau Coordination San Jacinto Valley Enhanced Recharge and Recovery Program (ERRP) PEIR Construction Goetz Road Water Storage Tank EIR Monitoring San Jacinto Valley Raw Water Pipeline Initial Study/MND • MMRP Implementation Biological and cultural resources surveys and construction monitoring associated with **ERRP** implementation Financial Size: \$300,000+ California Department of Water Resources (DWR) On-Call Environmental Planning Services. • CEQA/NEPA ESA has been the provider of on-call Environmental Planning Services for the DWR Southern • On-Call Services Division since 2006. ESA is preparing environmental analyses, documentation, and permits for • Biological and various projects along the State Water Project and performing construction monitoring. Major Cultural Services projects include: Construction Castaic Dam High Intake Tower Access Bridge Retrofit Project Initial Study/MND Monitoring San Joaquin Field Division Liner Raise and Instrumentation Project Initial Study/MND USFWS/CDFW Salton Sea Bruchard Road Dust Suppression Project Addendum Consultation Lake Perris Seepage Recovery Project EIR Perris Dam Remediation Program EIR Permitting Perris Dam Emergency Release Facility Project Supplemental EIR Financial Size: \$700,000+ Los Angeles Department of Water and Power (LADWP) On-Call Environmental Services. • CEQA Since 2011, ESA has been supporting the LADWP by providing a full array of environmental • On-Call Services services to the Office of Environmental Planning and Assessment. The following is a sample of Technical Studies CEQA and construction monitoring projects under ESA's latest three-year contract: . Construction East Hollywood District Yard Project Initial Study/MND Monitoring Forest Lawn Recycled Water Tank Project Initial Study/MND MMRP Implementation Stormwater Capture Program Initial Study/MND **River Supply Conduit Construction Monitoring** City Trunk Line South Project EIR Construction Monitoring Foothill Trunk Line Unit II EIR Construction Monitoring **Owens Lake Master Project EIR** Addendum to the Great Basin Unified Air Pollution Control District's 2008 Owens Valley PM10 State Implementation Plan

Financial Size: \$900,000+



Table 3-1: Summary of Relevant Experience						
Relevant Projects	Services Provided					
 Metropolitan Water District As-Needed Environmental Planning Services. ESA has been providing on-call environmental services to Metropolitan since 2002, including CEQA review, permitting, and specialized biological and cultural resources surveys. We have provided field surveying and mitigation monitoring compliance services, including regular monitoring of construction projects at the Weymouth Filtration Plant. Much of ESA's work required immediate response in a prompt and resourceful manner to complete field monitoring activities. Major projects include: Weymouth Filtration Plant Ozonation Facilities and Site Improvements Program FEIR and Addendums 1, 4, and 5 Weymouth Filtration Plant General Construction Monitoring Colorado River Aqueduct Conveyance Reliability Program MND and Addenda Jensen Solids Dewatering and Lagoons FEIR and Addenda 	 CEQA Technical Studies On-Call Services MMRP Implementation Construction Monitoring Biological and Cultural Surveys 					
 Inland Empire Utilities Agency (IEUA), On-Call Environmental Services. ESA has been providing on-call environmental services for IEUA since 2012, including for CEQA/NEPA compliance documentation; regulatory permitting; and technical services such as biological assessments, jurisdictional delineations, stormwater pollution prevention plans (SWPPPs), cultural resource surveys, and mitigation monitoring. ESA has provided a diversity of services through over 15 task orders initiated under this contract to date, including: Facilities Master Plans PEIR Turner Basins SWPPP and Implementation Prado Basin Monitoring Wells Preconstruction surveys Zone 930 Burrowing Owl (BUOW) Survey Wineville Jurisdictional Determination 	 CEQA/NEPA On-Call Services Construction Monitoring USACE Coordination CWA Section 404 Application Jurisdictional Determination Biological Surveys 					
Individual Projects						
IRWD Sypnon Reservoir Geotechnical Investigations Project Initial Study/MND and Syphon Reservoir Improvement Project EIR. IRWD proposes to enlarge the Syphon Reservoir and Dam, to increase its recycled water storage capacity from 500 to 5,000 acre-feet. This will allow IRWD to maximize use of its recycled water instead of discharging it into the ocean while reducing the District's dependence on imported water supplies during the summer months. IRWD adopted the Final Initial Study/MND for the Geotechnical Investigations in June 2019. ESA provided extensive biological surveys and cultural surveys in support of the Initial Study/MND; assisted IRWD with AB52 process for Tribal consultation; facilitated coordination with USFWS and CDFW for mitigation associated with the Orange County NCCP and Grant Deed restrictions for the site; and secured a Jurisdictional Determination from the U.S. Army Corps of Engineers and Streambed Alteration Agreement from CDFW in less than one year. ESA is currently in the preliminary stages of preparing the EIR for the Reservoir Improvement Project. <i>Financial Size:</i> <i>\$900,000+</i>	 CEQA Biological Surveys Cultural Surveys AB52 Mitigation Monitoring USFWS/CDFW Coordination and Permitting 					
IRWD Peters Canyon Channel Water Capture and Reuse Pipeline Project IS/MND. IRWD together with the Cities of Tustin and Irvine, Orange County Flood Control District, and Caltrans developed a cost-effective solution for the disposal of Peters Canyon Channel flows that contain high nitrate and selenium concentrations. The Project diverts high selenium nuisance surface and groundwater flows to OCSD for treatment and reuse. ESA provided a Reduced Discharge Technical Study to document project impacts to flow and water quality downstream from the proposed diversion points, including impacts within Peters Canyon Channel, San Diego Creek, and IRWD's San Joaquin Marsh. ESA also provided Cultural Resources and Biological Resources Technical Reports to support direct and indirect impacts of the Project, including impacts associated with changes in flow and water quality downstream from proposed diversion points. ESA prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for CEQA compliance; the IS/MND was certified and the Project approved by the IRWD Board of Directors in April 2015. Subsequently, ESA's staff provided construction monitoring services in accordance with the	 CEQA Biological Surveys Cultural Surveys Hydrologic Analysis Reduced Discharge Technical Report Agency Coordination Mitigation Monitoring/MMRP 					

biological and cultural mitigation measures in the MMRP. Financial Size: \$235,000

Table 3-1: Summary of Relevant Experience

Delayant Duciente	Complete Dressided
Relevant Projects	Services Provided
Integrated Banking Project, to be located outside of Bakersfield in western Kern County. IRWD together with Rosedale-Rio Bravo Water Storage District will develop over 500 acres of land with	 CEQA Biological Surveys and Report
groundwater recharge and extraction facilities. The project will be integrated into Rosedale's	 Cultural Surveys and
existing Conjunctive Use Program and will provide Rosedale with additional recharge and	Report
storage capability and operational flexibility. The project will allow IRWD to store water for	Air Emissions Modeling
supply reliability and redundancy. The Final EIR was certified in December 2015. Financial Size:	
	CEOA
IRWD biosonas nanating and Energy Recovery radiates roject supplementation (JERA).	• Construction
The project provides a complete biosolids process, biogas management, and energy generation	Monitoring
system for the Michelson and Los Alisos WRPs. The Final SEIR was certified in 2012. ESA also	
provided cultural mitigation/construction monitoring services. <i>Financial Size:</i> \$300,000+	
IRWD Baker Water Treatment Plant Project EIR and Addenda. The Baker WTP Project	. CEQA
increases water supply reliability in southern Orange County by creating redundancy of	 Technical Studies
treatment system capacity and distribution infrastructure for potable water in the event of	 Cultural Survey and
facility outages due to routine maintenance or emergencies. The project upgraded the existing	Report
Baker Filtration Plant in the City of Lake Forest, constructed additional transmission pipelines,	 Biological Survey and
and installed a new pump station, all within the Central Subarea of the Orange County NCCP. Key	Report
issues included noise, aesthetics, and traffic due to residential land uses surrounding the project	
site. The Final EIR was successfully certified in 2011. ESA also prepared subsequent Addenda to	
the EIK for modifications that included pipeline realignments, addition of onsite residual	
ENVID San Jacinto Pay Water Pinolino Project Initial Study (MND, ESA propared the Initial	CEOA
Study/MND evaluating an initial phase of the San Jacinto Valley Groundwater Banking	 CEQA Biological and
Enhanced Recharge and Recovery Program (ERRP) ESA prenared the Program FIR for the ERRP	• Diological and Cultural Services
which was certified in June 2018. The IS/MND tiered from the Program EIR and was adopted in	Air Emissions Modeling
June 2019. The Pipeline Project provides a dedicated raw water pipeline to convey water to	 Noise Emissions
existing and future recharge ponds along the San Jacinto River. ESA conducted biological and	
archaeological resources surveys for the project to support the IS/MND and is currently providing	
construction monitoring at ERRP recharge ponds. Financial Size: \$77,000+	
EMWD Goetz Road Water Storage Tank EIR. ESA is preparing the Draft EIR, which includes	• CEQA
technical studies for biological and cultural resources, as well as visual simulations and a	 Biological and
shade/shadow analysis. The project involves construction and operation of an 8-million-gallon	Cultural Services
potable water storage tank, a chlorination disinfection facility, and an associated transmission	Visual Simulations
pipeline, in order to address a number of deficiencies in EMWD's 1627 pressure zone. Key issues	Shade/Shadow
included hoise and aesthetics. ESA conducted biological, archaeological, and paleontological	Air Emissions Modeling
surveys. Financial Size: \$200,000+	Noise Emissions
LADWP Forest Lawn Recycled Water Tank Project IS/MND. ESA is preparing the Initial	• CEQA
Study/MND for the project which includes installation of a new recycled water storage tank and	Biological and Cultural Services
associated conveyance pipeline. The project would provide peak summer recycled water suppry	Cultural Services
surveys and evaluations for the project. <i>Financial Size:</i> \$140,000+	
DWR Castaic Dam High Intake Tower Access Bridge Retrofit Project IS/MND. FSA is preparing	• CEOA
the Initial Study/MND to seismically retrofit the high tower access bridge at Castaic Lake, the	 Biological and
terminal reservoir of the State Water Project's West Branch. The project would retrofit the access	Cultural Services
bridge to make it seismically capable of withstanding a potential 7.3 magnitude earthquake. The	• Air Emissions Modeling
project involves significant drawdown of the lake for construction activities. ESA conducted	• Noise Emissions
biological and cultural resources surveys to support preparation of the Initial Study/MND.	
Financial Size: \$40,000+	

C - 13



References	ESA Projects
Gina Radieve, Senior Environmental Scientist California Department of Water Resources, Department of Engineering P: 916-651-2458	 Castaic Dam High Intake Tower Access Bridge Retrofit Project Initial Study/MND San Joaquin Field Division Liner Raise and Instrumentation Project Initial Study/MND Salton Sea Bruchard Road Dust Suppression Project Addendum Lake Perris Seepage Recovery Project EIR Perris Dam Remediation Program EIR Permitting Perris Dam Emergency Release Facility Project SEIR
Joseph Broadhead, Principal Water Resource Specialist, Eastern Municipal Water District P: 951-928-3777 ext. 4545	 San Jacinto Valley ERRP PEIR Goetz Road Water Storage Tank EIR San Jacinto Valley Raw Water Pipeline Initial Study/MND Biological and cultural resources surveys and construction monitoring associated with ERRP implementation
Nadia Parker, Supervisor – Environmental Planning & Assessment Los Angeles Department of Water and Power P: 213-367-1745	 East Hollywood District Yard Project Initial Study/MND Forest Lawn Recycled Water Tank Project Initial Study/MND Stormwater Capture Program Initial Study/MND River Supply Conduit Construction Monitoring City Trunk Line South Project EIR Construction Monitoring Foothill Trunk Line Unit II EIR Construction Monitoring Owens Lake Master Project EIR Addendum to Great Basin Unified Air Pollution Control District's 2008 Owens Valley PM10 State Implementation Plan
Pietro Cambioso, Deputy Manager of Planning Inland Empire Utilities Agency P: 909-993-1600	 Facilities Master Plans PEIR Turner Basins SWPPP and Implementation Prado Basin Monitoring Wells Preconstruction surveys Zone 930 Burrowing Owl (BUOW) Survey Wineville Jurisdictional Determination

Table 3-2: Client References

Section 4: Schedule

ESA understands the schedule required for CEQA compliance depends on the complexity of the project, the completeness of the project objectives and description, and the level of controversy associated with project components. With clear stakeholder support and a completely developed project description, a Negative Declaration requires approximately four months to prepare, circulate for public review, and certify. An Addendum to an EIR typically can be completed within one month or less. When a project requires intensive technical studies or neighborhood outreach, the schedule can be extended by several months. NEPA documents also can be prepared efficiently depending on the completeness of analysis and complexity of the project. However, federal approval of EAs generally adds at least several months to the CEQA schedule due to the additional agency coordination. For this reason, we typically work with the Bureau to negotiate preparation of a CEQA-Plus document instead of a joint CEQA/NEPA document when Bureau funding is the federal nexus. We have found that after completion of a CEQA-Plus document, the project schedule of the SWRCB for SRF funding can add several months to the project schedule, depending on the level of effort needed to comply with Section 106 of the National Historic Preservation Act.

ESA specializes in on-call services contracts that require a deep bench of technical capabilities to be available at any time. We will get the right person on the job whenever needed. After reviewing our firm's current and planned workload, we can assure IRWD that the ESA team has the availability and experience to provide on-call services to the District.

Section 5: Fee Schedule

Charges will be made at the Category Rates set forth below for time spent on project management, consultation, meetings, field work, technical analyses, report preparation and review, travel time, etc. From time to time, ESA retains outside professional and technical labor on a temporary basis to meet peak workload demands. Such contract labor may be charged at regular Personnel Category Rates.

Personnel Category Rates

The range of rates shown below for each staff category reflects ESA staff qualifications, expertise and experience levels. These rates allow our project managers to assemble the best project teams to meet the unique project requirements and client expectations for each opportunity. The Labor Categories listed below correspond to those included for each member of the Management Team and Technical Team in **Section 2** above.

Environmental Science Associates | 2020 Schedule of Fees

Level I	Level II	Level III
265	280	300
210	225	240
175	190	205
150	160	170
105	125	135
85	100	120
	Level I 265 210 175 150 105 85	Level ILevel II26528021022517519015016010512585100

Expenses

- A. Travel Expenses
 - 1. Transportation
 - a. Company vehicle IRS mileage reimbursement rate
 - b. Common carrier or car rental actual multiplied by 1.15
 - 2. Lodging, meals and related travel expenses direct expenses multiplied by 1.15
- B. Communications Fee

In-house costs for phone, e-mail, fax, regular postage, walk-up copier, and records retention – project labor charges multiplied by 3%

C. Printing/Reproduction Rates

Item	Rate/page
8 1/2 x 11 b/w	\$0.05
11 x 17 b/w	\$0.10
8 1/2 x 11 color	\$1.00
11 x 17 color	\$2.00
Covers	\$0.50
Binding	\$1.00
HP Plotter	\$25.00
CD	\$10.00
Digital Photography	\$20.00 (up to 50 images)



Section 6: Joint Venture

ESA does not propose employ a joint venture during the course of this contract. Typically, ESA's in-house staff has capabilities that are comprehensive and sufficient for completing environmental compliance documents for small projects. However, ESA routinely engages in subcontract arrangements when technical specialties that are beyond our in-house capabilities are required and appropriate for a project. We have worked with many firms in the area, including traffic engineering firms, geotechnical firms, local cultural resources specialists, as well as specialized biological resource personnel. We are open to a variety of teaming arrangements where it suits IRWD and the particular project. As mentioned previously, ESA has ongoing working relationships with firms such as Fehr & Peers and KOA Corporation for traffic studies and Ninyo & Moore for geotechnical and environmental hazards/hazardous materials, and Todd Groundwater and Tom Harder for groundwater services. If such specialized skills are needed for a particular task, ESA will work with IRWD to identify appropriate subconsultants.

Section 7: Conflict of Interest

To the best of our knowledge, ESA does not have existing personal, financial, and/or organization conflicts of interest prohibited by law.

Section 8: Insurance Requirements

If selected to provide the services under this contract, ESA is prepared to furnish IRWD with acceptable evidence showing that the insurance coverage required has been procured. ESA has insurance coverage of \$1 million each for general liability, property damage, worker's compensation, automobile, and professional liability. We will provide proof of insurance through our carrier, Woodruff-Sawyer & Co., upon the awarding of this contract. A copy of our certificate can be found in **Appendix B**.

Section 9: Sample Contract

ESA has reviewed the copy of IRWD's professional service agreement, attached to the RFP and we have no modifications to the standard terms and conditions.





PRODUCER License # 0E67768

CERTIFICATE OF LIABILITY INSURANCE

MCGRAWM DATE (MM/DD/YYYY)

		11/12/2019			
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).					
RODUCER License # 0E67768	CONTACT Ali Smith				
A Insurance Services	PHONE (A/C No Ext) (619) 788-5795 50206	FAX (619) 574-6288			

ENVISCI-05

IOA Insurance Services	PHONE (A/C, No, Ext): (619) 788-5795 50206 FAX (A/C, No):(6	19) 574-6288			
Suite 600	E-MAIL ADDRESS: Ali.Smith@ioausa.com				
San Diego, CA 92122	INSURER(S) AFFORDING COVERAGE	NAIC #			
	INSURER A : RLI Insurance Company	13056			
INSURED	INSURER B : Mt Hawley Insurance Company	37974			
Environmental Science Associates	INSURER C: Crum & Forster Insurance Company	42471			
550 Kearny St., Suite 800	INSURER D :				
San Francisco, CA 94108	INSURER E :				
	INSURER F :				

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 ADDL SUBR POLICY EFF POLICY EXP

LTR		TYPE OF INSURANCE	INSD	WVD	POLICY NUMBER	(MM/DD/YYYY)	(MM/DD/YYYY)	LIMIT	S
Α	Χ	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	\$ 2,000,00
		CLAIMS-MADE X OCCUR	Х	x	PSB0007416	12/1/2019	12/1/2020	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 1,000,00
	Χ	Cont Liab/Sev of Int						MED EXP (Any one person)	\$ 10,00
								PERSONAL & ADV INJURY	\$ 2,000,00
	GEN	I'L AGGRE <u>GAT</u> E LIMIT AP <u>PLIE</u> S PER:						GENERAL AGGREGATE	\$ 4,000,00
		POLICY X PRO- JECT LOC						PRODUCTS - COMP/OP AGG	\$ 4,000,00
		OTHER:						Deductible	\$
Α	AUT	OMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,00
	Χ	ANY AUTO	Х	x	PSA0002468	12/1/2019	12/1/2020	BODILY INJURY (Per person)	\$
		OWNED SCHEDULED AUTOS						BODILY INJURY (Per accident)	\$
		HIRED AUTOS ONLY AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$
	Χ	Comp.: \$1,000 X Coll.: \$1,000							\$
в	Х	UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	\$ 10,000,00
		EXCESS LIAB CLAIMS-MADE			PSE0003196	12/1/2019	12/1/2020	AGGREGATE	\$ 10,000,00
		DED X RETENTION \$ 10,000							\$
Α	WOR	KERS COMPENSATION						X PER OTH- STATUTE ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE		ETOR/PARTNER/EXECUTIVE Y/N X PSW0004135 12/1/2019 12/1/2020 E.L. EACH ACC		E.L. EACH ACCIDENT	\$ 1,000,00			
	(Man	idatory in NH)	N/A					E.L. DISEASE - EA EMPLOYEE	\$
	If yes	s, describe under CRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$ 1,000,00
С	Pro	f Liab/Ded. \$50K			PKC108908	9/17/2019	12/1/2020	Per Claim/Aggregate	5,000,00
С	Poll	Liab/Ded. \$50K			PKC108908	9/17/2019	12/1/2020	Occurrence/Aggregate	5,000,00

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Proof of Insurance for Environmental Science Associates Issued for Evidence of Insurance Purposes Only

CERTIFICATE HOLDER	CANCELLATION
Sample Certificate c/o Environmental Science	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
Associates 550 Kearny Street, Suite 800 San Francisco, CA 94108	AUTHORIZED REPRESENTATIVE T. Kelly Howlell
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EXHIBIT "D"

CARLSBAD FRESNO IRVINE LOS ANGELES PALM SPRINGS POINT RICHMOND RIVERSIDE ROSEVILLE SAN LUIS OBISPO

January 30, 2020

Fiona Sanchez, Director of Water Resources Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Subject: Proposal for On-Call CEQA and NEPA Consultation

Dear Ms. Sanchez

LSA Associates, Inc. (LSA) is pleased to provide this proposal for on-call environmental-consulting services for Irvine Ranch Water District (IRWD) for compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

LSA is a full-service, multidiscipline environmental, transportation and project management professional-services group with headquarters in Irvine, California, and additional offices located throughout the State. Preparation Review of CEQA (including CEQA+) and NEPA documents has been a core service at LSA since the founding of the firm in 1976. Over the past 44 years, LSA has expanded its services to include virtually all environmental planning and permitting services, making the firm a "one-stop" choice for CEQA and NEPA documentation. Today, the firm employs approximately 200 environmental professionals in nine offices in California, including specialists in CEQA and NEPA documentation, biological resources, architectural and historic resources, archaeology, paleontology, air quality, greenhouse gas emissions, noise, and transportation. LSA has a successful track record of preparing environmental documents that are technically sound and legally defensible, as well as innovative and solution-oriented. LSA will provide environmental-planning expertise to IRWD that reflects the company's extensive experience with similar projects, including the following:

- Irvine Ranch Water District
- Orange County Water District
- Metropolitan Water District
- Moulton Niguel Water District
- Rancho California Water District
- South Coast Water District
- Coachella Valley Water District
- San Diego Water District

- Kern/Tulare Water District
- Cawelo Water District
- West Kern Water District
- West Valley Water District
- Tehachapi-Cummings County Water District
- Contra Costa Water District
- Joshua Basin Water District
- North Marin Water District
- Quail County Water District

It is important to note that LSA is a 100 percent employee-owned corporation. All LSA employees own stock and are personally vested in the firm's commitment to providing quality service. As a result, clients know they are in the hands of a stable company that will follow through on its commitments.



LSA

A hallmark of LSA's approach is to use senior-level staff who remain assigned and committed to a project for the full term of the project. LSA's Principals and staff are trained as planners and environmental analysts, bringing an enhanced set of skills to environmental review. LSA's combined expertise allows the firm to refine projects where possible, develop mitigation measures that address identified impacts when necessary, and identify alternatives that will satisfy CEQA and NEPA requirements and reduce potential project impacts. Further, LSA is proactive in communication and problem solving and is adept at identifying problems as they emerge and developing alternative approaches and solutions in consultation with clients. LSA's commitment of senior-level staff, its depth of expertise, and its emphasis on communication with lead agencies have earned the company a reputation for providing thorough, credible, and objective reports.

LSA has assembled a team of professionals who are highly qualified to accomplish all of the tasks necessary to prepare environmental document(s) for the proposed contract. LSA's Irvine office has over 90 technical and support staff, including environmental planners, air quality and greenhouse gas emissions specialists, biologists, archaeologists, paleontologists, architectural historians, noise specialists, and transportation specialists who are ready to assist IRWD with future projects.

The LSA Team will be led by Nicole Dubois as Principal in Charge. Ms. Dubois will be supported by Environmental Task Leaders Nicole West, David Atwater, and Shelby Cramton. Ms. Dubois and the Environmental Task Leaders have extensive experience managing environmental projects and conducting CEQA and NEPA analysis for projects throughout Southern California. They will remain assigned to the contract for its duration.

In summary, LSA offers the following:

- Recent environmental experience with water districts, including IRWD
- A unique one-stop option for the completion of CEQA and NEPA documentation, including biological resources, architectural and historic resources, archaeology, paleontology, air quality, greenhouse gas emissions, noise, and transportation
- Commitment of senior-level staff who can provide technical expertise and project management skills to advance the CEQA process
- Depth of resources (90 staff in Irvine) to keep project schedules on track.

Thank you in advance for your consideration of this proposal. Although every effort has been made to anticipate your needs, LSA welcomes the opportunity to discuss this proposal in further detail. If you have any questions, please contact Nicole Dubois at (949) 553-0666 or nicole.dubois@lsa.net.

D - 2

Sincerely, LSA Associates, Inc.

Nicole Dubois

Managing Principal



INTRODUCTION

LSA Associates, Inc. (LSA) is pleased to submit this Statement of Qualifications/Proposal to provide oncall environmental consulting services for the Irvine Ranch Water District (IRWD) in accordance with the California Environmental Quality Act (CEQA) and/or the National Environmental Policy Act (NEPA).

LSA is a diversified environmental, transportation, and project management firm that evolved from a small consulting firm formed by Larry Seeman in 1976. (LSA was originally called Larry Seeman Associates.) The firm was designed to meet the need for environmental evaluation as a result of the passage of CEQA in 1970. From this foundation, the firm's expertise, experience, and services have grown to encompass the many issues related to environmental law. LSA has over 40 years of experience helping clients navigate the often complex process of environmental review.

ENVIRONMENTAL PLANNING has been the cornerstone of LSA's professional practice since its founding and continues to be one of the firm's key practice areas. LSA's environmental staff includes expert practitioners of CEQA (including CEQA+) and NEPA. LSA's multidisciplinary project teams are assembled to fit the specific needs of each client and project.

The firm provides support with all aspects of CEQA and NEPA compliance, including preparation of documentation; coordination with affected federal, State, and local agencies; and implementation and monitoring of mitigation during construction and operation of facilities.

LSA's work begins with the collection and analysis of baseline data, which is used to determine the significance of a project's impacts. The firm then proposes mitigation measures to reduce impacts, where possible, to below levels of significance. It also provides recommendations on project design refinements and/or alternatives to avoid or reduce otherwise significant impacts, as well as ensure thorough and accurate documentation (including the use of LSA's Geographic Information Systems [GIS] Division) as required to assist regulators in making informed decisions and protect the project from litigation.

In addition to its capabilities in preparing CEQA and NEPA documents, the LSA staff includes in-house expert professionals in a variety of technical disciplines. By maintaining its technical

LSA's Services include the following:

- Preparation of EIRs/EISs, ISs, EAs, IS/NDs, IS/MNDS, FONSIs, and EIR Addendums
- Preparation of supporting technical studies (such as for air quality, greenhouse gas emissions, noise, transportation, biological resources, cultural resources, paleontological resources, and historic resources)
- Coordination with local, State, and federal resource agencies and management of public participation programs
- Issuance of legal notices and incorporation of environmental documents into planning processes
- Mitigation monitoring including dust control, noise, biological, archaeological, and paleontological monitoring
- Implementation of permitting procedures for federal and State resource permits

expertise in house, LSA will provide IRWD with an integrated, multidisciplinary team that facilitates communication of project information, deliverables, and schedules. A few of LSA's technical disciplines are highlighted below:



D - 3

On-Call CEQA and NEPA Consultation



- LSA's AIR QUALITY, GREENHOUSE GAS (GHG) EMISSIONS, AND NOISE staff offer complete assessment modeling and monitoring of noise and air quality impacts for educational, residential, commercial, and industrial developments; General Plan and Specific Plan studies; and transportation projects. These services include modeling of construction and operational emissions from mobile and stationary sources. In addition, LSA remains current in regard to ever-changing regulations and requirements pertaining to GHG emissions and global climate change.
- LSA's BIOLOGICAL RESOURCES staff are known for their outstanding expertise in evaluation, management, and restoration of biological resources. LSA's staff of scientists prepares biological resource inventories, constraints analyses, and impact assessments. LSA's extensive experience in wetlands analysis, special-status species evaluation, and environmental permitting is respected by both clients and regulatory-agency staff. LSA designs habitat restoration plans and mitigation banks, implements and monitors revegetation programs, and facilitates successful completion of permitting assignments. Extensive use of GIS and global positioning system (GPS) technology has become a regular part of LSA's work.
- LSA's CULTURAL AND PALEONTOLOGICAL RESOURCES staff provide field surveys, testing, laboratory services, resource evaluation, and historical assessments. When required to offset significant impacts, LSA will develop cost-sensitive and practical mitigation for cultural and paleontological resources protection and preservation. LSA is also available to assist with the tribal consultation process for Senate Bill [SB] 18 and Assembly Bill [AB] 52, if requested.
- LSA's TRANSPORTATION staff offer comprehensive planning and engineering services for all aspects of development and transportation projects. LSA's services include preparation of Traffic Impact Analysis reports, modeling for regional transportation networks, identifying roadway funding and cost-sharing opportunities, assessing traffic and parking conditions, and developing strategic solutions.





1. SCOPE

LSA's mission is to provide services in the environmental disciplines to public and private clients that have the ability and capacity to affect the existing physical environment. Since this assignment is for oncall services to be performed on a task-order basis, a specific work plan cannot be presented at this time. However, this section presents LSA's general approach to this contract and to a range of potential environmental documents. Additionally, a detailed sample Scope of Work, schedule, and budget are provided in Appendix A; this sample Scope of Work assumes a moderately complicated project.

It is essential that there be a clear understanding between IRWD staff and the LSA Team regarding each assignment's goals and objectives. The appropriate lines of communication and reporting will be established to assure that the work progresses on schedule and as planned. LSA's basic management plan for each task order is to provide a well-defined budget, schedule, Scope of Work, staffing plan, progress reporting, and quality control procedures based on LSA's Quality Control Plan. This work plan will ensure that a proactive approach to project management is provided to client staff. LSA's goal is to function as an extension of IRWD staff throughout the duration of the contract.

At project initiation, it is expected that the LSA Team will meet with key IRWD staff members, refine the Scope of Work, delegate responsibility, and establish key project milestones. LSA will develop protocols for communication with IRWD staff and with responsible agencies, if applicable. LSA will proactively communicate with IRWD, which includes attendance at status meetings or calls with IRWD on a regular basis to ensure adequate progress and resolve issues throughout the CEQA and/or NEPA process. LSA's overall approach to conducting successful environmental analyses, preparing environmental documents, and regulatory permitting involves organizing both the LSA Team and the project tasks to achieve the following objectives:

- Work with IRWD staff and the consultant team, if any, to minimize project environmental impacts to the maximum extent practicable to reduce mitigation costs and streamline environmental approvals.
- Obtain final environmental clearance and resource agency permits for all project components.
- Ensure that all procedural steps required by CEQA and/or NEPA and IRWD are met in a timely manner and that all applicable regulations and guidelines are followed.
- Proactively resolve issues and pursue needed information and decisions to facilitate completion of CEQA and/or NEPA requirements within the agreed-upon schedule. If issues arise that would jeopardize the schedule, LSA will immediately apprise IRWD of the problem and diligently develop alternative approaches to maintain the schedule.
- Effectively use email, telephone, letter correspondence, and meetings to communicate with IRWD in a timely and thorough manner to ensure efficient coordination and flow of information.
- Provide in-house review of all products by a technical editor and a Principal prior to submittal, as stated in the LSA Quality Control Handbook. LSA's quality control procedures ensure that LSA documents arrive for review in final form, which allows the reviewer to concentrate on issues of substance rather than on editing tasks.

3 D - 5

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- Incorporate early involvement of and coordination with State and federal regulatory and resource agencies (subject to IRWD approval) to resolve issues and confirm assessment methodologies.
- Maximize use of existing information to limit the need for new or supplemental studies.

2. TEAM

As an on-call environmental services consultant to more than 70 agencies in California within the last 5 years, LSA recognizes that an on-call assignment requires an "on-call" obligation. The team must act quickly; it must be responsive, knowledgeable, ready to use its experience for myriad possible requests, and solution-oriented. LSA's range of experience has led it to one common denominator when working under an on-call services contract: constant, clear, productive communication. If placed on IRWD's on-call list, LSA will be responsive and efficient, maintaining frequent and purposeful communication with IRWD staff. LSA is committed to providing IRWD with prompt, efficient service and unparalleled expertise.

A hallmark of LSA's approach is to use senior-level staff members who remain assigned and committed to a project for the full term of the project. Before bidding on a project or individual task orders, LSA evaluates its workload and assignments to determine whether it can meet the client's goals. LSA pursues projects only when it can commit the appropriate resources. LSA's reliability is demonstrated by both its successful track record and its commitment of senior-level staff to this project. It is LSA's intention that its staff play a consistent, lead role from start to finish. Key personnel will not be replaced without written authorization from IRWD.

Nicole Dubois Principal in Charge

Ms. Dubois will serve as the Principal in Charge for all new task orders issued under the on-call contract. Ms. Dubois will be the main point of contact for IRWD. Project management tasks include regular contact with IRWD staff and the Project Team, contract management, schedule coordination, budget tracking and control, and development of deliverables. Ms. Dubois will be available for consultation on CEQA procedural matters and will attend meetings and public hearings with IRWD staff, as requested.

Ms. Dubois will also be ultimately responsible for quality assurance for all work undertaken and will review all in-house prepared text, tables, and graphics before these materials are presented to IRWD. Ms. Dubois will provide direction to all team members that will ensure internally consistent, coherent documents, and will coordinate the day-to-day activities associated with assigned tasks.

As a Principal at LSA, she has extensive experience in the preparation of environmental documents for a variety of land development, redevelopment, institutional, and capital improvement projects, including Initial Studies (ISs), Mitigated Negative Declarations (MNDs), and Environmental Impact Reports (EIRs). Her primary responsibilities include research, preparation, and management of environmental documents prepared in compliance with both CEQA and NEPA. Ms. Dubois has extensive experience managing large environmental projects and conducting CEQA analysis for projects throughout Southern California. Ms. Dubois is currently working with IRWD on the IS/MND for the San Joaquin Reservoir

D - 6

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Filtration Project and with the Orange County Sanitation District (OCSD) on the IS/Addendum to the Fountain Valley Crossings EIR for the proposed Administration Building, Site Security, and Entrance Realignment Project. Ms. Dubois has also previously worked with IRWD on the Eastwood Recycled Water Pump Station IS/MND and with the Moulton Niguel Water District (MNWD) on the IS/MND for the proposed Operations Center in Laguna Hills.

ENVIRONMENTAL TASK LEADS AND TECHNICAL STAFF

Ms. Dubois, Principal in Charge, will be assisted by the Environmental Task Leaders and technical staff shown in Table A, LSA Key Personnel. The individuals presented in this table and the Organization Chart, below, were specifically selected because of their technical expertise and prior work on IRWD projects or projects with similar requirements. While these individuals represent LSA's "core team" for this contract, support staff from within LSA may be brought onto the team as needed. Since LSA maintains a full complement of staff in all environmental and technical disciplines, the company is able to be flexible with staff assignments and to adjust workload priorities to meet IRWD's product and scheduling needs. As stated above, the Principal in Charge will be assigned for the duration of the contract. Resumes for key personnel are provided in Appendix B.





On-Call CEQA and NEPA Consultation

Table A: LSA Key Personnel

			Percentage of	
			Time Available	
		Years of	to Contribute to	
Staff Member	Education/Registrations	Experience	IRWD	Recent Experience
		Proj	ject Management	
Nicole Dubois, Principal	Master of Planning, University of	18	30%	IRWD Eastwood Recycled Water Pump Station
Environmental Planner	Southern California; B.A., Art			IRWD San Joaquin Reservoir Filtration Project
	History and Organizational Studies,			 Moulton Niguel Water District (MNWD) Operations Center IS/MND
	Pitzer College			Orange County Sanitation District (OCSD) Headquarters Complex Site
				and Security, and Entrance Realignment Program
		Environ	mental Task Leaders	
Nicole West, CPSWO,	M.S., Civil and Environmental	19	50%	IBWD Eastwood Recycled Water Pump Station
QSD/QSP, Associate	Engineering, University of California.			MNW/D Operations Center
Environmental Planner	Berkeley: B.S., Evolution and Ecology.			Voil Dam Seismis and Hydrologis Remediation Project
	University of California; CPSWQ;			Vali Dani Seisinic and Fiyolologic Kenediation Project
	QSD/QSP			OCSD Readquarters complex, site and security, and entrance Poslignment Drogram
David Atwater Senier	R.S. in Urban and Regional Planning with	10	E09/	IDMD Facture of Denvilled Meter Duran Station
Environmental Planner	an Interdisciplinary Minor in GIS	10	50%	IRWD Eastwood Recycled Water Pump Station
LINIONNEILAIFIANNEI	Applications California State Polytechnic			Kancho California Water District (KCWD) Santa Kosa Water
	Iniversity Pomona:			Reclamation Facility Renabilitation Program CEQA-Plus and
	oniversity, i oniona,			
				West Valley Water District (WVWD) Wellhead Treatment System
				Metropolitan Water District of Southern California (MWD) Lakeview
			Fact	Pipeline Repair Project IS/MND
Shelby Cramton,	M.A., Urban Planning, California State	3	50%	 OCSD Headquarters Complex, Site and Security, and Entrance
Environmental Planner	University, Northridge; B.A., Urban			Realignment Program
	Studies and Planning, University of			Upper and Lower Niguel Shores Meter Improvement Projects
	California, San Diego			Mission Foothills Residential Project
		Air Quality/C	Greenhouse Gas Emis	ssions
Amy Fischer, Principal	B.S., Environmental Policy Analysis, with	19	10%	IRWD Eastwood Recycled Water Pump Station Project
Air Quality/Noise	a Minor in Geography, University of			Richmond Wet Weather Storage Project
Specialist	Nevada, Reno			Penitencia Delivery Main and Penitencia Force Main Seismic Retrofit
				Project



2

On-Call CEQA and NEPA Consultation

Table A: LSA Key Personnel

			Percentage of Time Available	
		Years of	to Contribute to	
Staff Member	Education/Registrations	Experience	IRWD	Recent Experience
Michael Slavick, Senior	B.S., Environmental Policy Analysis and	28	30%	IRWD Eastwood Recycled Water Pump Station Project
Air Quality Specialist	Planning, University of California, Davis			 Metropolitan Water District (MWD) Whitewater River/Colorado River Aqueduct Siphon Scour Protection, Mine Reclamation, and Cabazon Radial Gate
				Cernetery Area Water Pipeline Replacement
Cara Carlucci,	B.S., City & Regional Planning with a	5	30%	City of Lemoore Water Treatment Plants Project
Environmental	Minor in Real Property Development,			Municipal Well Site 22 Project
Planner/Air Quality Specialist	California Polytechnic State University			Cogeneration at the City of Richmond Wastewater Treatment Plant
		Biol	ogical Resources	
Blake Selna, Principal Biologist Jim Harrison, Senior Biologist	B.S., Environmental and Resource Sciences, University of California, Davis B.A., Biological Sciences, California State University, Fullerton	19 27	20%	 IRWD Michelson Water Reclamation Plant Mitigation Monitoring, Compliance, and Reporting Program IRWD Carlson Marsh Regrade regulatory permits and construction monitoring IRWD Natural Treatment System Integrated Pest Management Plan Monitoring OC Waste & Recycling On-Call Services, primarily Prima Deshecha Landfill Expansion Regulatory Permitting and Mitigation Program OC Public Works La Pata Avenue Extension Regulatory Permitting and Construction Monitoring California High-Speed Rail Project, Bakersfield to Palmdale, Claypan Jurisdictional Delineations OC Waste & Recycling On-Call Services
				Rancho San Gorgonio Development Project, Jurisdictional Delineation
Jessica Lieuw, Assistant Biologist	B.A., Environmental Science, University of California, Irvine	3	30%	 IRWD Integrated Pest Management Plan Implementation Yorba Linda Boulevard Widening Project Capistrano Beach Emergency Coastal Development Permit
		Cultural/Pa	leontological Resou	rces
Kerrie Collison, RPA, Senior Cultural Resources Manager	M.A., Anthropology (Public Archaeology), California State University, Northridge; Registered Professional Archaeologist (RPA) No. 28731436	11	25%	 Southern California Edison On-Call Cultural Resource Services Caltrans District 12 On-Call Environmental Services Nohl Ranch Open Space Project



D - 9



On-Call CEQA and NEPA Consultation

Table A: LSA Key Personnel

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		Vears of	Percentage of Time Available to Contribute to	
Staff Member	Education/Registrations	Experience	IRWD	Recent Experience
Sarah Rieboldt, Ph.D., Associate Paleontologist	Ph.D., Paleontology, University of California, Berkeley, 2005; B.A., Biology (<i>Magna cum Laude</i>), University of Colorado, Boulder	19	20%	 IRWD San Joaquin Reservoir Filtration Project MNWD Operations Center and Site Consolidation Project Ball Road Sanitary Sewer and Storm Drain Improvements Project
Casey Tibbet, Associate, Architectural Historian	M.A., History (Historic Preservation), University of California, Riverside; B.A., Political Science, University of California, Riverside	23	15%	 Retainer Contract for the State Department of General Services— Historic Resources Assessment of the Los Pinos Forestry Camp Historic Resources Evaluation Report for State Route 1, 7th Avenue to Moss Street, ADA Upgrade Project City of Anaheim Library Green Space Project
			Noise	
Amy Fischer, Principal Noise Specialist	B.S., Environmental Policy Analysis with a Minor in Geography, University of Nevada, Reno	16	10%	 Richmond Wet Weather Storage Project Penitencia Delivery Main and Penitencia Force Main Seismic Retrofit Project Madera Irrigation District Annexation Project IS/MND
John Stephens, Associate Noise Specialist	B.S., Acoustical Engineering with a Minor in Communications, Purdue University; E.I.T. License No. ET30504764	15	30%	 MNWD Operations Center Project Shoemaker Bridge Replacement Southwest Fontana Logistics Center Project
		T	ransportation	
Ken Wilhelm, Principal Transportation Planner	B.A., Sociology, Chapman University	27	10%	 Eastwood Recycled Water Pump Station Project Irvine Business Complex TIAs Irvine Long-Range Transportation Vision Plan
Dean Arizabal, Associate Transportation Planner	B.S., Computer Engineering, University of California, Irvine	17	30%	 Eastwood Recycled Water Pump Station Project Diamond Jamboree Retail Center Shipyard Sediment Remediation Project
Arthur Black, Associate Transportation Planner	Master of Urban and Regional Planning, California State Polytechnic University, Pomona	13	30%	 MNWD Operations Center Project City of Long Beach General Plan TIA Santa Clara Valley Water District Pipe Replacement and Upgrading Project





3. EXPERIENCE

LSA has been an on-call environmental-services consultant to more than 70 agencies in California within the last 5 years. Presented below are descriptions of representative projects that demonstrate LSA's experience working with public agencies to complete CEQA and NEPA analysis for a variety of public and private projects.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

IRWD Eastwood Recycled Water Pump Station

Location: Irvine, California Contact: Jo Ann Corey, (949) 453-5326, corey@irwd.com

LSA prepared an IS/MND for the Eastwood Recycled Water Pump Station Project. The pump station will ultimately house 14 pumps within one building and will include the installation of three surge tanks, installed slightly below grade, with a roof structure. The project's purpose is to meet increasing demand in IRWD's Zone B and Zone C recycled-water service areas, provide a high degree of operational flexibility, and maximize the use of recycled water. Construction will include a concrete foundation, a concrete masonry unit block building, lighting, connections to existing recycled-water lines within the adjacent roadway, new recycled-water lines within the adjacent roadway, new recycled-water lines within the adjacent roadway, storm water drainage infrastructure (e.g., curbs and gutters), and installation of asphalt concrete for vehicular access and parking. In addition to the environmental document, LSA prepared air quality/GHG, noise, and traffic analyses for incorporation into the environmental document.

IRWD San Joaquin Reservoir Filtration Facility

Location: Newport Beach, California Contact: Jo Ann Corey, (949) 453-5326, corey@irwd.com

LSA is preparing an IS/MND for the San Joaquin Reservoir Filtration Project. The purpose of this project is to improve the quality of water transmitted from the reservoir by constructing new filtration facilities. The project includes new dual-module filtration facilities with a capacity of 18.5 cubic feet per second. These facilities will be located in a new building adjacent to an existing Control Building. In addition, the booster pumps located in the existing pump room of the Flow Control Facility must be replaced to accommodate the new filters. In addition to the environmental document, LSA is preparing technical analysis for air quality/GHG emissions, noise, traffic, archaeological resources, paleontological resources, and biological resources for incorporation into the environmental document, as well as assisting IRWD with AB 52 Native American consultation.

MNWD Operations Center

Location: City of Laguna Hills, California Contact: Matt Collings, (949) 448-4032, mcollings@mnwd.com

LSA prepared an IS/MND and related technical reports for the proposed MNWD Operations Center. MNWD proposal construction of a two-story, 45,000 sf office building, expanded above-ground fuel storage, a realignment of the entrance to the facility, a detention/ bioretention basin, and on- and offsite utility improvements including installation of a new 21-inch reinforced concrete pipe storm drain in the public right-of-way. In addition to the environmental document, LSA prepared an archaeological survey report and provided assistance with Native American consultation required by AB 52; and provided a paleontological resources report, a biological resources report and jurisdictional delineation, a





traffic impact assessment, an air quality and GHG analysis, and a noise analysis. LSA also provided assistance related to the acquisition of regulatory permits from CDFW.

Rancho California Water District Santa Rosa Water Reclamation Facility Rehabilitation Program

Location: City of Murrieta, California Contact: Andrew Webster, (951) 676-6740, AndrewWebster@kennedyjenks.com

LSA prepared a Categorical Exemption and CEQA+ technical studies in support of the Categorical Exemption. Funding for this project came from the State's Clean Water State Revolving Fund, which requires an evaluation against certain federal regulations including Section 7 of the Endangered Species Act, the Migratory Bird Treaty Act, Section 106 of the National Historic Preservation Act, and the Clean Air Act, in addition to CEQA+ requirements. In addition, a Noise Impact Analysis was prepared to address potential construction-related noise. The project entailed the replacement of components of the existing infrastructure, reconfiguration of piping, and installation of new components within the existing facility footprint. The objectives of the project were to maximize the life of the existing assets; replace obsolete, inefficient, and failing equipment; improve the operational characteristics and quality of the facility processes; decrease operational costs; and increase reliability.

West Valley Water District Wellhead Treatment System Project

Location: Rialto, California

Contact: Thomas J. Crowley, (909) 820-3702, tcrowley@wcwd.org

LSA prepared the IS/MND analyzing the environmental impacts associated with a groundwater perchlorate treatment system in which contaminated water from existing wells would be thoroughly treated for drinking-water purposes through the use of a biological treatment process for the West Valley Water District. Although there are five full-scale treatment systems that utilize this technology, the project is the first application of the technology in the United States that utilizes a biological process to treat groundwater for the purpose of a drinking-water system. The IS/MND was approved by the West Valley Water District Board in September 2009.

LSA also prepared an Addendum to the original IS/MND. The Addendum provided assessment of potential impacts attributable to air pollution emissions from a change in the project's soil import/export schedule. The original approval analyzed a project that included a balancing of on-site soils, while the amended project included export of approximately 9,000 cubic yards to locations in Arizona and Nevada. Detailed calculations of air pollution emissions were prepared to the satisfaction of South Coast Air Quality Management District staff. Under tight time frames needed to keep the Water District construction contractor's schedule, the Addendum was approved by the District Board in August 2011.

IRWD Addendums No. 3 and No. 4 to the Final EIR for the Irvine Desalter Project

Location: Irvine, California

Contact: Christian Kessler, (949) 453-5441, Kessler@irwd.com

LSA prepared Addendum No. 3 to the Final EIR for the Irvine Desalter Project (IDP), pursuant to CEQA and the *State CEQA Guidelines*. LSA tiered off of IRWD's Master Plan of Sewers EIR to prepare the appropriate environmental documentation. The Addendum analyzed modifications to the potable system as a result of a relocated site for the Potable Treatment Plant, additional potable wells, new locations of potable-well sites, construction of new pipelines and reuse of existing pipelines, a new brine line, and other appurtenant changes as they related to those modifications. On September 15, 2004, the Orange County Water District (OCWD) Board approved Addendum No. 3 to the Final EIR to cover these project modifications (Resolution No. 04-9-124).

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LSA prepared Addendum No. 4 to the Final EIR for the IDP, pursuant to CEQA and the *State CEQA Guidelines*. The IDP is a joint groundwater quality restoration project by IRWD and OCWD, with financial participation by the United States Department of the Navy, to clean up the groundwater in the vicinity of the former Marine Corps Air Station El Toro. The Addendum addressed the replacement of existing Well 78, including the destruction and replacement of the existing well, wellhead, and vault; pipeline; electrical equipment; instrumentation; and ancillary equipment.

IRWD Previous On-Call Services

Location: IRWD Service Territory Contact: Christian Kessler, (949) 453-5441, Kessler@irwd.com

LSA was retained by IRWD to provide on-call biological and environmental services. Work under this contract included the following: biological surveys; monitoring of IRWD construction and maintenance activities to prevent biological impacts and ensure compliance with the Fish and Game Code, the Clean Water Act, and the Endangered Species Act; providing assistance with obtaining necessary approvals under these regulations; and providing assistance with CEQA and NEPA documentation.

Under an on-call contract, LSA was asked to assist IRWD with the design, permitting, and construction of its 104-acre (ac) pond enhancement project in the San Joaquin Marsh of Irvine. One of the purposes of the project was to decrease nitrate concentration in tertiary-treated water prior to discharge. Design issues included the maximization of bird habitat and selection of plant species. LSA prepared permit application documents and assisted with permit processing to enable IRWD to obtain a United States Army Corps of Engineers (USACE) Section 404 Permit and California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement in less time than these agencies normally allot for these processes (i.e., fewer than 4 months for the Section 404 Permit and fewer than 30 days for the Streambed Alteration Agreement). Construction work included monitoring for biological, archaeological, and paleontological resources. Subsequently, LSA was retained under a separate contract with the Irvine Company to prepare a wetland mitigation plan to offset the minor impacts of the pond enhancement project and to create a wetland mitigation bank associated with the pond.

Additional IRWD projects that were initiated under the on-call services arrangement or supplemental sole source contracts included the following:

- Monitoring of emergency repairs on a broken pipeline in Sand Canyon Creek, and preparation of a restoration plan to mitigate the damage. LSA also monitored the restoration and is currently conducting the long-term maintenance and performance monitoring.
- Preparing a habitat restoration plan and the subsequent monitoring of its implementation for a slope repair project in Mason Regional Park. The slope, which was damaged by a water line leak, supported coastal sage scrub habitat that was occupied by the threatened California gnatcatcher. Assessment of the damage and development of the plan included coordination with the Orange County Harbors, Beaches, and Parks Department.
- Habitat mapping in the area of a proposed landscape berm for the purpose of determining constraints and permit requirements.
- Monitoring of weed removal activities throughout San Joaquin Marsh to ensure compliance with the Migratory Bird Treaty Act.
- Assessment of the biological effects of a leak in a pipeline containing tertiary-treated wastewater. The work included interaction with a hydrologist to help determine the likely extent of the zone of

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LSA



saturation caused by the leak. LSA specialists examined field conditions and historical aerial photographs to assess impacts on vegetation types.

- Conducting a 3-year study of habitat and soil conditions in Upper Newport Bay in anticipation of a permitted discharge of tertiary-treated water from the Michelson Treatment Plant on San Diego Creek. LSA's studies included comprehensive vegetation mapping on an annual GPS mapping of the interface between saltmarsh and freshwater-marsh vegetation and sampling of soil to determine salt content. Two years of monitoring were originally required to provide baseline information and for a study of the potential effects of the release of tertiary-treated water by IRWD at the Michelson Treatment Plant on San Diego Creek. Although the discharge permit was suspended, the monitoring study continued for 3 years, providing comprehensive baseline data as well as an indication of ongoing changes in the distribution of vegetation.
- Mitigation compliance monitoring, noise monitoring, special-status species surveys and monitoring, preconstruction nesting bird surveys, and vegetation clearing monitoring at the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project.
- CEQA documentation for the Santiago Canyon Generators and Irvine Desalter Projects (detailed elsewhere in this document).
- Archaeological/paleontological monitoring at Wells 21 and 22.
- Arborist evaluation in Modjeska Canyon.

NATIONAL ENVIRONMENTAL POLICY ACT

RCWD Vail Dam Seismic and Hydrologic Remediation Project

Location: Temecula, California Contact: Randy Neff, 951-296-6988, neffr@ranchowater.com

LSA is providing environmental and permitting services for the Vail Dam Seismic and Hydrologic Remediation Project. RCWD proposes to remediate seismic and hydrologic hazards associated with the existing Vail Dam, an arch dam, by constructing a new straight-axis gravity concrete dam immediately downstream of the existing dam. LSA is preparing an EIR/EIS, technical studies, and permit applications for the project. RCWD is the CEQA Lead Agency. The NEPA lead agency has not yet been determined; however, coordination is currently ongoing with the United States Federal Emergency Management Agency (FEMA), the United States Bureau of Reclamation, USACE, and the United States Fish and Wildlife Service.

IRWD Santiago Canyon Area Booster Pump Station Permanent Generators Project

Location: Modjeska Canyon (unincorporated Orange County), California Contact: Christian Kessler, (949) 453-5441, Kessler@irwd.com

LSA prepared an IS/MND and Environmental Assessment/Finding of No Significant Impact (EA/FONSI) for the IRWD Santiago Canyon Area Booster Pump Station (BPS) Permanent Generators Project. The project site was located within the Santiago Canyon–Modjeska Canyon area within an unincorporated portion of Orange County. In October 2007, the Santiago Fire burned through IRWD's Santiago Canyon service area, threatening homes, businesses, and IRWD's reservoirs and BPSs in the region. During the Santiago Fire, power outages were experienced at several of the pump stations, requiring the installation of portable emergency generators at each site. However, these temporary generators are also susceptible to damage by wildfires and are not permitted for permanent installation. LSA assisted IRWD in obtaining the necessary CEQA/NEPA clearance for permanent replacement of these portable generators to





improve the reliability of the water system during power outages, particularly when the outages are caused by fires in the canyons.

City of Hope Replacement Hospital Project

Location: Duarte, California Contact: David Wade, (562) 618-7605, Dswade22@gmail.com

LSA prepared an EA/FONSI addressing the environmental effects of the Helford Clinical Research Hospital. Helford Hospital replaced older structures with a state-of-the-art facility that facilitates patient, physician, and clinical-research interaction. Construction of Helford Hospital was necessary to address damage sustained to structures as a result of the Northridge earthquake, achieve State seismic requirements for acute-care facilities, and update the City of Hope's delivery of service.

The EA/FONSI was prepared consistent with the FEMA guidelines for implementation of NEPA. As part of the EA/FONSI, coordination with several federal agencies was conducted to address potential effects to biological and cultural (historic) resources. Effects to the local community were also assessed in the EA/FONSI. Potential air quality, noise, and traffic associated with construction activities were evaluated, and appropriate minimization measures were identified. Air quality, noise, traffic, and parking effects were also evaluated. Of particular concern to the local community was the adequacy of parking on campus and the potential for visitors and employees parking on local streets. Additionally, potential visual and shade/shadow effects were evaluated. Due to the height of the structure and proximity to existing residences, a shade/shadow analysis was conducted to assess potential effects on residences to the west of the City of Hope campus.

MITIGATION MONITORING AND REPORTING

IRWD Carlson Marsh Regrade

Location: Irvine, California Contact: Eric Akiyoshi, (949) 453-5854, akiyoshi@irwd.com

LSA assisted IRWD with the acquisition of the regulatory permits necessary for the Carlson Marsh Regrade project, in which the water circulation in the degraded marsh was restored and exotic plant species were eradicated. Permits included an Individual 404 Permit from USACE, a Streambed Alteration Agreement from CDFW, and a Section 401 Certification from the Santa Ana Regional Water Quality Control Board. LSA coordinated a construction-monitoring regimen for the vegetation removal and excavation of pilot channels, and a Habitat Mitigation and Monitoring Plan for the restoration of impacted habitat. After 4 years of habitat restoration monitoring and reporting, LSA received resource agency approval documenting that the site met all required performance standards and was released from further maintenance obligations.

RCWD Revegetation

Location: Southern California Contact: Andrew Webster, (951) 676-6740, AndrewWebster@kennedyjenks.com

LSA served as the primary revegetation consultant to RCWD for several new facilities. LSA prepared construction documents and specifications for implementation of the Valle de Los Caballos Upper and Lower Recharge Basin riparian area, El Chimisal Reservoir No. 2, the Date Street Reservoir, and the Date Street 1670 Transmission Main. LSA also provided recommendations and prepared construction documents and specifications for several native-habitat revegetation projects (chaparral and coastal sage scrub) associated with other RCWD facilities. LSA monitored and managed installation, maintenance, weed control, and progress of several native revegetation projects for RCWD. Monitoring activities







included coordination and oversight of plant and seed procurement, scheduling of site preparation and plant/seed installation, frequent site visits during installation to ensure compliance with specifications and provide technical expertise, preparation of field memorandums documenting field activities, frequent site visits following installation to document and provide technical expertise during the maintenance period, and preparation of summary reports for submittal to resource agencies and the RCWD for areas adjacent to RCWD structures and facilities in Murrieta Hills and Temecula. Additionally, LSA prepared recommendations for monitoring performance criteria, maintenance, and remedial planting for upland projects already in the ground. LSA also served as the revegetation specialist expert witness for the RCWD in litigation.

IRWD Integrated Pest Management Plan Implementation

Location: Irvine, California

Contact: Ian Swift, (949) 453.5864, swift@irwd.com

LSA is currently involved with implementing the IRWD Integrated Pest Management (IPM) Plan in IRWD's 34 natural-treatment-system facilities and the 300 ac San Joaquin Marsh. The IPM Plan aims to treat pests within these facilities while minimizing impacts on human health and the environment. Under this contract, LSA has been in charge of organizing an innovative approach to managing invasive-plant maintenance activities that focuses on nonchemical treatment methods. LSA biologists are responsible for routine site visits to map locations of invasive-plant pest outbreaks, as well as determining effective treatment methods. In doing so, LSA has developed an interactive data viewer that allows relevant parties to access real-time data, thus streamlining communication between LSA, IRWD, and IRWD's landscape contractor.

4. **REFERENCES**

In lieu of reference letters, below is a summary of LSA's most recent work for IRWD. In addition, contact information for IRWD staff involved in these projects is provided in the table below.

IRWD Eastwood Recycled Water Pump Station

LSA prepared an IS/MND for the Eastwood Recycled Water Pump Station Project. The pump station will ultimately house 14 pumps within one building and will include the installation of three surge tanks, installed slightly below grade, with a roof structure. The project's purpose is to meet increasing demand in IRWD's Zone B and Zone C recycled-water service areas, provide a high degree of operational flexibility, and maximize the use of recycled water. Construction will include a concrete foundation, a concrete masonry unit block building, lighting, connections to existing recycled-water lines within the adjacent roadway, new recycled-water lines within the adjacent roadway, new recycled-water lines within the adjacent roadway, storm water drainage infrastructure (e.g., curbs and gutters), and installation of asphalt concrete for vehicular access and parking. In addition to the environmental document, LSA prepared technical analysis related to air quality/GHG, noise, and traffic analyses for incorporation into the environmental document.

IRWD San Joaquin Reservoir Filtration Facility

LSA is preparing an IS/MND for the San Joaquin Reservoir Filtration Project. The purpose of this project is to improve the quality of water transmitted from the reservoir by constructing new filtration facilities. The project includes new dual-module filtration facilities with a capacity of 18.5 cubic feet per second. These facilities will be located in a new building adjacent to an existing Control Building. In addition, the booster pumps located in the existing pump room of the Flow Control Facility must be replaced to accommodate the new filters. In addition to the environmental document, LSA is preparing technical



BILLING RATES FOR KEY PERSONNEL (2020-2024)

Staff Name	Title	Billing Rate
Nicole Dubois	Principal Environmental Planner	\$240
Nicole West	Associate Environmental Planner	\$190
David Atwater	Senior Environmental Planner	\$165
Shelby Cramton	Senior Environmental Planner	\$120
Amy Fischer	Principal Air Quality/Noise Specialist	\$225
Michael Slavick	Senior Air Quality Specialist	\$190
Cara Carlucci	Senior Air Quality Specialist	\$130
Blake Selna	Principal Biologist	\$240
Jim Harrison	Senior Biologist	\$140
Jessica Lieuw	Assistant Biologist	\$110
Kerrie Collison	Senior Cultural Resources Manager	\$140
Sarah Rieboldt	Associate Paleontologist	\$170
Casey Tibbet	Associate Architectural Historian	\$150
John Stephens	Associate Noise Specialist	\$170
Ken Wilhelm	Principal Transportation Manager	\$250
Dean Arizabal	Associate Transportation Planner	\$185
Arthur Black	Associate Transportation Planner	\$185
TBD	Senior Planner/Specialist	\$155
TBD	Planner/Specialist	\$115
TBD	Assistant Planner/Specialist	\$95
TBD	GIS Specialist	\$150
TBD	Graphics Specialist	\$115
TBD	Office Assistant	\$75
TBD	Research Assistant/Intern	\$55
TBD	Word Processing	\$105
TBD	Technical Editing	\$115



JOINT VENTURE/SUBCONSULTANT ARRANGEMENTS

LSA does not propose any type of joint venture or have any intent to propose subcontract arrangements that will be utilized during the course of this project.

With a staff of over 200, LSA has the breadth and depth to respond quickly to almost any California Environmental Quality Act or National Environmental Policy Act topic. Upon receipt of a project-specific request for a work program and cost estimate, LSA will assign specialists from its air quality, biological resources, cultural resources, paleontological resources, noise, and transportation groups as needed.

If LSA does not have the in-house resources to fulfill a particular Irvine Ranch Water District (IRWD) need (e.g., Geotechnical or Hazards), or if the recent experience of another local subcontractor would allow for economies of either time or budget, LSA will engage a subcontractor agreeable to IRWD. The following lists a few of the subconsultants LSA works with for **geotechnical**, **hazards and hazardous-materials**, **and hydrology and water quality services**. LSA has worked with each of the firms listed below and finds these firms to be professional, responsive, and innovative.

Fuscoe Engineering

16795 Von Karman Avenue Irvine, California 92606 **Services:** Civil Engineering, Hydrology/Water Quality

Ninyo & Moore (DBE)

475 Goddard, Suite 200 Irvine, California 92618 Services: Geotechnical Engineering, Hazards/ Hazardous Materials

CWE Corporation (DBE/MBE/SBE)

1561 East Orangethorpe Avenue, Suite 240 Fullerton, California 92831 Services: Civil Engineering, Hydrology/Water Quality

Centec Engineering

4299 MacArthur Boulevard Newport Beach, California 92660 Services: Hazards/Hazardous Materials



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CERTIFICATE OF LIABILITY INSURANCE

AUSTINA DATE (MM/DD/YYYY) 9/30/2019

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MED EXP (Any one person)	<u>s</u> 10,00
PERSONAL & ADV INJURY	\$ 1,000,00
GENERAL AGGREGATE	\$ 2,000,00
PRODUCTS - COMP/OP AGG	\$ 2,000,00
Deductible	\$
COMBINED SINGLE LIMIT (Ea accident)	s 1,000,00
BODILY INJURY (Per person)	\$
BODILY INJURY (Per accident)	\$
PROPERTY DAMAGE (Per accident)	\$
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EXHIBIT "E"

PSOMAS

Balancing the Natural and Built Environment

January 30, 2020

Fiona M. Sanchez Director of Water Resources Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Subject: Proposal for On-Call CEQA and NEPA Consultation

Dear Ms. Sanchez:

Psomas understands the Irvine Ranch Water District (IRWD) is seeking a qualified consultant to provide On-Call California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) Consultation. We have assembled a team of highly qualified professionals, many of whom are currently working on Psomas' IRWD On-Call Contract. Our goal is to provide IRWD with a full spectrum of services to comply with CEQA and NEPA requirements. Psomas will work collaboratively with IRWD to comply with all environmental requirements within established budgets and required timeframes.

The Project Team will be led by Jennifer Marks as Project Manager for this contract. Jennifer is a Senior Project Manager with 21 years of experience managing a variety of project types including water and wastewater infrastructure, development projects, and transportation improvement projects. She has worked on CEQA/NEPA projects with several water districts, including nearly five years for IRWD and several years for both regional and local City-owned water departments throughout Orange and Los Angeles counties and is familiar with the unique challenges that water district projects face. She will serve as the day-to-day contact, ensuring availability for multiple, concurrent IRWD task orders.

Jim Hunter, ENV SP, will serve as Principal-in-Charge and Quality Assurance (QA)/Quality Control (QC) Manager for this effort. Jim has 34 years of in-depth experience with multi-disciplinary and complex projects. He is well versed at managing technical teams on project specific infrastructure projects such as the Pipeline Safety Enhancement Plan across 12 counties for the Southern California Gas Company and environmental compliance for construction of a 153-mile, 500-kV Southern California Edison transmission line, as well as projects/task orders issued under Psomas' on-call contracts, namely Los Angeles County Public Works Water Resources Branch and Metropolitan Water District of Southern California Environmental Planning Services.

Psomas has processes in place that will support our delivery of high quality, technically sound documents. The team members assigned to this contract are among the most experienced environmental compliance professionals in Southern California, and all are Psomas staff—the depth of our bench allows us to provide the most commonly required services without needing to add subconsultants to our team.

Jim Hunter, as Vice President of Psomas, is authorized to legally bind Psomas to a contract with IRWD. Again, we appreciate the opportunity to submit the enclosed proposal. Please feel free to contact us with any questions at 714.751.7373 or Jim.Hunter@Psomas.com, or Jennifer.Marks@Psomas.com.

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Sincerely,

PSOMAS Jim Hunter Vice President

miger y. Marlos Jennifer Y. Marks

Senior Project Manager

3 Hutton Centre Drive Suite 200 Santa Ana, CA 92707

Tel 714 751.7373 www.Psomas.com

INTRODUCTION

Firm Profile

Dedicated to balancing the natural and built environment, Psomas provides sustainably engineered solutions to public and private clients. Psomas, a California Corporation, was founded in 1946 and is a multi-faceted consulting firm with over 600 employees, providing our core services of environmental consulting, civil engineering, survey and mapping, and construction management. While the firm as a whole offers a wide variety of services, Psomas' Environmental Services Group is capable of supporting the needs that are most relevant to the Irvine Ranch Water District's (IRWD's) On-Call California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) contract. Psomas' Environmental Services Group specializes in providing the following services:

- CEQA and NEPA documentation
- Air Quality and Greenhouse Gas (GHG) Emissions Analyses
- Energy Analyses and Health Risk Assessments
- Noise and Vibration Studies
- Cultural Resources including Archaeological and Paleontological Assessments, Monitoring, and Tribal Cultural Coordination
- Biological Resources Surveys and Assessments
- Jurisdictional Evaluations/Delineations, Regulatory Permitting, and Agency Coordination
- Habitat Restoration/Mitigation Planning, Monitoring, and Reporting

Psomas' goal is to establish long-lasting, positive, and productive working relationships with our clients. Our project management style is rooted in our commitment to provide accurate and comprehensive consulting services; timely and cost-effective reports and documents; and regulation compliant document processing.

RESPONSE TO RFP ITEM II. SCOPE OF WORK

Project Understanding and Approach

In our experience with on-call contracts for public agencies, the environmental documentation requirements for a "typical project" can vary extensively. Psomas' Environmental Services Group specializes in the preparation of documentation pursuant to CEQA and NEPA for lead agencies throughout Southern California. While specific CEQA requirements are clear according to the State law and NEPA requirements are defined

specifically by each NEPA lead agency, there is some latitude and interpretation that is generally required in determining the level of analysis that is appropriate for a project. Through our years of experience and breadth of project work, Psomas is able to interpret the laws and apply them to a specific project while successfully navigating and adhering to sometimes competing federal, State, and local statutes, codes, ordinances, policies, and procedures. Our knowledge of technical issues, applicable regulations, and entitlement and regulatory processes allows Psomas to provide responsive, practical, and solution-oriented advice to our clients. Additionally, our interaction with Psomas' engineering practice, which has overseen the development, design, permitting, construction, and operation of hundreds of potable water, recycled water, and wastewater infrastructure projects throughout the southwestern United States, allows us a unique understanding of how to assess the impacts specific to water and wastewater projects.

The Psomas Team is capable not only of providing comprehensive CEQA and NEPA documentation services (as noted below in Tasks 1 and 2), but can also provide stand-alone technical reports to support project analysis and/or technical reports, including general and focused biological assessments; construction monitoring for sensitive habitat areas and/or sensitive species located within or adjacent to project areas; Tree Surveys; Habitat Conservation Planning; Wildlife Movement Corridor Studies; Noise Assessments; Air Quality Assessments; Greenhouse Gas Emissions Analyses; Energy Analyses, Cultural Resources including Archaeological and Paleontological Assessments; Tribal Cultural Resources, water quality management plans; and storm drain, sewer, and water capacity studies. We also coordinate resource agency permitting and procurement as well as Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP) compliance.

The task discussions below are representative of the work efforts that would be included in the preparation of environmental documentation as noted in the RFP for CEQA (Negative Declaration [ND], Mitigated Negative Declaration [MND], and Addenda) and NEPA (Environmental Assessment [EA] and Finding of No Significant Impacts [FONSI]).

Task 1: California Environmental Quality Act

Psomas understands the inherent complexities of processing projects through the CEQA process. If a project is not analyzed in a comprehensive manner and if impacts to sensitive land uses and adjacent jurisdictions are not considered, future projects have the potential to present opportunities for legal challenges against the CEQA documentation and supporting technical analyses. Psomas has an excellent track record of preparing thorough CEQA documents that are capable of withstanding legal challenges. All environmental documentation will be prepared in conformance with the criteria, standards, and procedures of CEQA (California Public Resources Code, Sections 21000 et seq.), the State CEQA Guidelines (Title 14, California Code of Regulations, Chapter 3, Sections 15000 et seq.), and IRWD procedures. However, compliance with CEQA is only one component to ensuring the preparation of a legally adequate document.

Navigating through the CEQA process is a complex endeavor due to new and constantly changing regulations, court rulings, and legislation. While not every project is complicated, nor will they all be litigated, Psomas works to ensure that every CEQA document and technical report we prepare reflects all applicable rules, regulations, and appropriate legal interpretations. Due to the changes and updates in regulations, CEQA rulings, and legislation, we routinely revisit our documents that are in process to ensure their consistency with all legal and regulatory updates. This practice ensures compliance with all

pertinent provisions of CEQA as well as a document's legal defensibility, if challenged.

When preparing an environmental document pursuant to CEQA, typical activities performed would include, but are not limited to, the tasks listed below.

Project Initiation/Project Study

Sessions: The project initiation effort will involve coordination between Psomas and IRWD staff to define the scope of services required for assigned work requests. Psomas strives to work closely with clients to ensure that project designs are conceived in a manner that minimizes environmental impacts before starting

the CEQA process. Projects that are designed to avoid or minimize impacts to sensitive uses and resources can engender a sense of confidence from the community and special interest groups. Psomas will strategize with staff to ensure that all CEQA and regulatory permitting environmental issues are considered early in the process. Upon reviewing a proposed project description, Psomas will coordinate with the IRWD Project Manager to develop an appropriate Task Order Scope of Work that addresses the proposed project; existing environmental documentation and commitments; the appropriate type of environmental documentation and level of analysis required; and project permitting requirements. Psomas' involvement on projects may continue through participation in regularly scheduled project development

team meetings so team members can stay up-to-date with project development.

Although not required for an ND, MND, or Addendum, Psomas will be available to participate in public meeting efforts. The total timeframe required to complete the environmental documentation process can be significantly affected by the concerns and/or input expressed by local residents, businesses, State and federal agencies, environmental interest groups, and the interested community-at-large. For some projects, workshops, meetings, and/or targeted outreach efforts may be appropriate to provide a forum for meaningful community input and to instill the public with a sense of "partnering" and "ownership" in the process. The assigned Psomas project management team members are professionals who are able to effectively facilitate public meetings and conduct presentations on the environmental process and/or required technical analyses. At the request of IRWD, Psomas will attend and participate in scoping meetings to facilitate the environmental review process. Psomas will also prepare a meeting summary that

discusses how each issue will be addressed in the CEQA document.

Documents/Project Research: Psomas maintains access to a variety of information sources covering the IRWD service area, including local and regional planning documents, GIS databases, web-accessible databases, previous environmental documents, and reference documents. Psomas team members also have experience and established relationships from working on projects for 24 years in Orange County, specifically including jurisdictions within RWD's service area. If an answer is not immediately available, the project team members are available to consult with peers

and other contacts to obtain additional information at IRWD's direction.

Administrative Draft Environmental Document:

Psomas has the expertise to support IRWD on a full range of technical evaluations required to support environmental document preparation. Psomas, using the State CEQA Guidelines' environmental checklist, will prepare a draft Initial Study (IS). The analysis will be based on all available technical information, including any background planning documents, previous environmental documentation in the area, and projectspecific technical studies. Existing conditions will be described in narrative, numerical, and graphic form, as appropriate to a particular issue. Potential impacts will be identified on an individual and cumulative basis, as appropriate. Mitigation Programs—including Project Design Features (PDFs), Standard Conditions (SCs), and Mitigation Measures (MMs)—will be proposed to reduce impacts to levels considered less than significant to the extent feasible. Focused and strategic interaction with staff and other project team members will ensure that the environmental documentation and technical reports comprehensively address the potential impacts that might

result from project implementation. The IS can be used as a preliminary tool to determine the appropriate level of documentation based on the presence or absence of impacts that cannot be mitigated to less than significant levels. Should it be determined that no potentially significant and unavoidable impacts would occur, Psomas will recommend the preparation of an ND or an MND. After the Administrative Draft IS is completed, it will be submitted for IRWD review. Following receipt of IRWD comments on the IS, Psomas will revise the document and complete the necessary documentation for an ND or MND.

Should the findings in the IS suggest the potential for a significant and unavoidable impact, preparation of an Environmental Impact Report (EIR) will be required. Psomas will present this recommendation along with all supporting documentation to IRWD for consideration. It is understood that a separate request for proposals would likely be issued at this point.

Section 15164 of the State CEQA Guidelines provides for the preparation of an Addendum to a Final EIR if none of the conditions described in Section 15162 calling for the preparation of a Subsequent EIR have occurred. Though the State CEQA Guidelines do not establish a format for an addendum, for projects where it has been determined that an addendum to a previously approved or certified CEQA document is the appropriate document, Psomas has found that an effective approach is to have the addendum follow a similar format as previously identified for an IS. The analysis would be based on the environmental checklist from Appendix G of the State CEQA Guidelines. In the case where an addendum is being prepared for a project which is a component of a larger project that was addressed in a previous Program EIR, a summary of the previous analysis will be provided for each environmental topic and the mitigation program will reiterate applicable project design features, regulatory requirements, and mitigation measures from the original environmental document. Additionally, following the project-specific analysis, an overall statement identifying the proposed project's consistency with the previous



analysis will be made. The advantage of an addendum is that the process can be streamlined as State CEQA Guidelines does not require additional public review.

Screencheck Draft and Public Draft Environmental Document: Once the comments on the Administrative Draft document from both IRWD and their peer reviewer

> have been addressed, Psomas will submit a Screencheck Draft document for IRWD review. At this time, Psomas and IRWD staff may decide to meet to review the document. At the meeting, the document can be reviewed and any required changes made during the meeting, streamlining the review of the final "proof check" document during the meeting.

For an ND or MND, Psomas will be responsible for coordinating document reproduction, distribution, and noticing pursuant to CEQA. Consistent with IRWD's direction, document reproduction will be primarily on CD or flash drive to minimize the number of print copies. We will also provide the

environmental document and technical appendices in a web-ready format for IRWD's use.

For an addendum to a previous environmental document, public review is not required; therefore, Psomas will prepare an addendum for use and approval by IRWD. As noted above, document reproduction will be on CD and the addendum will be available in a web-ready format for IRWD's use.

Response to Comments and Final Environmental

Document: If any public comments are submitted on an ND or MND, Psomas will work with IRWD and the project team to develop appropriate and defensible responses. Topical responses may be used if multiple comments are received on the same issue. The responses to comments document will be revised and finalized upon receipt of IRWD comments. Psomas will prepare a Final MND, which may include the responses to comments document, the Mitigation Monitoring Program (discussed below and under Task 7, Mitigation Monitoring and Reporting), and, if applicable, any revisions or clarifications to the text of the ND or MND.

For an addendum, public review is not required, and a response to comments document would not be produced. Should any revisions be recommended through the approval process, Psomas will revise the Addendum and submit the Addendum for IRWD use.

Mitigation Monitoring Program: Psomas will develop a Mitigation Monitoring Program based on IRWD's

F _ 4 Irvine Ranch Water District | On-Call CEQA and NEPA Consultation

preferred format, and will clearly identify all components of the Mitigation Program, responsible parties, and a timeframe for implementation. Implementation of the MMP is further discussed under Task 7, Mitigation Monitoring and Reporting.

Attendance at Public Hearings: As discussed previously under Project Initiation/Project Study Sessions, Psomas is able to coordinate public meetings. Psomas team members are skilled at conducting project-related presentations for decision-makers at public workshops and hearings; providing helpful technical responses and clarifications; and providing general support for IRWD staff. We will be available to attend and participate in any public meetings for consideration of the environmental document.

Noticing Requirements:

Psomas will be responsible for all aspects of project noticing, including notice preparation, coordination of newspaper publications, and payment of all applicable filing fees.

Task 2: National Environmental Policy Act

Similar to the process identified above for CEQA, Psomas is also experienced in preparing thorough NEPA documents that are capable of withstanding legal challenges for a variety of federal agencies. All environmental documentation will be prepared in

conformance with the criteria, standards, and procedures of NEPA (Title 42 United States Code [USC], Sections 4331 et seq.) and specific NEPA guidance as set forth by individual agencies. CEQA and NEPA are similar in the intent to analyze environmental impacts and in the review process which involves analysis, public involvement, and document preparation. NEPA applies to "proposals for legislation and other major Federal Actions" (42 USC 4332[2][c]). NEPA also applies when an agency exercises authority over a non-federal project with a federal nexus (i.e., federal decisions on approvals, permits, or funding).

Similar to the process identified previously for preparation of an IS and ND or MND pursuant to CEQA, Psomas will prepare an EA leading to a FONSI or Mitigated FONSI pursuant to NEPA. Document preparation will follow the same basic process as the CEQA documentation with (1) preparation of an Administrative Draft EA that will be subject to review by IRWD and its peer reviewer; (2) preparation of a Screencheck Draft document; (3) preparation of a Draft EA for Public Review; and (4) preparation of the final EA/FONSI. However, because the NEPA process will involve a separate lead agency (i.e., the federal agency with oversight on the project), additional review cycles may be required prior to preparation of the Draft EA for Public Review and preparation of the final EA/FONSI. As noted previously, specific document preparation and review requirements vary depending on the federal lead agency. Psomas has experience working with a variety of federal lead agencies and will contact the federal lead agency early in the process to determine the anticipated schedule and to develop a scope of work addressing each key milestone.

Due to the wide availability of financial assistance via a variety of grants associated with water projects, it is



acknowledged that IRWD may pursue funding via a federal grant program, such as WaterSMART or other grants available through the Clean Water State Revolving Fund (CWSRF). Because the CWSRF Loan, administered through the State Water Resources Control Board (SWRCB), is partially funded by the U.S. **Environmental Protection** Agency (USEPA), any project receiving these funds would be considered a federal action subject to federal regulations in addition to CEQA. The SWRCB developed CEQA-Plus requirements to streamline

environmental documentation and review for projects receiving CWSRF financing. In these cases, preparation of CEQA-Plus (also known as federal Cross-Cutters) documentation would be sufficient to allow federal lead agency compliance with NEPA, and Psomas will prepare an "Environmental Package" pursuant to the CEQA-Plus regulations, including specific analysis related to the Clean Air Act, the State and federal Endangered Species Acts, the Migratory Bird Treaty Act, and the National Historic Preservation Act.

Psomas also has experience preparing NEPA documentation for projects under the jurisdiction of the Federal Highway Administration (FHWA). In these cases, Psomas will coordinate with the local California Department of Transportation (Caltrans) District, as delegated by FHWA, and will prepare documentation specific to Caltrans requirements as set forth in the Standard Environmental Reference.

Task 3: Staff Rates

Hourly rates for staff members proposed are listed below. Additional field staff for Regulatory, Biological, Habitat Restoration, and Cultural Resources services are available for task orders as-needed, but would not be assigned without prior written approval from IRWD.

	STAFF RATES			
Key Personnel	Contract Role/Title	Hourly Billing Rate		
Psomas				
Jim Hunter, ENV SP	Principal-in-Charge, QA/QC Manager	<mark>\$268</mark>		
Jennifer Marks	Project Manager	\$220		
Megan Larum	Assistant Project Manager\$118Assistant Project Manager\$118Environmental Planner/ Noise Technician\$123Environmental Planner/ Air Quality/GHG Specialist\$139Air Quality, GHG, and Noise Manager\$220Biological Resources Manager\$193Senior Regulatory Specialist\$207			
Michael Milroy	Contract Role/TitleHourly Bling RatePrincipal-in-Charge, QA/QC Manager\$268Project Manager\$220Assistant Project Manager\$118Environmental Planner/ Noise Technician\$123Ar Quality/GHG Specialist\$139Air Quality,GHG, and Noise Manager\$193Senior Regulatory Specialist/ Senior Botanist/ Restoration Biologist\$139Senior Wildlife Biologist/ Restoration Biologist\$139Senior Wildlife Biologist/ Restoration Biologist\$139Senior Archaeologist\$139Senior Archaeologist\$137			
Daria Sarraf	Environmental Planner/ Air Quality/GHG Specialist	\$139		
Tin Cheung	Air Quality, GHG, and Noise Manager	\$220		
Amber Heredia	Biological Resources Manager	\$193		
Brad Blood, PhD	Senior Regulatory Specialist	\$207		
Allison Rudalevige	Regulatory Specialist/ Senior Botanist/ Restoration Biologist	<mark>\$1</mark> 37		
Lindsay Messett	Senior Wildlife Biologist	\$1 39		
Jonathan Aguayo	Senior Wildlife Biologist/ Restoration Biologist	<mark>\$1</mark> 37		
Charles Cisneros, MS, RPA	Senior Archaeologist	<mark>\$152</mark>		
Kassie Sugimoto	Archaeologist	<mark>\$118</mark>		
Melissa Macias	Paleontologist	\$113		
Michael Deseo	GIS Technician	<mark>\$1</mark> 45		
Robert Becker	GIS Technician	\$102		

REIMBURSABLE COSTS

Item	Rate			
Mileage	Federal Standard Mileage Rate			
Reprographics (Outside)	at cost plus 10%			
Reprographics (Inside)	Request Printing fee sheet			
Other Out-of-Pocket Expenses	at cost plus 10%			
Subconsultants	at cost plus 10%			
Plotting: Color Bond	\$1.50 per square foot			
Plotting: Color Photo Gloss	\$2.50 per square foot			
Aerial Maps: Fewer than 500 acres	\$200			
Aerial Maps: 500–1,500 acres	\$350			
Aerial Maps: Greater than 1,500 acres	\$500			

Task 4: Project Task Item Estimates

The approach Psomas takes on all assignments emphasizes excellence. This is accomplished by committing staff members who have appropriate expertise and by incorporating specific key elements into all of our projects, as discussed below. It is through this approach that we are able to ensure delivery of an outstanding product that reflects the high standards that IRWD maintains.

Psomas understands that good communication requires a level of transparency with our clients regarding schedule and budget. In order to present an accurate picture of the project schedule and budget to IRWD on a regular basis, the Psomas management team will actively track each project's progress through our in-house management software, allowing us real-time project statistics. With this information, our management team can quickly make the necessary adjustments to reallocate resources and make any necessary reassignments to ensure schedules are met and budgets are not exceeded. Our commitment to schedule and budget has been demonstrated through our past work with IRWD, including the recent Zone A to Rattlesnake Reservoir Pump Station Initial Study/Mitigated Negative Declaration (IS/MND) as well as through our extensive experience with other clients. Psomas is known among our clients for our client responsiveness and attention to detail, which is demonstrated by the number of longterm clients and On-Call/As-Needed Environmental Services contracts we have maintained with public sector agencies. We have established long-term relationships with clients, some for over 20 years, for various services and work products ranging from specialized technical reports for small development projects to the preparation and processing of EIRs for large complex development and infrastructure projects. Psomas understands that every project is important and is willing to jump in with both feet to do what needs to be done to successfully complete a project; this strategy allows our clients to focus on their work and be successful at what they do.

Following is a list of some of our key long-term water, utility, and public works clients for which we are currently providing As-Needed or On-Call Consultant Services, with the total years of service for each client indicated in parenthesis:

- City of Anaheim Public Utilities Department (16 years)
- City of Anaheim Public Works Department (16 years)
- County of Orange (24 years)
- Eastern Municipal Water District (1 year)
- Los Angeles County Public Works (24 years)
- Metropolitan Water District of Southern California (9 years)
- OC Parks (5 years)

E - 6 Irvine Ranch Water District | On-Call CEQA and NEPA Consultation

- Orange County Transportation Authority (10 years)
- Orange County Water District (10 years)
- Riverside County Flood Control and Water Conservation District (5 years)
- Sanitation Districts of Los Angeles County (.5 years)
- Santa Margarita Water District (22 years)
- South Coast Water District (3 years)
- Southern California Edison Company, Eastern Hydro Division (21 years)

Under these contracts Psomas has provided scopes of services, estimated costs, and schedules for hundreds of individual projects. Each scope, cost, and schedule is prepared to fulfill our clients' needs by providing cost- and time-efficient services that meet the project objectives without burdening projects with unnecessary or superfluous tasks.

With 16 professional staff members dedicated to this contract, Psomas will be able to meet the demanding schedules of concurrent assignments. While each of the key staff members will have other company-wide project responsibilities, we ensure that each team member will have adequate availability to meet the assigned project's requirements. We are careful not to commit 100 percent of any staff member's time, thereby ensuring availability of qualified staff to fulfill all tasked and scoped responsibilities.

Task 5: Team Experience

Psomas believes that our approach to fulfilling the required management for future IRWD projects is best met by appointing Jennifer Marks as Project Manager who will operate as the day-to-day manager and primary contact with IRWD and other team members—and Jim Hunter, ENV SP, as Principal-in-Charge and Quality Assurance (QA)/Quality Control (QC) Manager. Brief biographies are provided below for Jennifer and Jim.

Complete resumes, including years of experience, education, special knowledge and skills, pertinent permits, and brief descriptions of relevant project experience for all key staff members can be found in Attachment B. An organization chart is provided on the following page depicting the reporting structure for Psomas' full team.

Jennifer Marks | Project Manager

Jennifer Marks is a Senior Project Manager with 21 years of experience in the preparation of environmental documentation and analysis consistent with CEQA and NEPA for water districts; various public utilities; local planning and development departments; and independent developers. In addition, she has served as Project Manager for As-Needed contracts for IRWD; the City of Anaheim for the Public Utilities, Public Works Department; Metropolitan Water District,;Eastern

Municipal Water District; and Project Manager for specific work for Metropolitan Water District through our prime contract and the Water Replenishment District of Southern California as a subconsultant to Hazens & Sawyer. Throughout her career, she has worked directly with a variety of interested and affected parties including U.S. Army Corps of Engineers (USACE); U.S. Fish and Wildlife Service (USFWS); California Department of Fish and Wildlife (CDFW); California Department of Transportation (Caltrans); USEPA; SWRCB; and U.S. Bureau of Reclamation (BOR). In addition to managing planning, development, and infrastructure projects, she has performed impact analyses for many environmental resource issue areas, including water resources, biology, air quality, noise, traffic, land use, aesthetic resources, geology, historic and cultural resources, and hazards and hazardous materials. Jennifer will serve as IRWD's primary contact and will manage preparation of and serve as the technical lead for all environmental documentation. She will coordinate Psomas' wide range of in-house technical staff; oversee and review individual assignments; and ensure the delivery of quality work products on schedule and within cost constraints.

Jim Hunter, ENV SP | Principal-in-Charge and QA/QC Manager

Jim Hunter will serve as Principal-in-Charge and QA/ QC Manager for the Psomas Team. Jim is able to bind Psomas to the contract and will provide oversight support and strategic problem-solving consultation, while also managing the consultant team, as needed, to ensure established diversity goals are met. He has 34 years of experience providing strategic land use entitlement, environmental, and regulatory compliance services to private industry, municipal, and utility clients in Southern California. Key experience includes assembling and leading high performing teams in the areas of CEQA and/or NEPA environmental review and permitting; pre-construction planning; and construction compliance monitoring for major land development and capital infrastructure across Southern California. Jim's experience with multi-disciplinary and complex projects includes serving as Principal-in-Charge and Contract Manager for multiple On-Call contracts including Los Angeles County Public Works Water Resources Branch and Metropolitan Water District of Southern California Planning Services, as well as project specific work for a Pipeline Safety Enhancement Plan across 12 counties for Southern California Gas Company; environmental compliance for construction of a 153-mile, 500-kV Southern California Edison transmission line; an EIR/ EIS for a major Port of Long Beach container terminal; CEQA/NEPA and permitting approvals for a 2,304bed correctional facility in rural Kern County; and

F _ 7 Irvine Ranch Water District | On-Call CEQA and NEPA Consultation



Team Availability

The table below show that estimated percentage of time each alphabetically listed staff member would have available to commit to IRWD-assigned tasks. Psomas is committed to devoting the staff resources necessary in a timely matter to ensure exceptional client service. We are highly qualified in providing On-Call Environmental Services to public agencies and are careful to ensure key staff members are available for the On-Call Contract as needed to fulfill any schedule demands that may arise. As noted in Task 3, additional field staff for Biological and Regulatory Services and Cultural Resources services are available for task orders as needed and pending IRWD approval.

Key Personnel	Availability	Key Personnel	Availal
Jonathan Aguayo	30%	Megan Larum	75%
Robert Becker	15%	Melissa Macias	50%
Brad Blood, PhD	15%	Jennifer Marks	65%
Tin Cheung	15%	Lindsay Messett, CBW	30%
Charles Cisneros, MS, RPA	40%	Michael Milroy	30%
Michael Deseo	15%	Allison Rudalevige	30%
Amber Heredia	30%	Daria Sarraf	30%
Jim Hunter, ENV SP	15%	Kassie Sugimoto	50%

various projects for water and wastewater utilities across Southern California.

Task 6: Project Coordination

Psomas understands that each client is different and that each project is unique with respect to environmental concerns and public interest; as such, we tailor our plans for communication and coordination accordingly. A typical project with IRWD is expected to require regular, weekly communication via email and phone calls to ensure that all project components are progressing. The Psomas team will make a concerted effort to ensure that expectations are clearly defined and met without compromise; that miscommunication and misunderstandings are minimized; and that concerns are addressed at the earliest possible point in the process. As key milestones approach, the frequency of communication is expected to increase to keep the project moving forward.

Psomas has historically assumed the role of both consultant and subconsultant on a variety of projects. Depending on the assigned task, Psomas will assume either a primary project management role and be responsible for the management of a project team or will serve as a member of a larger team and take direction from another party, as directed by IRWD. Due to our extensive experience throughout Southern California, Psomas has positive working relationships with a number of consulting, architectural, and engineering firms and we look forward to the chance to collaborate with peers in these fields.

Task 7: Mitigation Monitoring and Reporting

As noted previously under Task 1, Psomas will prepare a Mitigation Monitoring Program (MMP) to identify all components of the Mitigation Program, including mitigation measures, responsible parties, and a timeframe for implementation. Psomas understands

the elements necessary for a solid, measurable mitigation measure and works to ensure that the measures identified during the CEQA/NEPA environmental documentation process meet these criteria. The benefits of a well-written mitigation measure are most evident during execution in the field when clarity is of the utmost importance. While implementing a well-written mitigation measure is the ideal scenario, we are faced with measures that lack clarity from time to time, especially when implementing measures that were drafted by a third party. However, because members of the Psomas Team have an understanding of what comprises a sound mitigation measure based on our experience in writing mitigation programs, we can make necessary and educated interpretations as needed to keep project implementation compliant and moving forward.

Pursuant to Section 15097(a) of the State CEQA Guidelines, "a public agency may delegate reporting or monitoring responsibilities to another public agency or private entity . . . " Psomas will assume the role of mitigation monitoring and reporting on behalf of IRWD and will designate a key person to ensure that all mitigation is completed consistent with the intent of the original measure. Psomas includes specialists that are capable of conducting necessary monitoring tasks related to the full range of environmental issues, including air quality, biological resources, habitat restoration, cultural resources, hydrology and water quality, noise, and traffic. Successfully documenting the completion of mitigation efforts conducted on a project sometimes makes the difference between compliance and non-compliance. Psomas has extensive experience monitoring and overseeing these efforts but, more importantly, Psomas has a long history of good communication among all parties on the project team. When in the field during project implementation, rectifying potential incidents prior to non-compliance events is a team effort that is best lead by experienced environmental monitors. Furthermore, appropriately reporting compliance and remedial efforts requires knowledgeable staff using relevant terminology. In addition to Psomas' experience coordinating with project teams, Psomas has extensive experience communicating and coordinating with local regulatory agencies, including the USACE, Regional Water Quality Control Board (RWQCB), CDFW, California Coastal Commission (CCC), U.S. Fish and Wildlife Service (USFWS), and others.



Task 8: References

Psomas' Environmental Services Group has completed several CEQA/NEPA task orders for IRWD via two consecutive on-call services contract. The following is a list to date of work completed and ongoing along with key IRWD staff.

Project Title and Description

Zone A to Rattlesnake Reservoir Pump Station IS/MND (ongoing)

Psomas prepared an IS/MND for the replacement of the existing Rattlesnake Reservoir Pump Station No. 2 with a new Zone A to Rattlesnake Reservoir Pump Station at the Rattlesnake Reservoir Complex. Psomas' scope of work included a biological survey, a cultural resources records search, air quality and GHG modeling, energy analysis, additional environmental analyses, and preparation of the CEQA document (MND). Psomas also managed the public distribution process for IRWD, including publishing the public notice in the local newspaper. The IS/MND is currently being reviewed by agencies and members of the public. Once the comment period ends, Psomas will manage the response to comments process and prepare a Final IS/MND for IRWD's use.

3.7 MG Zone 1 Reservoir IS/MND (March 2018)

Psomas prepared an MND for the construction and operation of an above-ground 3.7 MG reservoir adjacent to an existing 15 MG Zone 1 Reservoir. As part of the project, additional improvements are proposed, including installation of inlet/outlet, overflow, and drain piping; valve and drain vaults; new valves; roof hatches; and a reservoir management system. Psomas' scope of work included a biological survey, a cultural resources site survey, air quality and GHG modeling, additional environmental analyses, and preparation of the CEQA document (MND). As part of the environmental process, Psomas prepared a visual analysis based on a thorough walk-through of the surrounding properties and photo-documentation of views from surrounding land uses. Psomas also managed the public distribution process for IRWD and prepared responses to comments for consideration by the Board.

Irvine Lake Pipeline (ILP) North Conversion Project: Santiago Hills C + Reservoir

Cultural Resources Monitoring Report (June 2017)

California Gnatcatcher Survey (October 2016)

Burrowing Owl Survey (October 2016)

Psomas provided biological and cultural monitoring for the ILP North Conversion Project at the Santiago Hills C+ Reservoir, Orchard Hills, and Rattlesnake Complex sites. The monitoring included conducting gnatcatcher/cactus wren surveys, biological monitoring for clearing of coastal sage scrub, conducting pre-construction burrowing owl surveys, and performing archaeological and paleontological resources construction monitoring.

ILP North Conversion Project: Baker Raw Water Pumping Station

Special Status Plant Surveys (June 2017)

Coastal California Gnatcatcher Survey (June 2017)

Psomas conducted biological surveys for the ILP North Conversion Project at the Baker Raw Water Pumping Station. Surveys included three special status plant surveys and three coastal California Gnatcatcher surveys. Upon completion of the survey work, the reports were transmitted to the U.S. Fish and Wildlife Service.

IRWD Project Staff Members

- Jo Ann Corey, Environmental Compliance Specialist
- Richard Mori, Principal Engineer
- Jacob Moeder, Engineer
- Jo Ann Corey, Environmental Compliance Specialist
- Fiona Sanchez, Director of Water Resources
- Kellie Welch, Water Resources Manager
- Richard Mori, Principal Engineer
- Joseph McGehee, Engineer
- Toni Lynch, Assistant Engineer
- Jo Ann Corey, Environmental Compliance Specialist

 Jo Ann Corey, Environmental Compliance Specialist

Project Title and Description

ILP North Conversion Project IS/MND (December 2015)

Psomas prepared an IS/MND for the ILP North Conversion Project. The project proposed the conversion of a segment of the ILP from untreated water to recycled water and all associated improvements to the IRWD water distribution system required to accommodate this conversion. The project also proposed improvements and modifications to several IRWD facilities in the cities of Orange and Irvine. In addition to preparation of the IS/MND for the project, Psomas prepared the air quality analysis, a biological resources assessment, cultural resources assessment, a greenhouse gas analysis, and a noise assessment pursuant to CEQA requirements. A portion of the project site is located in the Central-Coastal Subregion of the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP); IRWD is a participating jurisdiction and is subject to the terms of the NCCP/HCP Implementation Agreement. Therefore, the Biological Resources Assessment addressed compliance with the Central-Coastal NCCP/HCP. Additionally, because the project would qualify for grant funding, Psomas coordinated with the U.S. Department of the Interior Bureau of Reclamation to define any additional environmental documentation requirements and completed the additional work pursuant to CEQA-Plus.

In addition to work performed for IRWD, Psomas has similar relevant experience with other water districts and agencies throughout Southern California. A complete description of these projects is provided in Attachment B, Relevant Project Descriptions.

Additionally, Psomas has provided a letter of recommendation from the Eastern Municipal Water District that speak to Psomas' technical expertise, responsive service, and budget and schedule compliance. This letters is provided in Attachment C, Lettersof Reference.

ADDITIONAL ITEMS

Joint Venture

Psomas will not engage in a Joint Venture nor is it using subconsultants for this On-Call Contract. Psomas has the depth of expertise within its current staff to complete any and all work efforts associated with this On-Call contract within the IRWD's budget and schedule requirements.

Conflict of Interest

Psomas has no conflicts of interest that would preclude our ability to uphold this contract.

Contract

Psomas has reviewed the professional service agreement and has no proposed modifications to the standard terms and conditions.

Insurance

Psomas insurance coverage for both professional liability and general liability meets the requirements stated in the RFP. ACORD certificates demonstrating current coverages are provided in Attachment D to this proposal. Psomas' insurance certificates will be presented to IRWD upon contract award.

ATTACHMENTS

Attachment A: Relevant Project Descriptions Attachment B: Resumes Attachment C: Letter of Reference Attachment D: ACORD Insurance Forms

IRWD Project Staff Members

- Jo Ann Corey, Environmental Compliance Specialist
- Fiona Sanchez, Director of Water Resources
- Kellie Welch, Water Resources Manager
- Richard Mori, Principal Engineer
- Joseph McGehee, Engineer
- Jacob Moeder, Engineer

West Valley Feeder No. 1 Stage 3 Project Initial Study and Mitigated Negative Declaration

Los Angles, CA

OWNER/CLIENT

Metropolitan Water District of Southern California

REFERENCE

Lilia Martinez (213) 217-5656 Imartinez@mwdh2o.com

DATES

4/2017 to 10/2018

FINANCIAL SIZE

\$97,624.00

Psomas is preparing an Initial Study/ Mitigated Negative Declaration (IS/ MND) for the Metropolitan Water District's (Metropolitan's) West Valley Feeder No. 1 (WVF1) Stage 3 Project. The project site is located on approximately 0.46 acre within the north/northwestern portion of Chatsworth Park South where the San Fernando Valley floor borders the adjacent Simi Hills/Santa Susana



Mountains in the community of Chatsworth, in the City of Los Angeles, and the County of Los Angeles. Existing surrounding development is characterized by the Chatsworth Park South facility to the south and southeast, single-family residences to the east, and undeveloped hillside terrain within the Santa Susana Pass State Historic Park to the north and west. A railroad right-of-way (ROW) is located north of the project site, and informal multi-use trails are located throughout the project site and serve pedestrian, bicycling, and equestrian uses.

The purpose of the proposed project is to continue pipeline improvements implemented by Stage 1 and 2 of the West Valley Feeder No. 1 Valve Modification Project. The project would include modification of the WVF1. The existing valves were installed when the line was constructed in 1962 and no longer seal properly. Further, several of the valves were directly buried and cannot be accessed without excavating the pipeline. The project would include 1) replacing valves, 2) adding valve structures, and 3) improving access for maintenance and repairs to WVF1. The work was prioritized and divided into three stages over multiple shutdown seasons to minimize the duration of pipeline outages. The proposed project would include construction of a new patrol road to provide access to the mechanical structures associated with the WVF1 pipeline. The proposed access road, associated vehicle turnaround area, and access gates have been designed to accommodate a full-size maintenance truck (i.e., Ford F550 or equivalent) for operations, maintenance, and security.

Psomas conducted a biological survey for the project and worked with Metropolitan engineers to avoid impacts to key resources.



PSOMAS

Irvine Ranch Water District On-Call CEQA/ NEPA Consultation Services

Irvine and Orange County, CA

OWNER/CLIENT

Irvine Ranch Water District

REFERENCE

Jo Ann Corey (949) 453-5362 corey@irwd.com

DATES

8/2014 to Present

FINANCIAL SIZE

Varies by individual task order

Psomas has provided environmental services to the Irvine Ranch Water District (IRWD) since 2010 and we currently under contract to provide on-call services (this is our second on-call contract, which was awarded in August 2016; our first on-call contract was awarded in January 2014). Under ourfirst On-Call Contract, Psomas prepared an Initial Study/Mitigated Negative Declaration (IS/MND) for



the Irvine Lake Pipeline North Conversion Project. The project would involve the conversion of a segment of the ILP from untreated water to recycled water and all associated improvements to the IRWD water distribution system required to accommodate this conversion. The proposed project involves improvements and modifications to several IRWD facilities in the cities of Orange and Irvine. A portion of the ILP from the Baker RWPS near the Peters Canyon Reservoir to the Rattlesnake Reservoir Complex would be converted to a recycled water line. The ILP North Conversion Project includes capacity for both existing and future planned untreated water demands. Project actions would include construction of a 2.4 MG recycled water reservoir as a partially buried circular tank and associated inlet and outlet structures; conversion of an existing booster pump station to allow for pumping of recycled water to two separate zones; reconfiguring an existing water facility to serve as a back-up source of recycled water; and construction of pipelines within existing roadways in the cities of Irvine and Orange.

In addition to preparation of the IS/MND for the project, Psomas prepared the air quality analysis, biological resources assessment, cultural resources assessment, greenhouse gas analysis, and noise assessment pursuant to CEQA requirements. Because the project would qualify for grant funding, Psomas coordinated with the U.S. Department of the Interior Bureau of Reclamation to define any additional environmental documentation requirements and completed the additional work pursuant to CEQA-Plus.



A portion of the project is located in the Central/Coastal Subregion of the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) and IRWD is a participating jurisdiction and is subject to the terms of the NCCP/HCP Implementation Agreement. Therefore, the Biological Resources Assessment addressed compliance with the NCCP/HCP.

PSOMAS

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EXHIBIT "F"

Cover Letter

January 30, 2020

Fiona M. Sanchez Director of Water Resources Irvine Ranch Water District 1560 Sand Canyon Avenue Irvine, California 92618

WATER RESOURCES

JAN 30 2020

IRVINE RANCH WATER DISTRICT

Subject: Request for Proposals: On-Call CEQA and NEPA Consultation

Dear Ms. Sanchez,

We are pleased to provide the Irvine Ranch Water District (IRWD) with the following proposal for California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) consultation services. As a firm, Dudek specializes in water and wastewater engineering and project design, planning, and environmental compliance. As described in our proposal, Dudek believes we offer IRWD the following strengths:

Local, Responsive Project Management. Rachel Struglia, PhD, AICP, will serve as contract manager and the point of contact for IRWD. Dr. Struglia has performed multiple projects for IRWD and served as project manager for IRWD's previous on-call CEQA/NEPA contract in 2014–2016. She will direct a local staff of three project task managers to provide environmental support, as necessary. Joe Monaco, with his extensive water experience and 32 years of CEQA/NEPA compliance, will serve as Principal in Charge for this contract.

On-Call Expertise. We have more than 150 on-call contracts throughout the state that provide as-needed environmental services as well as mitigation monitoring and environmental compliance services. We have completed over 2,800 environmental documents in compliance with CEQA and NEPA, including dozens of recent water/wastewater-related projects.

Diverse Technical Specialties. As a medium-sized firm, Dudek is small enough for project managers to make nimble decisions and stay engaged with you from start to finish. We are large enough that our staff can tackle a spectrum of environmental and planning challenges. We have all the technical specialties needed for CEQA compliance in house.

The Dudek team is ready to mobilize on any upcoming IRWD project. We welcome any questions you have regarding our proposal and look forward to the opportunity to re-engage with IRWD. Please do not hesitate to contact Dr. Struglia directly at 949.373.8318 or rstruglia@dudek.com.

Sincerely,

Joseph Monaco President and CEO

Rachel Struglia, PhD, AICP

Rachel Struglia, PhD, AICF Contract Manager

Proposal for On-Call CEQA and NEPA Consultation

F - 1

1. Scope

Scope of Work

The following scope of work is based on the tasks outlined in the Request for Proposals (RFP) and reflects a generalized approach to a water or wastewater project for the Irvine Ranch Water District (IRWD).

Task 1: California Environmental Quality Act

Dudek has one of California's largest, most experienced teams for California Environmental Quality Act (CEQA) document preparation. Our environmental planners have prepared and processed more than 2,800 CEQA documents for a variety of large and small development, restoration, and conservation projects throughout the state. Combining comprehensive analysis and evidence-based findings, we provide legally defensible documents that are supported by substantial evidence, none of which have ever been successfully challenged. We conduct technically sound assessments and manage environmental review processes in a streamlined, compliant, and straightforward manner.

We produce complete CEQA documents done right the first time. Our environmental planners work with our in-house technical publications editors and graphic designers to prepare high quality documents that are clearly organized and easily interpreted by the public, agencies, and individuals responsible for future project development. We efficiently coordinate and prepare reports by utilizing our in-house technical experts in Orange County and across our southern California offices. Our team expedites complex project processing by designing and maintaining realistic document schedules, adhering to consistent communication protocols, leveraging our longstanding agency relationships, and anticipating potential issues as soon as possible. Additionally, our planners expertly serve as independent, neutral staff, often managing the environmental review process for agencies on a contract basis...

Task 2: National Environmental Protection Act

Dudek is adept at successfully navigating infrastructure projects through the National Environmental Policy Act (NEPA). Dudek's qualified planning specialists have permitted projects ranging in scope from short distribution line rebuilds to 200-megawatt solar generation facilities. Our NEPA practice is led by Jonathan Rigg who has extensive experience working on infrastructure, transportation, and energy projects throughout the Western United States and with a widerange of NEPA-lead agencies. Our team is well-versed in completing all levels of NEPA compliance documents—from Categorical Exclusions, Environmental Assessments/Findings of No Significant Impacts, CEQA-Plus documents, and Environmental Impact Statements/Records of Decision. Along with preparing defensible NEPA documents, our NEPA project managers are particularly skilled at coordinating the efforts of large interdisciplinary teams of resource specialists for preparing reports and permit documents within the overarching NEPA schedule. Dudek NEPA planning specialists are experts in applying and coordinating the appropriate level of public and agency outreach to meet the necessary requirements of federal and state regulations. Following final NEPA approval, Dudek's planners help transition the project to the compliance phase by developing a master list of all mitigation measures required by the final approval document and from all other land use and resource permit agencies.

Task 3: Staff Rates

Staff rates are provided in Dudek's 2020 Rate Schedule that has been provided in Section 5 of this proposal.

Task 4: Project Task Item Estimates

Dudek experience in CEQA and NEPA compliance has been provided in Section 3.

Task 5: Team Experience

Team experience is discussed in Section 2 of this proposal.

Task 6: Project Coordination

Project Management Approach

Our project management philosophy for this contract will be based on our extensive project experience working with water districts throughout the firm's 40-year history. Drawing upon knowledge from these projects, our project managers make decisions that enable continuous forward project momentum with a focus on providing straightforward cost-saving solutions in a legally defensible manner. This proven approach involves the following:

Defined Lines of Communication

Effective project management requires detailed communication and among project participants. Dudek believes that effective project management comes when there is a continuous flow of information on a regular basis. Dr. Struglia will remain personally involved in any project she manages for IRWD. Working as a team with other technical discipline leaders, she will keep all task orders on schedule and within budget and will maintain the highest level of quality for all deliverables. She will communicate project status updates with other members of the consultant team and with the IRWD by doing the following:

- Serving as the single point of contact;
- Establishing regular meetings with IRWD staff to discuss project milestones and ongoing/future activities;
- Presenting project approaches to CEQA, with a recommendation that best suits IRWD's institutional culture (risk adverse, but cost conscious)
- Holding regular project management meetings with key project staff to coordinate work efforts, check on task completion, and review budget conformance; and
- Updating the project schedule, as necessary, so all team members are aware of information that may affect delivery of work products and the overall project schedule.

Project Management Tools

The management team will work together to meet these communication goals and keep the project on schedule and within budget by using the following:

- **Project Kickoff Meeting:** The Key project team members will attend a project kickoff meeting with IRWD staff. This meeting will be critical to the ultimate success of the project, as it provides an opportunity for all parties to discuss the project, review the scope, and formalize key assumptions.
- **Dedicated Lines of Communication:** After the kickoff meeting, Ms. Struglia will distribute a key contact list to all team members, identifying communication protocols and contact information.
- Virtual Collaboration: Dudek offers a number of tools to facilitate efficient, productive virtual collaboration as well, including file sharing/storage via ShareFile, document co-authoring that permits simultaneous document collaboration through SharePoint, client web portals that are custom-built for access via Dudek.com, virtual deliverables that are produced and uploaded to online portal(s), mobile data collection and reporting, and virtual meetings using Zoom Meetings.
- Schedule and Budget Tracking: The management team will use a schedule-tracking tool to meet important milestones for task orders issued under this contract. We use Deltek Vision to track all budget line items and deliver an accurate monthly balance.
- **Progress Reports:** Dr. Struglia will prepare regular progress reports that will include a list of tasks completed during the period, a list of tasks anticipated during the coming period, a project schedule update, a summary of the schedule, and any outstanding scope of work or information request issues.

Proposal for On-Call CEQA and NEPA Consultation

Quality Control

Document Quality Assurance and Quality Control

Dudek's editorial and publications team will work closely with Dr. Struglia to apply the highest standards of quality to all IRWD deliverables. For a typical Dudek work product, the following process will be used:

- **Style Guide Development:** During the start-up phase of the project, the Dudek technical editing team will create a project-specific style guide to maintain consistency of terms and nomenclature used in project documents. This style guide will be in accordance with IRWD's standard formatting requirements and will be shared with IRWD before preparing project documents.
- **Technical Review:** An appropriate third-party technical reviewer will be assigned to all written work products. This step in the review process is focused on the legal adequacy and technical accuracy of all deliverables, and multiple reviewers may be used depending on the complexity of the document.
- Editorial Review: Once the technical review is complete, Dudek editors will conduct an editorial review of deliverables following the agreed-upon style guide. Prior to submittal to IRWD, each document will be formatted by Dudek's publications staff.
- **Document Production:** Dudek's publications production team verifies the quality of each formatted document before publication. Dudek's editorial team, in collaboration with the publications and information technology staff, will produce and publish the Web versions of project deliverables.

Administrative Record

As a best practice, Dudek builds a thorough administrative record during the course of project development. During the writing process, the editor works closely with the writing team to catalogue references cited in an index, and collects and compiles all source material.

Data Management

All data received by Dudek are cataloged in a master data intake database that is stored in a commonly accessible network location with other spatially related files and metadata files for management/control according to Dudek's Policy for geographic information system (GIS) Project Data Organization. All spatial data received will be reviewed for metadata and verified visually in the Environmental Systems Research Institute's ArcCatalog and ArcMap software. Dudek-generated data will undergo quality control checks for feature completeness, accuracy, and attribute value consistency, as well as appropriate metadata completeness.

Task 7: Mitigation Monitoring and Reporting

As part of the environmental documentation preparation process for a project, Dudek will typically develop a Mitigation Monitoring and Reporting Program (MMRP) to be used by the project's compliance team during project implementation. Dudek has extensive experience in both preparing and implementing MMRPs. Our goal is to write MMRPs that provide a comprehensive, single document for the mitigation measures to be implemented to facilitate the achievement of the impact avoidance envisioned in CEQA documents. Dudek writes MMRPs that are easily accessible, functional, and provide a clear pathway for effective implementation. In addition, Dudek has an experienced compliance management team and roster of permanent and on-call monitors available to implement MMRPs should IRWD require assistance with the implementation of any MMRP.

Task 8: References

As requested by the RFP, Dudek's history of project work with IRWD is presented in Section 3 of this proposal. Additionally, two letters of reference have been provided in **Appendix B**.

2. Team

The Dudek Team

The Dudek team specifically chosen for this contract has the availability and capacity to provide services on upcoming IRWD projects. Dr. Rachel Struglia will serve as project manager and lead the team out of Dudek's San Juan Capistrano location. Our selected team will promptly proceed with any new IRWD task order. Team members can commit substantial effort to the task when it is necessary for the success of a project. Dudek personnel will be committed to this contract, and no substitution of key team members will be made without prior written consent from IRWD.

Figure 1 outlines proposed lines of communication for this contract, followed by brief biographies for key personnel. **Table 2** presents an at-a-glance look at qualifications and availability for the expanded team. Focused resumes are provided in **Appendix A**.



Figure 1. Dudek Team Organization

Project Team

Staff	Education	Experience
Joe Monaco, AICP Principal in Charge Availability: 5% Labor Category: Project Director Environmental	San Diego State University MCP, City Planning University of California (UC), Los Angeles BA, Geography/Business Emphasis	 More than 32 years' experience managing CEQA/NEPA compliance projects Extensive experience in regional water resource development
Rachel Struglia, PhD, AICP Contract Manager Availability: 20% Labor Category: Project Director Environmental	UC Irvine PhD, Environmental Analysis and Design Arizona State University MS, Justice Studies University of Connecticut BA, Anthropology	 More than 21 years' experience managing CEQA/NEPA compliance projects Successfully managed large-scale infrastructure projects
Collin Ramsey, LEED GA Task Order Manager Availability: 30% Labor Category: Senior Specialist II	California State University, Fullerton MS, Environmental Studies, Policy and Planning Emphasis UC Santa Barbara BA, Film Studies	 More than 10 years' experience managing CEQA/NEPA compliance projects
Patrick Cruz Task Order Manager Availability: 40% Labor Category: Specialist I	UC Santa Barbara BA, Environmental Studies BA, Geography (GIS emphasis)	More than 2 years' experience in CEQA/NEPA compliance
Dana Link-Herrera Task Order Manager Availability: 35% Labor Category: Specialist II	California State Polytechnic University, Pomona MURP, Urban and Regional Planning UC San Diego BA, International Studies (Environmental Studies minor)	More than a year of experience in CEQA/NEPA compliance
Jonathan Rigg NEPA Task Order Manager Availability: 30% Labor Category: Specialist V	University of Arizona MA, Russian and Eastern European Studies University of Colorado BA, International Affairs and Russian Studies	 More than 12 years' managing environmental compliance and permitting projects, specializing in NEPA

Proposal for On-Call CEQA and NEPA Consultation

F - 6

Page 5

Staff	Education	Experience
Robert Ohlund, PE Engineering Technical Advisor Availability: 10% Labor Category: Project Director Engineering	University of Southern California BS, Civil Engineering	 More than 36 years' engineering experience for public infrastructure projects Specialist in water, wastewater, and recycled water resource projects
Tommy Molioo Biological Resources Availability: 20% Labor Category: Specialist V	University of Denver MAS, Environmental Policy and Management Minot State University BA, Biology	 More than 11 years' experience as a biologist Specialist in technical surveys and reporting for CEQA/NEPA compliance
Tricia Wotipka Waters and Wetlands Permitting Availability: 20% Labor Category: Senior Specialist III	Pennsylvania State University BS, Wildlife and Fisheries Science	 More than 19 years' experience as an environmental specialist and biologist Specialist in wetland delineations, environmental permitting, and CEQA/NEPA documentation
Janice Wondolleck Biological Resources Availability: 30% Labor Category: Analyst V	UC Berkeley BS, Environmental Sciences UC Los Angeles Extension Certificate in Landscape Architecture (In Progress)	 More than 4 years' experience preparing biological sections for technical studies, including environmental impact reports (EIRs), biological technical reports (BTRs), habitat conservation plans (HCPs), and focused survey reports
Ted Roberts, MA, RPA Cultural Resources Availability: 25% Labor Category: Specialist V	Northern Arizona University MA, Anthropology Wayne State University BA, Anthropology	 More than 17 years' experience with archaeological and resource management
Jennifer Reed Air Quality, Greenhouse Gas Emissions Availability: 30% Labor Category: Specialist V	UC Santa Barbara BA, Environmental Studies BA, Geography	 More than 12 years' experience in CEQA/NEPA project compliance An environmental planner specializing in air quality
Mark Storm, INCE Bd. Cert. Noise Availability: 25% Labor Category: Senior Specialist III	Massachusetts Institute of Technology BS, Aeronautics and Astronautics	 More than 28 years' experience as a noise control engineer specializing in environmental noise assessment, mechanical systems noise control, and architectural acoustics Experience authoring noise technical reports and sections for CEQA/NEPA projects

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Staff	Education	Experience
Nicole Peacock, PE, PG, REA Public Health and Safety, Hazardous Materials Availability: 25% Labor Category: Senior Hydrogeologist IV/Engineer IV	UC Los Angeles BS, Civil and Environmental Engineering/Geology	 More than 20 years' experience as an environmental engineer and geologist Experienced in Phase I and II Environmental Site Assessments (ESAs) and environmental compliance
Perry Russell, PG, CEG Hydrology/Groundwater/Water Quality Availability: 30% Labor Category: Specialist III	California State University, Northridge MS, Geological Resources UC Santa Barbara BA, Geological Sciences	 More than 32 years' experience as a geologist Specialist in completing geology/soils, hydrology/water quality, hazards/hazardous materials, and utilities sections for CEQA/NEPA documents
Steve Dickey PG, CHG, CEG Geology/Hydrogeology Availability: 30% Labor Category: Senior Hydrogeologist II/Engineer II	University of Riverside Graduate Work, Geophysics and Geology Occidental College BA, Geology	 More than 46 years' experience performing contaminant hydrogeology, engineering geology, groundwater supply, and geophysical projects for industrial and municipal clients
Keith Carwana Compliance Manager Availability: 25% Labor Category: Senior Specialist II	University of Southern California MA, Public Administration UC Santa Barbara BA, Geography BA, Environmental Science	 More than 14 years' experience as an environmental specialist Extensive experience preparing, reviewing, and implementing environmental documentation for CEQA/NEPA compliance
Dennis Pascua Transportation Availability: 15% Labor Category: Senior Specialist IV	UC Irvine BA, Social Ecology (Environmental Analysis and Design)	 More than 25 years' experience in transportation planning and engineering Experienced with CEQA/NEPA and transportation topics and policies surrounding active transportation, context sensitive solutions, and complete streets throughout California
Stuart Fraser, RLA Habitat Restoration Planning Availability: 15% Labor Category: Senior Specialist I	California University Pomona MLA, Landscape Architecture Humboldt State University BS, Wildlife Management	 More than 18 years' experience as a registered landscape architect and restoration ecologist Specialist in ecosystem restoration and native revegetation
Michael Huff, RCA Fire Protection Planning, Arborist Availability: 20% Labor Category: Project Director Environmental	Northern Arizona University BS, Forest Management	 More than 26 years' experience as a forester and fire protection planner Experienced in CEQA supporting technical documents

Proposal for On-Call CEQA and NEPA Consultation

Page 7

3. Experience

The following projects exemplify Dudek's history of working with IRWD.

ON-CALL CEQA/NEPA SERVICES

Client: IRWD Dates: 2012–2013 and 2014–2016 Cost: Varies by individual project; see descriptions below Client Reference: Jo Ann Corey; 949.453.5300

Dudek has previously held on-call CEQA/NEPA services contracts with IRWD during the 2012–2013 and 2014–2016 contract cycles. Projects under these on-call contracts included:

Syphon Interim Facilities Initial Study (IS)/Mitigated Negative Declaration (MND). Dudek prepared an IS/MND for IRWD to evaluate the construction and operation of interim facilities on IRWD property just south of the Syphon Reservoir between the face of the dam and the Crean Lutheran Church High School Sports Complex. The proposed improvements assisted IRWD in converting the Syphon Reservoir from a reservoir holding irrigation water to seasonal storage of recycled water available for a variety of uses for recycled water customers, which requires some amount of disinfection, necessitating interim facilities housing chlorination equipment and other related infrastructure. The IS/MND was adopted in January 2013. Cost: \$39,801.

Syphon Interim Facilities IS/MND Addendum No. 1. Dudek prepared an addendum to address changes from what was previously assessed in the original IS/MND. The modifications included an increased construction footprint from 6.39 acres to approximately 8 acres, and an increase in width from a 15-foot-wide access road to a 20-foot-wide access road. When the Final IS/MND was adopted by the IRWD Board of Directors, the surface area requirements for the construction of pipelines crossed the Crean property assumed that Crean would rough grade its proposed sports park site prior to IRWD beginning construction. This assumption reduced the expected excavation depths for installing the pipelines. Crean informed IRWD that due to financial constraints, Crean was not going to be able to rough grade its site before IRWD was to begin construction of project facilities. Therefore, the depths of excavation increased, and additional construction access was needed for the installation of the pipelines as described above. This addendum was completed in February 2013. Cost: \$9,320.

City of Lake Forest Sports Park and Recreation Center Final EIR Addendum No. 1. Dudek prepared an addendum to the City of Lake Forest Sports Park EIR for the relocation of 498 feet of a 16-inch IRWD recycled water pipeline within the proposed park. The addendum was completed in August 2012. Cost: \$13,599.

City of Lake Forest Sports Park and Recreation Center Final EIR Addendum No. 2. Dudek prepared an addendum to the City of Lake Forest Sports Park EIR for minor modifications to the City of Lake Forest Sports Park and Recreation Center Final EIR. The modifications include addition of a 24-inch storm drain to join existing IRWD drains to a proposed Sports Park drain and an increase to the construction footprint to install the 16-inch recycled water line adjacent to the storm drain, which was assessed in the first Addendum (August 2012) to the Sports Park and Recreation Center. No substantial changes occurred that warranted preparation of subsequent or supplemental EIRs pursuant to Section 15162 of CEQA Guidelines. This addendum was completed in January 2013. Cost: \$6,780.

Chloramine Booster Stations at Foothill Zone 6 and Portola Zone 8 Reservoirs, Addendum No. 1. Dudek prepared an addendum to an IS/MND for the construction of chloramine booster stations for reservoirs within Foothill Zone 6 and Portola Zone 8. The Foothill Zone 6 reservoir site and the Portola Zone 8 reservoir site were previously assessed in the Reservoir Management System and Chlorine Analyzers and Reservoir Mixer/Samplers at Domestic Water Reservoirs Project Mitigated Negative Declaration in April 2007. The project involved retrofitting two reservoirs with reservoir management systems to allow the addition of chemicals to the reservoirs to improve degraded water quality as a result of nitrification. Initially IRWD was going to prepare another IS/MND, but Dudek suggested preparation of an Addendum to the previous IS/MND, saving the District time and money. Cost: \$12,610.

City of San Juan Capistrano Annexation CEQA Support

Client: Santa Margarita Water District (SMWD) Dates: December 2019–January 2020 Cost: \$2,600 Client Reference: Dan Ferons; 949.459.6590; danf@smwd.com

In an effort to control costs for its existing ratepayers, the City of San Juan Capistrano initiated proceedings to transfer its utility system to SMWD. The transfer, which required an annexation and annexation agreement, would ensure that the city's ratepayers would only see modest rate increases in coming years, as well as the investment of approximately \$25 million in capital improvements over 10 years by SMWD. SMWD contracted with Dudek to review all materials relating to the transfer and annexation, and to coordinate with the City and their attorneys in the preparation of CEQA documentation to cover all actions taken as part of the annexation. In its coordination efforts, Dudek determined that processing of the contemplated actions via a categorical exemption would sufficiently satisfy environmental requirements under CEQA. Accordingly, Dudek prepared and filed a Notice Exemption and supplemental Justification Memorandum at the Orange County Clerk-Recorder's Office, which will be used by the Orange County Local Agency Formation Commission in its final approval of the annexation.

Trampas Dam and Reservoir Mitigation Monitoring

Client: SMWD Dates: December 2017–Ongoing Cost: \$110,000 Client Reference: Jeffery McDonnell; 949.456.6950; effm@smwd.com

Dudek is currently providing archaeological and paleontological monitoring for the Trampas Canyon Dam Project that is creating a 5,000 acre-foot recycled water reservoir that will provide seasonal and operational storage for the district's existing and proposed recycled water system. Dudek is responsible for coordinating directly with the construction contractor to provide the necessary monitoring coverage for the project. Dudek regularly communicates with SWMD Engineers the Field Engineers subcontracted by SMWD and provides weekly reports to document the monitoring efforts that occurred throughout the week. Upon construction completion, Dudek will be prepare a final compliance monitoring report to document the monitoring efforts that occurred throughout the monitoring efforts that occurred in accordance with the Project's requirements.

Oso Sewage Lift Station Replacement Mitigated Negative Declaration

Client: El Toro Water District (ETWD) Dates: July 2018–August 2019 Cost: \$41,000 Client Reference: Bobby Young; 949.837.7050 x223; byoung@etwd.com

Dudek prepared an IS/MND for the replacement of a lift station in the City of Laguna Woods. The project involved demolition of the existing station originally constructed in 1974 and construction of a new pre-cast wet-well, two

submersible pumps, valve vault, back-up generator, and outdoor electrical enclosure. Additionally, implementation of the project required an expansion of the lift station's boundaries by 10 feet to accommodate the new equipment. While the replacement of an existing lift station would typically be categorically exempt under CEQA, Dudek worked with ETWD to scope an IS/MND based on the project's adjacency to the Laguna Coast Wilderness Park and sensitive habitat for the coastal California gnatcatcher (*Polioptila californica*), a species listed as threatened by the U.S. Fish and Wildlife Service. Dudek biologists conducted coastal California gnatcatcher surveys pursuant to California Department of Fish and Wildlife protocols and prepared a Biological Resources Assessment to identify and mitigate potential impacts to the threatened species. The IS/MND also addressed potential construction- and operation-related impacts relating to air quality and greenhouse gas emissions, noise and vibration, water quality, and traffic. ETWD's Board of Directors approved the project in fall 2019 and ETWD used the approved CEQA document to obtain an emergency generator permit from the South Coast Air Quality Management District, encroachment permits from the City of Laguna Woods, and to assist in the acquisition of property necessary for the expansion.

Crowther Sewer Pipeline Project MND

Client: City of Placentia Dates: April 2018–December 2019 Cost: \$73,200, completed the IS/MND \$13,000 under budget. Client Reference: Masoud Sepahi; 714.993.8148; msepahi@placentia.org

In 2018, the City of Placentia approached Dudek with new findings that the Crowther Sewer Pipeline, an existing sewer collection line, was soon projected to be unable to handle increased flows as a result of redevelopment occurring within the City's Transit-Oriented Development zone. After conferring with Dudek's engineering and environmental teams, the City of Placentia's Public Works Department contracted with Dudek to develop a sewer pipeline replacement design package necessary for replacement of the existing gravity sewer line. Additionally, Dudek's environmental division was contracted to prepare an IS/MND and associated technical studies for the project. Since the proposed pipeline alignment would transverse into the City of Fullerton, California Department of Transportation (Caltrans), Orange County Public Works, and railway right-of-ways and connect into an Orange County Sanitation District trunk line, coordination with these agencies and stakeholders was required. Further, as part of the Caltrans Encroachment Permit, Dudek prepared a Caltrans Historical Resources Compliance Report. Other technical work included quantifying construction-related air quality and greenhouse gas emissions, noise and vibration levels, and peak construction trip-generation.

North Auburn Mercy Housing NEPA Housing and Urban Development EA

Client: County of Placer Dates: November 2018–June 2019 Cost: \$26,000 Client Reference: Leigh Chavez; 530.745.3077; Ichavez@placer.ca.gov

The project is a vacant 3-acre site in Auburn, California that is being redeveloped with a Mercy Housing multifamily residential project. The project would construct 79-units within the larger Placer County Government Center (PCGC) Master Plan area. A U.S. Housing and Urban Development (HUD) funded project, it would set aside homes for homeless/special needs households that qualify for federal programs. Residential services would include educational opportunities and after school programs, access to health and wellness, and community and civic involvement opportunities. The project would include a community building, green spaces, "front porches," that face 1st Street (a major street within the PCGC), and encourage multimodal transportation (including an enhanced bus stop, bicycle repair areas, and pedestrian facilities). Key issues include community impacts/environmental justice, land use, utilities/service systems, and transportation/accessibility.

Apex to Crystal Transmission Line Project EA

Client: Los Angeles Department of Water and Power (LADWP) Dates: October 2017–December 2019 Cost: \$209,000 Client Reference: Aiden Leong; 213.367.0706; aiden.leong@ladwp.com

To reduce costs and increase reliability, LADWP proposes to construct a new 500-kilovolt, 10- to 14-mile transmission line from the Apex generating station to the Crystal switching station in Clark County, Nevada. The project runs primarily across federal land requiring a number of regulatory approvals and permits from the Bureau of Land Management (BLM) and is subject to various mitigation requirements and best management practices. To support BLM review, we provided environmental documentation, including preparing a plan of development; an environmental assessment addressing air quality and biological, cultural, and visual resources; and tech studies for biological and cultural resources. A Utility Environmental Protection Act application has been submitted to the State of Nevada Public Utilities Commission, and BLM processing is ongoing.

References

Dudek takes pride in maintaining good working relationships with our past and current clients. **Table 3** lists references for IRWD; letters and emails from these clients are provided in **Appendix B**.

Table 3. Dudek References

Client and Project	Client Reference
El Toro Water District	Bobby Young
Oso Sewage Lift Station Replacement Project	Project Engineer
	P.O. Box 4000
	Laguna Hills, California 92654-4000
	949.837.7050 x223
	byoung@etwd.com
Santa Margarita Water District	Daniel Ferons
Multiple Projects	General Manager
	26111 Antonia Parkway
	Rancho Santa Margarita, California 92688
	949.459.6590

4. Schedule

As a midsized, employee-owned firm, we work to maintain have an open culture, flat structure, and operational flexibility. This progressive approach encourages multiple internal disciplines (e.g., environmental planning, coastal planning, regulatory, and compliance) to collaborate simultaneously on a given project, allowing us to consider a project more holistically than other more singularly focused environmental consulting firms.

The Dudek staff specifically chosen for this contract have the availability and capacity to provide services on upcoming IRWD projects. We have included a wide range of team members with different specialties to accommodate the specifics of any impending project. The vast majority of our selected team is located in Southern California; task managers are located in Dudek's San Juan Capistrano office, supported by staff from Dudek's Encinitas headquarters, in north San Diego County.

The Dudek team presented in this proposal is fully committed and available for this contract. With current workloads ranging from 60% to 80%, our selected team will promptly proceed with any new IRWD task order. Team members can commit substantial effort to the task when it is necessary for the success of a project. Dudek personnel will be committed to the proposed project and no substitution of team members will be made without prior approval from IRWD.

5. Fee Schedule

DUDEK 2020 STANDARD SCHEDULE OF CHARGES

ENGINEERING SERVICES

Project Director	\$290.00/hr
Principal Engineer II	\$270.00/hr
Principal Engineer II	\$260.00/hr
Principal Engineer I	\$250.00/hr
Program Manager	\$230.00/hr
Senior Project Manager	\$230.00/hr
Project Manager	\$225.00/hr
Senior Engineer III	\$220.00/hr
Senior Engineer II	\$210.00/hr
Senior Engineer I	\$200.00/hr
Project Engineer IV/Technician IV	\$190.00/hr
Project Engineer III/Technician III	\$180.00/hr
Project Engineer Il/Technician II	\$165.00/hr
Project Engineer I/Technician I	\$150.00/hr
Senior Designer	\$170.00/hr
Designer	\$160.00/hr
Assistant Designer	\$155.00/hr
CADD Operator III	\$150.00/hr
CADD Operator II	\$140.00/hr
CADD Operator I	\$125.00/hr
CADD Drafter	\$115.00/hr
CADD Technician	\$110.00/hr
Project Coordinator	\$120.00/hr
Engineering Assistant	\$115.00/hr

ENVIRONMENTAL SERVICES

Project Director	\$245.00/hr
Senior Specialist IV	\$230.00/hr
Senior Specialist III	\$220.00/hr
Senior Specialist II	\$200.00/hr
Senior Specialist I	\$190.00/hr
Specialist V	\$180.00/hr
Specialist IV	\$170.00/hr
Specialist III	\$160.00/hr
Specialist II	\$145.00/hr
Specialist	\$130.00/hr
Analyst V	\$120.00/hr
Analyst IV	\$110.00/br
Analyst III	\$100.00/hr
Analyst II	\$90 00/hr
Analyst	\$80.00/hr
Technician IV	\$90.00/br
Technician III	\$80.00/br
Technician II	\$70 00/br
Technician I	\$60.00/hr
Compliance Monitor	\$95.00/hr

DATA MANAGEMENT SERVICES

GIS Programmer I	\$185,00/hr
GIS Specialist IV	\$160.00/hr
GIS Specialist III	\$150.00/hr
GIS Specialist II	\$140.00/hr
GIS Specialist I	\$130.00/hr
Data Analyst III	\$100.00/hr
Data Analyst II	\$90.00/hr
Data Analyst I	\$80.00/hr
UAS Pilot	\$100.00/hr

CONSTRUCTION MANAGEMENT SERVICES

Principal/Manager	\$195.00/hr
Senior Construction Manager	\$180.00/hr
Senior Project Manager	\$165.00/hr
Construction Manager	\$155.00/hr
Project Manager	\$145.00/hr
Resident Engineer	\$145.00/hr
Construction Engineer	\$140.00/hr
On-site Owner's Representative	\$140.00/hr
Construction Inspector III	\$130.00/hr
Construction Inspector II	\$120.00/hr
Construction Inspector I	\$110.00/hr
Prevailing Wage Inspector	,\$135.00/hr

HYDROGEOLOGICAL SERVICES

Project Director	\$285.00/h
Principal Hydrogeologist/Engineer II	\$285.00/h
Principal Hydrogeologist/Engineer I	\$250.00/h
Sr. Hydrogeologist IV/Engineer IV.	\$235.00/h
Sr. Hydrogeologist II/Engineer III	\$220.00/h
Sr. Hydrogeologist II/Engineer II	\$205.00/h
Sr. Hydrogeologist I/Engineer I	\$190.00/h
Hydrogeologist VI/Engineer VI	\$175.00/h
Hydrogeologist V/Engineer V	\$165.00/h
Hydrogeologist IV/Engineer IV	\$155.00/h
Hydrogeologist III/Engineer III	\$145.00/h
Hydrogeologist II/Engineer II	\$135.00/h
Hydrogeologist VEngineer I	\$125.00/h
Technician	\$100.00/b

DISTRICT MANAGEMENT & OPERATIONS

District General Manager	\$195.00/h
District Engineer	\$185.00/h
Operations Manager	\$160.00/h
District Secretary/Accountant	\$120.00/h
Collections System Manager	\$135.00/h
Grade V Operator	\$125.00/h
Grade IV Operator	\$110.00/h
Grade III Operator	\$100.00/h
Grade II Operator	\$75.00/h
Grade Operator	\$70.00/h
Operator in Training	\$65.00/h
Collection Maintenance Worker II	\$75.00/h
Collection Maintenance Worker I	\$65.00/h

CREATIVE SERVICES

3D Graphic Artist	\$180.00/hr
Graphic Designer IV	\$160.00/hr
Graphic Designer III	\$145.00/hr
Graphic Designer II	\$130.00/hr
Graphic Designer I	\$115.00/hr

PUBLICATIONS SERVICES

Technical Editor III	145.00/h
Technical Editor II.	130.00/h
Technical Editor I	115.00/h
Publications Specialist III	105.00/h
Publications Specialist II	\$95.00/h
Publications Specialist I	\$85.00/h
Clerical Administration	\$90.00/h

Forenel: Engineering - Coust appearances, depositions, and interrogatories as expert witness will be billed at 20 thmes normal rates: Emergency and Heldeys - Minimum charge of two hours will be billed at 1.75 times the normal rates: Emergency and Heldeys - Minimum charge of two hours will be billed at 1.75 times the normal rates: Beergency and Heldeys - Minimum charge of two hours will be billed at 1.75 times the normal rates Beergency and Heldeys - Minimum charge of two hours will be billed at 1.75 times the operation of the second se

The rates listed above assume prevailing wage rates does not apply. If this assumption is incorrect Dudek reserves the right to adjust its rates accordingly.

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6. Joint Venture

Dudek does not propose to enter into a joint venture for the purposes of performing work requested by IRWD under this RFP. Additionally, given Dudek's depth of experience and diverse array of in-house technical specialists, Dudek is confident in its capability to complete high quality and technically sound environmental documents with the project team identified herein. As such, Dudek does not anticipate the use of subcontractors under this contract. However, Dudek maintains a strong working relationship with many local environmental subcontractors, and is open to teaming with other consultants, as required or requested by IRWD.

7. Conflict of Interest

Dudek has reviewed our past and current projects, clients, and contracts, and has reviewed our staffs' roles within the company, and does not find any conflicts of interest that would impede our ability to perform the scope of work requested by IRWD in the RFP.

8. Insurance

Proof of insurance has been provided in Appendix C.

9. Contract

Dudek takes no exception to the Sample Contract.



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

									8/	26/2018	
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											
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	Cross Liability							PERSONAL & ADV INJURY	\$ 1,000,	000	
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В	Professional Liab Claims Made Contractors Pollution Liab: Occur			PEC014631402		8/28/2018	8/28/2019	\$1,000,000 Per Claim \$1,000,000 Aggregate			
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Re: Various Locations Burtech Pipeline, Inc is an Additional Insured on the Commercial General Liability and Auto Liability when required by written contract or agreement regarding activities by or on behalf of the Named Insured. The insurance is primary insurance and any other insurance maintained by the Additional Insured shall be excess only and non-contributing with this insurance. A waiver of subrogation applies to the Commercial General Liability, Auto Liability, Umbrella / Excess Liability and Workers Compensation / Employers Liability in favor of the Additional Insured.											
CEF											
Burtech Pipeline, Inc					SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.						
Encinitas CA 92024						AUTHORIZED REPRESENTATIVE					

ACORD 25 (2016/03)

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F - 16

EXHIBIT "G" HARMSWORTH ASSOCIATES

Environmental Consultants

January 30th, 2020

Irvine Ranch Water District Attn: Ms. Fiona M. Sanchez, Director Water Resources 15600 Sand Canyon Ave., Box 57,000 Irvine, CA 92619

Dear Ms. Sanchez:

Re: Proposal for On-Call Monitoring and Permitting Services

Harmsworth Associates (HWA) has provided general environmental services to private and public organizations since 1984. The firm developed expertise in Orange County in ecologically sensitive areas through its work with the Irvine Company, The Nature Conservancy, the Natural Communities Coalition, and IRWD within the IRWD Service Area. The firm has expertise in ecologically sensitive areas and played a major role in the development of the Central and Coastal sub-region NCCP/HCP. Harmsworth Associates has prepared documents for and conducted CEQA/NEPA compliance, mitigation development and monitoring as well as associated wetland permitting with the USACE, CDFW and RWQCB. The firm has a close working relationship with The Irvine Company, in a number of Planning Areas, undertaking predevelopment biological surveys, mitigation planning and monitoring in IRWD's Service Area.

Recently the firm assisted IRWD with the several important projects including, the Fleming Reservoir assessment, Baker 2016 NCCP project, Lake Forest Sports Park waterline, Rattlesnake spillway permitting and restoration, construction monitoring and restoration for the Baker SAC 30 NCCP project. In each case HWA responded promptly to conduct the required monitoring/surveys in a timely and cost-effective manner.

Neither Harmsworth Associates nor its personnel have a conflict of interest prohibited by law. The firm has the required insurance and has named IRWD as an additional insured on its certificates of insurance. The IRWD contract is acceptable to Harmsworth Associates.

Thank you for the opportunity to submit the enclosed Scope of Work. Yours truly

Harmsworth Associates

D.V.Hemswatt.

Rodney V. Harmsworth, Ph.D. President

19 Golf Ridge Drive, Dove Canyon, CA 92679 (949) 858-1553 FAX (949) 589-2784 e-mail: rod949@home.com

ENVIRONMENTAL ASSISTANCE FOR ON-CALL MONITORING AND PERMITTING SERVICES

SCOPE OF WORK

At the request of the Irvine Ranch Water District (IRWD), Harmsworth Associates will provide the following on-call services:

Task 1: Land Use Planning

IRWD plans through its Master Plan, and sub-area Master Plans for its three primary statutory activities, to provide domestic water, reclaimed water and wastewater treatment. These activities are planned to accommodate the County and City development plans. Moreover, the IRWD is required to comply with the many laws, regulations and codes in its capital improvement program.

Harmsworth Associates is familiar with the Planning Areas within IRWD's Service Area and has recently conducted pre-construction biological surveys, construction monitoring or permitting in the following PAs 1, 6, 9 18 and 39, for The Irvine Company's residential developments that will be served by IRWD through its capital improvement program. The firm has access to local planning documents, CEQA, NEPA documents and permits. Moreover, the firm was a part of the NCCP/HCP planning process representing the Metropolitan Water District of Southern California and later assisting both The Irvine Company and IRWD in extensive biological surveys and the preparation of amendments to the NCCP/HCP,

Harmsworth Associates will assist IRWD with planning its capital projects and maintenance activities by providing advice on the nexus of environmental issues with planning activities to minimize the environmental consequences and cost of its planned actions.

Task 2: Regulatory Agency Consultation, Permit Application and Procurement

Harmsworth Associates is familiar with the preparation and processing of federal, state, and local permits on projects, operations, maintenance and planning activities. Assistance by Harmsworth Associates may involve the preparation and processing of permit applicants and supporting materials with one or more of the regulatory agencies. The firm has provided consultation on both riparian and upland systems.

Harmsworth Associates secured emergency permits for IRWDs Rattlesnake spillway, the ILP washout and the San Joaquin Reservoir Access Road washout. Currently HWA are in the process of obtaining permits for a housing development in Beaumont, Riverside County.

Harmsworth Associates will assist IRWD with the preparation of permit applications to the resource/wildlife regulatory agencies including:

- United States Army Corps of Engineers
- Bureau of Land Management
- United States Forest Service
- California Department of Water Resources
- California Regional Water Quality Control Board
- California Department of Fish and Wildlife
- California Coastal Commission
- South Coast Air Quality Management District

Harmsworth Associates will provide services to monitor or implement compliance and reporting. Compliance may require monitoring contractor removal of exotic plants, restoration and revegetation monitoring then complete the annual or periodic reporting requirements in permits. Consultant shall provide certification of compliance with permit conditions for IRWD and agency approval. Harmsworth Associates shall develop a schedule of all permit requirements for existing and new permits and their status. Consultant shall bring any violations of permit conditions to the attention of the District.

Task 3: Wetland Delineation

Harmsworth Associates staff has taken the USACE delineation course and are fully competent to determine the jurisdictional boundaries of the United States Army Corps of Engineers (pursuant to Section 404 of the federal Clean Water Act). They have expertise with the California Fish and Wildlife Code (pursuant to Section 1602) and the California Coastal Commission (pursuant to the California Coastal Act).

Harmsworth Associates has completed many wetland delineations in southern California and Orange County for submission to the USACE, RWQCB and CDFW to obtain permits certifications and agreements. One recent project was for a proposed housing development in the city of Calimesa. Impacts occurred to a perennial creek that supports riparian habitat. HWA conducted the delineation, all biological surveys, and impact analysis and obtained the permits.

Harmsworth Associates recently completed Wetland Delineations, Vegetation Mapping and obtained permits on projects in Moreno Valley, Noble Creek and Bridge Street in Riverside County.

Harmsworth Associates will provide wetland delineation services to IRWD in compliance with the regulatory definitions in force.

Task 4: Biological Survey, Monitoring, Assessment

Harmsworth Associates has the necessary permits to survey for the listed species in the Service Area including nest monitoring ability for the least Bell's vireo, the southwestern willow flycatcher and the collection of endangered fairy shrimp etc. The staff is very familiar with the flora and fauna of Orange County having completed some of the most extensive surveys undertaken in the County. The firm was selected to survey the **Orange County Coastal Central NCCP/HCP** project including:

- 1. Rare Wetland Plants in the Orange County Central/Coastal NCCP Subregion
- 2. Rare Grassland Plants in the Orange County Central/Coastal NCCP Subregion
- 3. Quino Checkerspot Butterfly Habitat in Orange County Central/Coastal NCCP Subregion
- 4. Arundo donax in Orange County Central/Coastal NCCP Subregion
- 5. Native Fish in Orange County Central/Coastal NCCP Subregion
- 6. Arroyo Southwestern Toad in Orange County Central/Coastal NCCP Subregion
- 7. Southwestern Pond Turtle in Orange County Central/Coastal NCCP Subregion
- 8. Grassland Birds in Orange County Central/Coastal NCCP Subregion
- 9. Tricolored Blackbird in Orange County Central/Coastal NCCP Subregion
- 10. Raptors in Orange County Central/Coastal NCCP Subregion
- 11. Least Bell's Vireo and Willow Flycatcher in Orange County Central/Coastal NCCP Sub-region

In addition the firm has undertaken extensive wildlife and plant surveys of the North Ranch Policy Plan Area for The Irvine Company. Currently the firm is undertaking numerous surveys for TIC, IRC, NCC and the TNC of the flora and fauna in IRWD's Service Area.

Harmsworth Associates will undertake biological surveys, assessments and monitor preconstruction and construction areas as required for the District's projects. Harmsworth Associates will provide field services, written reports, compliance with state and federal protocols and advisement on IRWD's projects. The firm will undertake preliminary and initial assessments, bird nesting surveys, biological monitoring and identification of threatened and endangered species.

Task 5: Threatened and Endangered Species Regulation, Monitoring and Reporting Harmsworth Associates can survey and prepare documents for endangered and threatened species and recommend strategies to minimize and mitigate potential impacts within the NCCP/HCP agreements. Harmsworth Associates has permits (No. PRT-810768) and MOUs to survey and study endangered species such as the least Bell's vireo, southwestern willow flycatcher, coastal California gnatcatcher, fairy shrimp, pond turtle and other species. The firm's staff attends meetings with the USFWS staff on key issues involving survey protocols for listed species and provides input of a practical nature.

As a consultant representative of Lennar Homes with the Coalition for Habitat Conservation the firm follows the latest developments and legal actions under the ESA. Complex issues such as the "No Surprises Policy", "adverse modification" definition and the ability to mitigate "off-site" impacts to critical habitat are currently under litigation and may impact IRWD's Section 10(a) (1) (B) Endangered Species Permit obtained as a

result of the NCCP/HCP plan in 1996. These and other issues of importance are well known to Harmsworth Associates.

Over the past several seasons HWA staff has assisted TIC comply with the endangered species act relating to least Bell's vireo at PA1. A complex set of mitigation measures required TIC to conduct surveys and nest monitoring for least Bell's vireo in addition to weekly noise monitoring of construction activity during the nesting season for the vireo. Weekly reports were required to be submitted to USFWS, CDFW and the Corps. HWA conducted the surveys, nest monitoring, noise monitoring and submitted the weekly reports.

Harmsworth Associates will assist IRWD in the review of regulatory issues associated with listed species under the Endangered Species Acts (FESA and CESA) and ascertain the significance of such regulation on IRWD's projects, operations, and planning activities. The firm will provide assistance with specific policy formulation on endangered species covered under the:

- Federal Endangered Species Act
- California Endangered Species Act
- Natural Community Conservation Plan Act
- The NCC's policies and IRWD's rights on "take" in the reserve
- Migratory Bird Treaty Act

The firm will provide assistance with both existing 10(a) permits and new applications as required.

Task 6: Mitigation Monitoring and Reporting

Harmsworth Associates has a long history of mitigation monitoring in Orange County. The firm is currently working on a number of projects for the Irvine Company undertaking preconstruction surveys, construction monitoring surveys for conditions compliance, noise monitoring and other requirements for several developments in the service area. The firm is currently assisting IRWD in restoring cactus scrub habitat at the OPA site and is assisting the Natural Communities Coalition (NCC) managing contractors controlling exotic weeds in the NCCP/HCP reserve.

Other projects include:

- Mitigation monitoring at various sites for IRWD including Lake Forest Zone C, Santiago Creek ILP, Harding Tank and Baker RWPS.
- Mitigation monitoring of native grassland restoration at PA18 for The Irvine Company.
- Surveys and monitoring for least Bell's vireo, southwestern willow flycatcher, and other riparian birds at various riparian habitats in Irvine for The Irvine Company.
- Vegetation and wildlife surveys for The Nature Conservancy, at open space areas of the Irvine Ranch.

• Monitoring vegetation removal under the NCCP guidelines

Harmsworth Associates will assist IRWD in mitigation monitoring planning, 404, 1602, and 401 permit conditions compliance. Harmsworth Associates shall provide services to monitor or implement compliance and reporting. Compliance may require monitoring contractor removal of exotic plants, restoration and revegetation monitoring then complete the annual or periodic reporting requirements in permits. Consultant shall provide certification of compliance with permit conditions for IRWD and agency approval. Harmsworth Associates shall develop a schedule of all permit requirements for existing and new permits and their status. Consultant shall bring any violations of permit conditions to the attention of the District.

Task 7: Water Quality Storm-water Monitoring and Reporting

Harmsworth Associates personnel have a strong background in water resources. Dr. Harmsworth was an analytical chemist prior to specializing in the field of fresh water biology as a limnologist. At Camp Dresser and McKee he was president of the Environmental Sciences Division and responsible for over 200 personnel including 100 water quality chemists. He managed water quality monitoring projects from wastewater treatment plant efficacy analysis (City of Detroit WWTP), sewer and wastewater discharges to lake, river and stream systems. He was responsible for the long-term monitoring of Salt Creek sediment load as a part of the RWQCB conditions. We are familiar with water quality collection procedures and the quality assurance procedures required for water quality collection and analysis.

Harmsworth Associates collected the biological data used by the Corps in preparation of the San Diego Creek SAMP and we are familiar with the workings of this SAMP.

Harmsworth Associates will provide water quality and sediment quality monitoring for compliance with USACE, RWQCB, and CDFW permit conditions. Also, Harmsworth Associates will provide compliance monitoring with the General Orange County Stormwater Permit.

Task 8: Natural Treatment System

Harmsworth Associates conducted invertebrate sampling in the Woodbridge Channel for the NTS project. The aim of the sampling was to document the existing invertebrate fauna of the Woodbridge Channel, particularly the riffle areas. Four locations were selected along the channel for sampling. Standard qualitative and semi-qualitative methods including, sweep netting of vegetation and the water column, sediment grabs, kick-sampling and hand searches, will be used to assess the status of the existing fauna. To the extent possible, sampling techniques were compatible with the methods used by Alex Horne along Peters Canyon Channel. The existing physical condition and vegetation communities at each location were described. Harmsworth Associates obtained permits for IRWD's inline basins under a sub contract to Tettemer and Associates. The firm has expertise in the areas of water quality, freshwater biology, wetland permits and restoration of wetland systems. The NTS as designed will remove sediment, some nitrogen from nitrification processes in the treatment basins and potentially heavy metals adsorbed onto sediments and selenium to the atmosphere.

Harmsworth Associates have been involved in the design, planting palette and installation of the NTS basins at PA1 and PA39 for The Irvine Company. Harmsworth Associates is familiar with the vegetation management and monitoring required for NTS basins.

Harmsworth Associates will provide assistance in monitoring water quality, fauna and the growth and types of vegetation in the basins. In addition the firm will provide advice on the management of the basins to optimize the removal of sediments and pollutants.

Task 9: Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP)

Harmsworth Associates was a consultant member of the working group of agencies and landowners that prepared the Orange County NCCP/HCP program for coastal sage scrub including the preparation of the EIR/EIS, Management Plan and the Implementing Agreements. The program plays an important role in the mitigation plans for participating landowner's projects and the operation and maintenance plans of existing and future facilities.

Harmsworth Associates prepared survey documents for the wetland, upland and grassland surveys and biological analysis for the NCCP/HCP Amendment including:

- Rare Wetland Plants in the Orange County Central/Coastal NCCP Subregion
- Rare Grassland Plants in the Orange County Central/Coastal NCCP Subregion
- Quino Checkerspot Butterfly Habitat in O.C. Central/Coastal NCCP Subregion
- Arundo donax in Orange County Central/Coastal NCCP Subregion
- Native Fish in Orange County Central/Coastal NCCP Subregion
- Arroyo Southwestern Toad in Orange County Central/Coastal NCCP Subregion
- Southwestern Pond Turtle in Orange County Central/Coastal NCCP Subregion
- Grassland Birds in Orange County Central/Coastal NCCP Subregion
- Tricolored Blackbird in Orange County Central/Coastal NCCP Subregion
- Raptors in Orange County Central/Coastal NCCP Subregion
- Least Bell's Vireo and Willow Flycatcher in Orange County Central/Coastal NCCP Sub-region

Harmsworth Associates has extensive experience working with the Orange County (NCCP/HCP). Projects relating to NCCP/HCP issues have been conducted for the Natural Communities Coalition, The Irvine Company, The Nature Conservancy, Transportation Corridor Agencies and others. Many of these projects have included

conducting biological assessments, focused surveys, assessment of impacts to NCCP resources, construction monitoring and co-ordination with NCC and wildlife agencies.

Harmsworth Associates recently provided NCCP/HCP compliance for IRWD on the Baker SAC 30 site, Lake Forest Zone C pipeline and on the Baker 2016 repairs.

Harmsworth Associates will provide assistance to IRWD in the planning of its projects that are related to the NCCP/HCP plan. Three main elements, the ESA 10a permit, the Implementing Agreement and the Mitigation Monitoring Program are of importance to IRWD. We will provide assistance for Section 10 relating to the construction minimization methods that must be followed.

Task 10: Project Coordination

Harmsworth Associates has a history of successful coordination with other consultants and agencies; and we can work equally well as a project leader or as a team member. Harmsworth Associates was a consultant member of the working group of agencies and landowners that prepared the Orange County NCCP/HCP, which required significant coordination with other consultants and agencies. Harmsworth Associates successfully obtained permits for IRWD's inline basins under a sub contract to Tettemer and Associates; and regularly work and coordinate with a variety of IRWD managers and staff on IRWD projects.

Harmsworth Associates regularly provide biological data and reports to other consultants preparing the CEQA documents; Harmsworth Associates will work with IRWDs CEQA consultant as requested.

Harmsworth Associates will coordinate with other consultants and agencies as necessary and will provide project management or act as a subordinate as directed by IRWD.

Task 11: Staff Rates

The rates of the personnel shown in the table would be used on the contract

CONSULTING FEE SCHEDULE JULY 1, 2019 TO JUNE 30, 2020

Harmsworth Associates understands that the fee schedule is good for the duration of the contract regardless of employee promotions.

Labor Category	Hourly Rates	
Principal	\$ 140.00	
Vice-principal	\$ 130.00	
Sr. Biologist	\$ 100.00	
Project Biologist	\$ 80.00	
Assistant Biologist	\$ 60.00	

EXPENSES

Mileage \$ 0.50 /mile Other direct costs at cost plus 12%

Task 12: Project Task Item Estimates

Once requested Harmsworth Associates always provides project scope/cost in a timely manner. Harmsworth Associates is used to working for IRWD, Irvine Company and other clients on call contracts, and is experienced in providing project scopes/costs at short notice. For all projects Harmsworth Associates provides a scope of work, cost estimate, schedule and staff availability; the level of detail depends on the client requirements for individual projects.

On small projects with very quick turn-around times Harmsworth Associates can provide a same-day proposal with staff availability, schedule, cost estimate and scope via email. For example on the Blyth Martin property assessment, the cost for the survey was initially provided via phone, with a follow-up email; the survey, meetings and letter report were completed within 7 days of the initial request.

On more typical small jobs Harmsworth Associates can provide a proposal, cost estimate, staff availability and schedule within a few days. For example, the exotic weed removal project in San Juan Creek from RMV (see Appendix A).

For more complex projects Harmsworth Associates provides a more detailed proposal including methodology, detailed schedule, cost estimate, scope of work and staff assignments. For example the biological surveys conducted at Rancho Cucamonga TTM19992 (see Appendix A).

Task 13: Team Experience

Harmsworth Associates would undertake the majority of the work with its own staff; detailed SOQ attached. However, we have included subcontractors in case additional work outside of the current scope is required.

Primary HWA staff for this project are as follows, although other staff may be utilized as necessary (detailed resumes are attached in Appendix B);

<u>Rod Harmsworth Ph.D.</u> - Dr. Harmsworth has 30 years of experience in all phases of project and personnel management in the environmental sciences field. Dr. Harmsworth was involved in the preparation of the Orange County NCCP/HCP as a representative of the Metropolitan Water District of Southern California. Time availability for IRWD contract – 15% of time.

<u>Paul Galvin, M.S.</u> – Designated Project Manager for on-call contract. Mr. Paul Galvin has over 25 years of experience conducting biological surveys, T/E surveys and managing environmental projects. Mr. Galvin is an expert in NCCP/HCP compliance and implementation and 404/1600 permitting.

Time availability for IRWD contract – 30% of time.

<u>Glen Morrison</u>, B.S.– Mr. Morrison has over 10 years experience conducting botanical and biological surveys. Ms. Morrison has extensive experience with wetlands/riparian habitats, coastal sage scrub and other habitats, and in rare plants. Time availability for IRWD contract – 10% of time.

<u>Michelle Balk</u>, M.S.– Ms. Balk has over 12 years experience conducting botanical and biological surveys. Ms. Balk has extensive experience with wetlands/riparian habitats, coastal sage scrub and other habitats, and is an expert in rare plants. Time availability for IRWD contract – 10% of time.

<u>Jacob Aragon, B.S.</u> - Mr. Aragon has over 7 years of experience in wildlife surveys and construction monitoring. Mr. Aragon has conducted numerous construction monitoring projects and surveys for wildlife and sensitive bird species including the least Bell's vireo (*Vireo bellii pusillus*). Time availability for IRWD contract – 10% of time.

<u>Daniel Cowell</u> - Mr. Cowell has over 7 years of experience in wildlife surveys and construction monitoring. Mr. Cowell has conducted numerous construction monitoring projects and surveys for wildlife and sensitive bird species including the least Bell's vireo (*Vireo bellii pusillus*). Time availability for IRWD contract -10% of time.

Task 14: References

Signal Peak OCFA/UCSD Wildfire Camera Tower Project Biological Assessment Worked with Allen Shinbashi, Kellie Welch and Jo Ann Corey

A new tower/antenna for the OCFA/UCSD Wildfire Camera Tower Project, was installed at the IRWD Signal Peak Facility. At very short notice IRWD needed a site visit and determination of the vegetation onsite, NCCP site status and potential for nesting birds.

Paul Galvin researched the history of the site from aerial photographs, archive documents and NCCP documents. Then the site was assessed and the vegetation mapped. It was determined that all impacts were to landscaped areas and that no mitigation would be required. A letter report was prepared within 3 days of the site visit with IRWD staff. Follow-up nesting bird surveys were also conducted prior to start of construction activities.

The entire work was completed in a timely and cost-effective manner. Mr. Galvin worked effectively with all parties and the quick turn-around allowed IRWD to proceed with this important project without any delays.

Lake Forest Zone B East Reservoir

Worked with Alex Murphy, Tom Bonkowski, John Dayer, Jo Ann Corey and David Asman

Harmsworth Associates provided construction monitoring and biological overview for the Lake Forest Zone B East Reservoir redevelopment project. Harmsworth Associates checked the site regularly to ensure compliance with all project biological and NCCP conditions. This included working with both IRWD staff and contractors to provide advice on which areas could be impacted and how to avoid impacts to sensitive habitats without delaying the project. Harmsworth Associates also worked with the IRWD team to address some damage that occurred to the adjacent Lake Forest Zone C mitigation site during removal of a boundary fence at the commencement of the project.

During this process Harmsworth Associates worked closely with IRWD staff ways to minimize environmental impacts without impacting the required construction activities.

Currently, Harmsworth Associates is monitoring the performance of the restored area by the fence line and reporting to the agencies on an annual basis.

REFERENCES

Dean Kirk, Vice-President The Irvine Company 5500 Newport Center Drive Newport Beach, CA 92658 DKirk@irvinecompany.com (949) 720-2878

Trish Smith The Nature Conservancy 1400 Quail, Suite 130 Newport Beach, California 92660 trish_smith@TNC.ORG (949) 263-0933

Richard Beck Michael Baker International 14725 Alton Parkway Irvine, CA 92618 <u>RBECK@rbf.com</u> 949-855-3687

Christine Beck, Senior Environmental Scientist California Department of Fish and Wildlife 3883 Ruffin Road San Diego, CA 92123 (858) 637-7188 (858) 467-4239 fax Christine.Beck@wildlife.ca.gov

Jim Mace US Army Corps of Engineers 1451 Research Park Drive Riverside, CA 92507-2154 (951) 898 6163 James.E.Mace@usace.army.mil

Marc Brown, Environmental Scientist Santa Ana Regional Water Quality Control Board 3737 Main Street, Suite 500 Riverside, CA 92501 Tel: (951) 321-4584 Fax: (951) 321-4580

SCHEDULE

Harmsworth Associates is experienced at providing on-call services for several clients and understands how to schedule staff workloads to meet client's requirements for all projects, whether large or small. Harmsworth Associates has a history of staff flexibility and responsiveness. This allows Harmsworth Associates to meet client schedules regardless of staff workloads. Harmsworth Associates demonstrated its ability to meet schedules during past emergencies at several IRWD pipelines, and the quick turn-around on recent projects such as the Blyth and Baker SAC-30 work. Based on our past experience, the firm's current and future workload we anticipate satisfying IRWD's project schedule for this on-call services contract.

JOINT VENTURE

This proposal is not a joint venture

CONFLICT OF INTEREST

Neither Harmsworth Associates nor its personnel have a conflict of interest prohibited by law or in contravention of IRWD policies.

INSURANCE

The firm has the required insurance and has named IRWD as an additional insured on its certificates of insurance. The IRWD contract is acceptable to Harmsworth Associates.

CONTRACT

The proposed contract is acceptable to Harmsworth Associates



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

THIS CERTIFICATE IS ISSUED AS A CERTIFICATE DOES NOT AFFIRMAT BELOW. THIS CERTIFICATE OF IN	MATTER	OF INFORMATION ONLY R NEGATIVELY AMEND, DOES NOT CONSTITUT	Y AND C EXTEN	ONFERS N D OR ALT	O RIGHTS	UPON THE CERTIFICAT VERAGE AFFORDED B THE ISSUING INSURFR	TE HOL	DER. THIS POLICIES	
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DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Projects as on file with the Insured. Irvine Ranch Water District is named as additional insured on the general liability policy-see attached endorsement.									
CERTIFICATE HOLDER	CANCELLATION								
Irvine Ranch Water District Attn: Ms. Susan Gallagher P.O. Box 2700			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								

ACORD 25 (2016/03)

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XHIBIT "H" 2121 Alton Parkway Suite 100 Irvine, CA 92606 949.753.7001 phone 949.753.7002 fax

January 30, 2020

Fiona M. Sanchez Director of Water Resources Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Subject: Proposal for On-Call Biological Monitoring and Permitting Services

Dear Ms. Sanchez:

Environmental Science Associates (ESA), an employee-owned California Corporation with an office in Irvine and 18 other locations along the nation's West Coast and in Florida, is an award-winning environmental consulting firm with over 50 years of experience guiding projects through the environmental review, permitting, and construction process. We are pleased to present this proposal to Irvine Ranch Water District (IRWD or District) as a qualified consultant for on-call biological monitoring and permitting services for small or recurring projects. As you know, ESA specializes in environmental compliance and natural resources permitting for water and wastewater infrastructure projects, with considerable experience throughout Southern California.

In our response to IRWD's Request for Proposals (RFP), we have provided a summary of our experience and capabilities to perform the types of services IRWD may require over the next four years. Our key strengths that set us apart are summarized below:

- **ESA's focus on environmental regulatory compliance for water and wastewater clients is unmatched**. Our team provides the full array of technical expertise requested in the RFP and will focus on solutions to your environmental issues to expedite successful project implementation.
- **Experienced on-call environmental service providers**. We have extensive experience providing on-call biological, permitting, and environmental compliance services to public utilities in Southern California, including IRWD since 2009, California Department of Water Resources since 2006, Inland Empire Utilities Agency since 2013, and Orange County Department of Public Works since 2001. We know what it takes to manage on-call contracts effectively and successfully and would have a minimized learning curve working with IRWD on this contract.
- We provide exceptional Senior Managers and a deep bench of Technical Experts. ESA's senior management team lead by Dr. Jennifer Jacobus and Scott Holbrook provides centralized leadership, strategic support, and a commitment to quality. Our job is to understand our clients' objectives and to collaborate with them to overcome challenges. Scott Holbrook will be the primary point of contact and responsible for collaboration with key technical leads and quality control of all deliverables. Our senior managers, key technical leads and supporting staff have extensive experience in their respective fields, many of whom have worked with IRWD on multiple projects.
- We know IRWD. We are familiar with the District's specific style, quality commitments, and cost control expectations, and we have established effective relationships with IRWD project managers. This experience brings real value to the District through strategic approaches to project implementation that minimize costs through careful staffing and scoping based on current real world experience and "institutional knowledge." ESA is committed to this partnership, and will hit the ground running.

We have greatly valued our partnership with IRWD over the past 11+ years, and we appreciate this opportunity to be considered for biological and permitting services going forward. This letter is signed by Tom Barnes, who as Vice President has the authority to represent and contractually bind the firm, and Scott Holbrook as Client/Project Manager. Should you have any questions, please feel free to contact Scott Holbrook at 949.753.7001 or sholbrook@esassoc.com.

H - 1

Sincerely,

Tom Barnes VP, Director, Water Group

Hollynde

Scott Holbrook Client/Project Manager



INTRODUCTION

Environmental Science Associates (ESA) is a multidisciplinary firm of environmental professionals that develop creative and feasible project solutions and environmentally responsible plans and projects, and deliver quality, scientifically-based environmental documentation. While we offer a wide range of services to support environmental planning and compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), this proposal focuses specifically on our expertise as it pertains to biological services and regulatory permitting and compliance. The format of this proposal follows the proposal content requirements outlined in the Request for Proposals.

Biological and Permitting Services

The ESA team presented in the proposal provides the full array of technical expertise for capital, operation and maintenance, and emergency projects that may require biological, permitting and compliance services, including mitigation planning, design, and implementation. ESA's professional biologists, botanists, arborists, restoration ecologists, regulatory permitting and resource management specialists provide a broad array of consulting services throughout Southern California's diverse environments including biological surveys, vegetation mapping, wetland delineations and assessments, tree inventories, protocol/focused species surveys, and monitoring and reporting. In particular, our team is particularly familiar with the resources within IRWD's service area and the local and regional plans and policies protecting those resources. We have supplemented our biology and permitting team with a few key in-house disciplines including community planning, air quality/noise, cultural resources, and environmental hydrology to ensure technical capability and quality. The breadth and depth of our expertise allows us to successfully engage in and complete multiple concurrent project assignments on schedule and within budget. Our specialists are credentialed and responsive and carry out projects with the greatest level of professionalism at the greatest value to our clients. Committed to accommodating client interests and compliance strategy requirements, ESA is recognized for its integrity and balanced perspective.

Subconsultant: Alta Environmental

ESA routinely engages in subcontract arrangements when technical specialties beyond our in-house capabilities are required and appropriate for a project. For this contract, we have enlisted the expertise of **Alta Environmental** to provide Water Quality, Stormwater Monitoring and Reporting services. Alta Environmental, an NV5 Company (Alta|NV5) is a well-recognized environmental consulting firm in the areas of National Pollutant Discharge Elimination System (NPDES) permits, including storm water permit compliance, sediment and water quality assessment, environmental site assessment, remediation, hazardous materials, industrial hygiene, hazardous waste, environmental health and safety, air quality, sustainability, training, and litigation support. They are focused on Environmental Compliance, Program Management, Energy, Construction Quality Assurance, and Infrastructure. The Alta|NV5 team has been providing professional environmental consulting services for over 50 years, with over 400 qualified professionals in 6 offices throughout Southern California. Further details about their firm and staff qualifications are presented in **Sections 2 and 3 and Appendix A**.

SECTION 1 Scope of Work

The following subsections address the ESA team's understanding, expertise, and management and technical approaches to accomplishing the tasks outlined in the RFP.

Management Approach

Management Team Availability and Schedule

IRWD's need for on-call services over the next four years and the schedule for on-call projects will drive the team's dedication to tasks as they are identified. Both Jennifer and Scott will commit time as specific tasks warrant. ESA is committed to meeting project schedule deadlines, and we have recent experience dedicating the time needed to get the job done on schedule such as the Palos Verdes Peninsula Water Reliability Project.

Project Controls and Invoicing

ESA engages in a proactive approach to tracking, reporting, and controlling costs so that budgets are managed effectively. The first step in managing project costs is working closely with the client to establish a clear and detailed scope, schedule, and budget. The scope of services assures the project is undertaken with maximum efficiency. ESA maintains a continuity of leadership and team members for its projects. This continuity assures our clients that each project benefits from the

efficiencies of a familiar team and receives the budget supervision it deserves. We conscientiously advise our clients when requested to perform services outside the scope of work to protect our clients from cost overruns.

ESA uses the Deltek electronic time reporting system to monitor and track staff activities for each project and submit monthly invoices in a timely manner. This system allows real-time monitoring of labor costs, which are compiled weekly and used to measure project performance as well as percentage of completion and percentage of budget spent. Our invoices include individual staff hours per project and any reimbursable, permitting, and filing fees. We include a customized progress report with each monthly invoice, indicating activities performed for active tasks during the invoicing period, expected activities for the next monthly period, and any expected challenges or problems. Under this contract, ESA will provide separate invoices for each project, and if requested by IRWD can provide a monthly summary of the overall Purchase Order (PO) status. ESA's individual invoices always include the total approved project budget, amount previously expended, amount expended for the current monthly billing period, and the budget remaining.

Quality Control / Quality Assurance

All ESA work products are subject to a stringent Quality Assurance/Quality Control (QA/QC) Program. The Program consists of multiple levels of review, each requiring a sign-off from the manager in charge:

- 1. Independent Technical Peer Review;
- 2. Project Manager Assembly and Review of Work Product;
- 3. Editorial Review of Work Product; and
- 4. Project Director Review and Approval.

This approach provides for preparation of documents that have received reviews from senior technical leaders for accuracy of content, the overall Project Manager for compliance of task objectives, a technical editor for style and readability, and a Project Director to ensure documents are legally defensible, technically accurate, and tailored to meet client needs.

Technical Approach

Task 1: Land Use Planning

ESA provides land use, policy and environmental planning services and supporting technical studies for a wide range of public agencies in Southern California. We have also represented a number of our clients and their environmental needs with the City of Irvine's Community Development Department and Orange County Planning and Development. We have developed a relationship with staff and understand their needs and each jurisdiction's expectations.

Our Community Planning team has expertise in policy planning, land use, zoning and development regulations. Our planners will help interpret existing local jurisdiction requirements, identify areas where local permitting or approvals may be required, and assist in the permitting process. In addition, our expertise in CEQA allows us to also interpret and prepare any environmental clearance required for land use permitting that may require CEQA clearance. In addition to understanding local land use and environmental policies and permitting, our team can also provide public outreach services to develop public buy-in for projects, assist stakeholders and the public with better understanding a project and its impacts, and also complying with local, state and federal policies for engagement with any permitting process required.

Task 2: Regulatory Agency Consultation, Permit Application and Procurement

ESA understands that IRWD's projects often require compliance with state and federal statutes that regulate aquatic resources. At the state level, these statutes include the Porter-Cologne Water Quality Control Act of 1969, as amended, Section 1600 et seq. of the California Fish and Game Code (FGC), and the California Coastal Act (CCA), and, at the federal level, the Clean Water Act (CWA) of 1972, as amended. To assist IRWD with complying with these regulations, our approach would be to work with IRWD to: 1) determine if the project activity is a regulated activity that may trigger a need for a permit; 2) delineate limits of aquatic resources (per Task 3) and assess potential impacts; 3) determine the potential jurisdictional status of the aquatic resources (i.e., are they considered waters of the U.S.?); 4) identify the most streamlined permitting strategy and feasible design options; 5) initiate pre-application meetings with agencies; 6) submit permit applications; and 7) thoroughly review permits obtained from agencies and provide suggested revisions.

The ESA team will advise and guide IRWD on how to best navigate permitting requirements depending on the project. We are experienced in securing Clean Water Act permits, Water Quality Certifications, Waste Discharge Requirements, Lake or Streambed Alteration Agreements, Coastal Development Permits; obtaining take authorization or demonstrating compliance with the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA); and demonstrating compliance with Section 106 of the National Historic Preservation Act and South Coast Air Quality Management District

(SCAQMD) policies. Under the direction of IRWD, ESA will attend pre-application meetings with regulatory agencies and support informal/formal agency consultations as necessary.

Task 3: Wetland Delineations

ESA regulatory scientists and wetland ecologists are extensively experienced in conducting wetland delineations in accordance with protocols and guidelines established by the U.S. Army Corps of Engineers (USACE) and California Coastal Commission (CCC), and are trained to perform the California Rapid Assessment Method (CRAM) assessments. In addition, we comprehensively identify aquatic resources that are protected under the Porter-Cologne Water Quality Control Act, FGC, Special Area Management Plans (SAMPs), and local open space and conservation general plan elements. At the onset of a particular project, ESA will identify all applicable regulatory statutes that will require compliance and target field investigations accordingly. Based on the delineation, ESA will prepare an aquatic resources delineation report or CRAM report suitable for submittal to the regulatory agencies to support permitting as well as CEQA/NEPA.

Task 4: Biological Surveys, Monitoring, and Assessments

ESA has demonstrated experience in providing a full range of biological services to IRWD. Our biologists are familiar with the flora and fauna within Orange County and IRWD's service area, and the sensitive habitats and special-status species known to occur in the service area such as least Bell's vireo and coastal California gnatcatcher. Our team is highly qualified to perform a variety of biological surveys, assessments, and monitoring (see **Table 2-1** for the biology team's qualifications) and is trained to use the latest technology to collect data electronically. It is anticipated that this task will involve, but not necessarily be limited to, the following: preliminary biological resources assessments and reconnaissance-level surveys; protocol/focused surveys for rare plants and special-status wildlife; preparation of biological technical reports to support permitting, Endangered Species Act compliance, and/or CEQA/NEPA; pre-construction special-status and nesting bird surveys and monitoring; NCCP/HCP clearance surveys; and staking/flagging restricted work areas.

Our biologists will review available biological reports and databases prior to conducting field surveys to identify known or potential biological resources on or near the project site. Vegetation communities will be mapped in the field using geospatial information systems (GIS) technology and classified according to A Manual of California Vegetation (Second Edition) by Sawyer-Keeler Wolfe and Evans (2009). Habitat assessments will be conducted to determine potential habitat suitability of special-status species, and species-specific surveys will be conducted in conformance with the most recent accepted protocols.

Task 5: Threatened and Endangered Species Regulation, Monitoring and Reporting

This task includes assessing the need for species surveys based on current site conditions, conducting those surveys consistent with federal and/or state protocols, reporting on the findings of these surveys, and monitoring project activities in proximity to listed species. ESA biologists are comprised of a diverse team of experienced and credentialed resource management specialists with expertise and experience, as well as credentials accepted by the applicable resource agencies related to threatened, endangered, and otherwise special status species (see **Table 2-1** for the biology team's qualifications).

ESA staff members are permitted or otherwise authorized by the U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Wildlife (CDFW) to perform protocol surveys for a wide array of species. Although we anticipate working through the NCCP/HCP, ESA biologists will advise IRWD on addressing potential impacts to federally and/or State endangered and/or threatened species subject to the FESA and/or CESA. ESA biologists will prepare mitigation strategies for completing Section 7 FESA consultation and obtaining a Biological Opinion from the USFWS, or a FESA Section 10 Habitat Conservation Plan, when warranted. Relative to CESA, ESA biologists will assist IRWD in the application to request an Incidental Take Permit pursuant to CESA Section 2081(b) and consistency determinations pursuant to FGC Section 2080.1. However, as mentioned above, ESA anticipates employing mitigation guidelines provided for in the region-wide NCCP/HCP to avoid or minimize project-related impacts to regulated resources.

Task 6: Mitigation Monitoring and Reporting Plans

As part of a typical scope of work for environmental compliance, ESA includes preparation of the Mitigation Monitoring and Reporting Program (MMRP) as required by CEQA, Habitat Mitigation and Monitoring Plans (HMMPs) as necessary, and implementation of requirements outlined in permit conditions. We understand that IRWD may require assistance implementing these environmental conditions for current projects such as the Syphon Reservoir Geotechnical Investigation Project. If requested by IRWD under this On-Call Services contract, ESA will implement the MMRPs, HMMPs, and permit conditions associated with projects, including preparation of a reporting program binder designed to track the implementation and completion of each requirement, management of monitoring activities and required field surveys, and preparation of periodic reports to document ongoing activities and project completion. Alternately, ESA has a real-time, scalable mobile data collection and reporting system to support compliance and construction monitoring projects and provide real-time monitoring results. Our field teams are trained with the latest technology to streamline the monitoring and reporting process; saving time and money for our clients.

By implementing a kick-off meeting prior to construction and through regular coordination calls for the duration of construction, ESA will work with IRWD and its contractors, and our subconsultant, to ensure the project's compliance with environmental monitoring and reporting requirements, while achieving construction goals. ESA has staff that specialize in construction monitoring in both our Biological Resources & Land Management Group and Cultural Resources Group, and our team has extensive experience implementing MMRPs and permit conditions for various projects as part of on-call services contracts. Examples of our mitigation monitoring and reporting experience are included in *Section 2*.

Task 7: Water Quality, Storm Water Monitoring, and Reporting

Alta Environmental has a highly qualified and diverse team to provide technical expertise in strategic program management of individual, Phase I, Phase II, Industrial, and Construction General Permits in California, performing site inspections and assessments, and monitoring and reporting for storm and waste water compliance, sediment and water quality assessments.

At the inception of a project, the project site will be evaluated for environmental permitting compliance needs. Depending on the scope of work, there may be the need for water quality permits to be obtained (i.e., Storm Water for Construction Activities, Low Threat Discharge Permits to ground or surface water). Alta Environmental will review the construction activities with IRWD and ESA's management team to provide preliminary BMP design recommendations and prepare the water quality permits needed. If requested, our team's Qualified Storm Water Pollution Prevention Plans (SWPPP) Practitioner (QSP) will prepare SWPPPs and oversee SWPPP inspections and compliance with environmental water quality permits and requirements. The SWPPP & Environmental Field Monitors also will be available to respond promptly and provide assistance with sampling required for approved discharges, spills, release reporting requirements, excavation of contaminated soil, and collection of samples of contaminated soil and groundwater. Field summary reports will be prepared, and required field documentation will be completed. The SWPPP and Environmental Field Monitors will comply with sampling, monitoring, and reporting requirements.

Task 8: Natural Treatment System

Part of storm water compliance is using low impact development or technologies to treat storm water runoff. The idea is to use plants specific for the type of pollutants of concern contained in dry weather runoff and storm runoff and to design the "basins" to encourage sediment and/or pollutant deposition within the "basins". In order to determine the size of the Natural Treatment System (NTS) and the types of plants to utilize, our team will provide IRWD with a clear understanding of the soil types and types of pollutants of concern. Our team is experienced in site design, plant palette design, and construction, maintenance, and monitoring of NTS such as the San Joaquin Marsh, Peters Canyon, and Dominguez Gap Wetlands.

Task 9: Natural Community Conservation Plan/Habitat Conservation Plan

ESA has comprehensive knowledge of the local Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) program, and will work directly with IRWD as we have done in the past to guide the planning and implementation of projects that may affect Reserve lands. Our team will provide field assessments, reporting, coordination, and administrative services consistent with the NCCP guidelines, and will facilitate direct communications with the Executive Director of the Natural Commissions Coalition (NCC) and the agencies in the NCCP guideline documents. If needed, ESA will facilitate meetings with USFWSs and CDFW to discuss any anticipated issues associated with NCCP/HCP compliance. If a proposed project falls within the jurisdiction of the local NCCP/HCP, similar what ESA completed for the Syphon Reservoir Geotechnical Investigation Project, ESA will work with IRWD to coordinate with the appropriate local agency and NCCP/HCP participating parties (i.e., Natural Communities Coalition and resource agencies) to ensure the proposed project is in compliance with the plan and ensure that the appropriate mitigation is recommended and/or satisfied.

Task 10: Project Coordination

ESA is accustomed to working with multiple stakeholders, agencies, and other consultants on any given project. In accordance with our focus on client satisfaction and under the direction of IRWD, ESA will team or collaborate with other consultants or agencies in order to provide the best technical or regulatory expertise required to meet project objectives and provide services that are in the best interest of our clients. As demonstrated by our project qualifications in **Table 3-1**, ESA regularly teams up with other planning firms, engineering firms, and specialty firms.

In addition, our project management team will regularly coordinate with IRWD, other consultants, agencies, and contractors to provide services requested under this on-call contract. Jennifer has worked with Scott and many of the key technical leads identified in this proposal, including Maile and May, on a variety of water/wastewater/groundwater projects throughout California, including the Syphon Reservoir Geotechnical Investigation Project. To facilitate coordination of teams comprised

of multiple consultants and agencies, ESA utilizes regularly scheduled conference call meetings to maintain focus of analyses, provide a forum for information exchange, and maintain compliance with project schedules and budgets.

Task 11: Staff Rates

As requested in the RFQ, we have presented our staff rates in Section 5.

Task 12: Project Task Item Estimates

Our typical on-call services contracts require us to prepare scopes of work, cost estimates and schedules for projects as they arise. ESA has prepared task order proposals for biological and regulatory compliance services under ESA's current CEQA/NEPA on-call contract, as well as other on-call contracts such as for DWR and Orange County Public Works (OCPW). The appropriate level of effort will be developed by our project management team in coordination with IRWD, key technical staff, and/or ESA's subconsultant. Staff will be assigned based on project requirements. Each new project will be established under this IRWD On-Call Services master contract and IRWD's Purchase Order. Upon request, ESA will prepare and submit a project team description, scope, budget, and schedule to IRWD for new projects as they arise within one to three days, depending on the nature of the work. Longer timeframes may be required for larger jobs. The costs associated with preparing scope/schedule/budget packages will be ESA's responsibility. With District approval of the scope and fee, ESA will begin work on new projects immediately upon receiving a written notice to proceed.

Task 13: Team Experience

As requested in the RFQ, we have presented our proposed project team and their relevant experience in Section 2 Team. Additional details about each team member are provided in the resumes attached as Appendix A.

Task 14: References

As stated in the RFP, in lieu of reference letters, ESA is providing a summary of work completed for IRWD projects and associated IRWD staff members. The ESA Team has completed the projects listed in Table 3-1 below, which include work completed under our previous on-call master contracts with IRWD and otherwise under individual project contracts. **Table 2-1** also identifies the IRWD staff that was previously involved in each project.

SECTION 2 Team

ESA is an environmental science and planning firm of more than 500 professionals throughout 19 offices across the Western United States and Florida. ESA is one of California's leading, 100 percent employee-owned environmental consulting firms, with more than 50 years of success in supporting client goals and achieving project success. ESA was established with the mission of assisting clients in solving environmental planning and compliance problems, developing environmentally responsible plans and programs, and providing quality, scientifically based environmental documentation in compliance with federal, state, and local statutes. Because we are highly esteemed for our breadth and depth of services, time- and costefficient procedures, and commitment to quality documentation and client service, ESA is regularly called upon by public and private entities throughout Southern California.

Taking into consideration the nature of the contract, anticipated projects, and the various disciplines necessary to address biological and regulatory permitting requirements, ESA has selected the proposed team based on their technical expertise, exemplary gualifications, location and availability. These key personnel – the Project Director, Project Manager, and Task Managers – have been selected to lead, oversee, and be hands-on in their execution of the contract tasks. These task managers also have a stable team of biologists, ecologists, scientists, and regulatory specialists available to them, also presented in this section. This deep bench ensures that ESA can maintain responsiveness in the face of potential multiple, concurrent task orders and to provide expedited service. Our organizational chart below illustrates the relationship between IRWD, our project management team, key personnel and technical support staff. ESA understands any substitution or addition of any key personnel must be requested in writing, along with a statement of gualifications and time commitment. We understand this request must be approved in writing in advance. Resumes of key personnel are provided in Appendix A. Technical support staff resumes are available upon request.

Management Team Jennifer Jacobus, PhD | Project Director

Dr. Jennifer Jacobus is a Senior Manager in ESA's Southern California Water Group. She is an accomplished CEQA/NEPA project manager with over 16 years of professional experience and a reputation for customer service and client satisfaction. Jennifer focuses exclusively on water and wastewater clients and projects throughout Southern California. She serves as the Project Manager for ESA's on-call contracts with IRWD, Inland Empire Utilities Agency (IEUA), and Eastern Municipal Water


District (EMWD). As a scientist with foundational training in ecology and resource management, Jennifer has a keen ability to communicate with ESA technical team leaders and staff to ensure appropriate and relevant analyses across all disciplines. She also has experience working with clients' engineering design teams, to understand project features and operational criteria. Jennifer has managed a full spectrum of water projects and has recently completed the environmental process for IRWD's Syphon Reservoir Geotechnical Investigations Project Initial Study/MND and, together with Scott Holbrook and May Lau, facilitated USFWS and CDFW coordination for a Streambed Alteration Agreement, Jurisdictional Determination, and NCCP consistency determination. Jennifer has acted as Project Manager for all IRWD projects described in Table 3-1 as well, including the current and ongoing Syphon Reservoir Improvement Project EIR.

Project Availability: 15% | *Labor Category:* Senior Principal Environmental Planner I | *Education:* PhD, Resource Ecology & Management, School of Natural Resources & Environment, University of Michigan; M.A., Geography, Boston University; B.A., Economics, Johns Hopkins University

Scott Holbrook | Client/Project Manager; NCCP/HCP; Project Coordination

Scott is a biologist and senior project manager with over 28 years of experience with the biological resources and environmental regulations in Southern California. He is skilled at leading site investigations and preparing technical reports for CEQA and NEPA impact analyses and in support of regulatory permitting, as well as for due diligence inquiries. His expertise includes developing cost-effective mitigation measures for projects involving pipelines and various water facilities, various energy and road project, and general real estate developments. As a trained ecological restoration specialist he has developed many innovative, cost-effective mitigation programs to serve project goals and meet resource agency permit requirements and is experienced with regional multi-species habitat conservation program requirements (e.g., Orange County NCCP/HCP). His relationship with IRWD was established during his work on the Syphon Reservoir Project, where he had a major role in the biological resources technical report, NCCP/HCP review and consistency determination, mitigation planning, and agency coordination. He also lent his expertise to the biological resource management plan for the San Joaquin Marsh Operating Guidelines and Resource Management Plan Update. In addition to his IRWD work, Scott serves as the contract manager for ESA's Permitting and Restoration Services on-call contract with OCPW.

As Client/Project Manager, Scott would be the primary point-of-contact for IRWD and responsible for the day-to-day management of the contract. He will interact regularly with designated IRWD representatives, the project team, and regulatory agencies, as needed. Scott will use ESA's contract management tools including real-time labor/cost reports providing job costs to date, regular cost summaries by project and task, and schedule management program tools to closely track and manage contract performance. Scott will implement ESA's principles for maintaining quality control over deliverable products. Scott will foster efforts by ESA staff and coordinate with the IRWD team to recognize constraints and challenges and work proactively toward resolutions. His approach to client communication/recommendations, critical thinking, resource agency relationships, and execution of project tasks bring a strategic approach to biological permitting, compensatory mitigation development/ implementation that combined with his extensive experience consistently exceeds client expectations.

Project Availability: 30% | Labor Category: Managing Biologist III | Education: B.A., Applied Ecology, University of California, Irvine

Task Managers

Michael Houlihan | Land Use Planning

With over 30 years of industry experience in directing, managing, and preparing environmental documentation within Southern California, Michael has lead numerous project teams through the successful completion of environmental processes; many being high-profile projects. These projects included planned communities, water/wastewater infrastructure, community land use planning, residential/commercial developments, parks/schools, transportation/circulation improvements, and energy facilities. His expertise is in providing high quality documents by resolving issues as they arise and through proactive and responsive communication. Michael has served as a project manager for projects with the Orange County Sanitation District, City of Newport, City of Costa Mesa, and City of Irvine.

Project Availability: 30% | *Labor Category:* Senior Principal Environmental Planner I | *Education:* B.S., City and Regional Planning, California Polytechnic State University, San Luis Obispo

May Lau | Agency Consultation & Permitting; Wetland Delineation

May is a regulatory program manager and senior project manager with 16 years of experience in the environmental consulting industry. Her primary responsibilities include providing permitting strategies; review of permit packages; agency consultations; CEQA/NEPA and other technical analyses for a variety of water/wastewater, transportation, private development, and restoration projects. May has cultivated and maintained trusted working relationships with local

ORGANIZATION CHART



Bold = Task Manager

resource agency staff, and has a keen understanding of their requirements and preferences in addition to her knowledge of the formalized statutes and policies. As the permitting task lead for the Syphon Reservoir Geotechnical Investigations Project, she has worked with IRWD and ESA key staff proposed under this on-call. In addition, she is serving as the regulatory permitting lead for other on-call contracts such as California Department of Water Resources (DWR), Los Angeles County Department of Public Works (LACDPW), and IEUA.

Project Availability: 30% | *Labor Category:* Principal Environmental Scientist I | *Education:* B.S., Environmental Science, University of California, Santa Barbara

Maile Tanaka | Biological Surveys/Monitoring & Reporting; T&E Species; MMRP

Maile has more than 14 years of experience in the field of consulting biology. Her professional experience includes vegetation mapping, habitat assessments, botanical surveys (including tree inventories and rare plant surveys), focused surveys for special-status wildlife, nesting bird surveys, and jurisdictional delineations throughout Southern California. She has experience in preparing technical biological resources documents in accordance with CEQA guidelines for numerous complex projects, and is well-versed with the requirements of the Orange County NCCP/HCP. Maile prepared the biological technical report for the Syphon Reservoir Geotechnical Investigations Project, which analyzed the project's consistency with the County of Orange Central & Coastal Subregion NCCP/HCP. She also was the lead biologist that conducted and coordinated multiple years of focused surveys for special-status floral and faunal species in support of the future Syphon Reservoir Improvement Project, coordinated with USFWS and CDFW, and oversaw the biological monitoring conducted in compliance with the project's MMRP and permit during implementation of the geotechnical work. Maile also coordinated with USFWS and CDFW regarding implementation of NCCP/HCP Construction-Related Minimization Measures.

Project Availability: 30% | *Labor Category:* Managing Biologist I | *Education:* Master of Environmental Science & Management, University of California, Santa Barbara; B.S., Organismic Biology, Ecology & Evolution, University of California, Los Angeles

Dave Renfrew (Alta Environmental), CPSWQ, PMP, QISP/TOR, QSD/P | Water Quality, Stormwater Monitoring & Reporting

David Renfrew brings 23 years of experience in the environmental industry with a focus on Phase I Municipal National Pollutant Discharge Elimination System (NPDES) Compliance Programs. David provides specialty professional expertise to municipal, industrial, commercial, and institutional clientele. He has implemented full scale monitoring and reporting projects and provided extensive program management support. Through his career, he has developed strategic technical comments to shape regulatory policy and permits on behalf of his clients. His project work includes management of municipal contracts to ensure quality project delivery; and compliance with Phase I NPDES Permit requirements including inspections, reporting, database development, site assessments, watershed assessments, water quality management plans, BMP effectiveness assessment, aerial deposition, site specific objectives, toxicity identification evaluations, water scarcity assessments, and resiliency planning documents. His work provides his clients a pathway for economically responsible compliance.

Project Availability: 30% | *Labor Category:* Alta Environmental Principal | *Education:* B.S., Geological Sciences (Emphasis in Hydrogeology), San Diego State University

Nick Garrity, PE | Natural Treatment System

Nick is the director of ESA's Southern California Environmental Hydrology & Design Group. He is a hydrologist and civil engineer with more than 20 years of experience working with wetland, river, estuary, and coastal systems. His technical and project management experience includes the planning and design of multi-benefit wetland enhancement, restoration, and management projects; water quality and flood hazard studies; hydrodynamic modeling; environmental impact assessments; and post-project monitoring and evaluation. His technical skills and expertise include the assessment and modeling of wetland hydraulics and water quality, sediment dynamics, and engineering design. With previous experience leading ESA's reduced discharge technical study on the San Joaquin Marsh for the Peters Canyon Water Capture and Reuse Project, current role in leading the development of IRWD's San Joaquin Marsh Operating Guidelines and Resource Management Plan, and experience with various treatments wetlands and wetland maintenance and restoration projects, including San Joaquin Marsh/Peters Canyon, Big Canyon, and Aliso Creek, he is well-suited to lead the hydrology studies and analyses for IRWD.

Project Availability: 20% | *Labor Category:* Senior Principal Environmental Scientist I | *Education:* M.S., Civil and Environmental Engineering, University of California at Berkeley; B.S., Geology– Physics/ Mathematics, Brown University

Technical Support Team

Table 2-1 provides a summary of the technical support staff proposed for this contract. These individuals will be available, as needed, depending on the scope of individual projects. Our proposed Management Team and Technical Team have an extensive history of working together on many projects that included biological monitoring and permitting as described later in this section, including IRWD projects.

The ESA Team understands that the availability of team members is of importance to the District; therefore, only staff with the requisite availability to commit to this On-Call Contract's scope of services are assigned to this project. We have included a generalized time-available percentage, but recognize that the services needed under this contract will be intermittent and varied, requiring periods of 100 percent commitment of key staff until tasks are complete. The work effort for our proposed key staff members will fluctuate as individual projects move from one phase to another. Based on the schedule and projected staff hours for implementation of the projects under this On-Call Contract, we can confidently commit to the availability and participation by our proposed Technical Team.

Table 2-1: Summary of ESA Technical Team Staff and Qualifications

Name	Technical Expertise
Adrienne Lee Biological Surveys/Monitoring & Reporting; MMRP Availability: 20% Labor Category: Biologist I Education: M.S., Biology; B.S., Ecology, Behavior, and Evolution	 Biologist with over 7 years of extensive field work experience in coastal sage scrub habitat in Southern California. Prepares CEQA documents, biological resource reports, vegetation management plans, mitigation monitoring reports, post-construction reports, and other technical reports and memorandums. Conducts rare plant surveys, vegetation mapping, protocol surveys, avian surveys, acoustical bat surveys, wildlife camera installation, monitoring.

Name	Technical Expertise
Name Alan Sako, LEED AP BD+C Agency Coordination, Permitting & Procurement Availability: 20% Labor Category: Principal Environmental Scientist I Education: B.S., Atmospheric, Oceanic & Environmental Science Alanna Bennett Sullivan	 Technical Expertise Over 18 years of experience in preparing and managing air quality and climate change analyses, performing ambient air quality impact analyses and health risk assessments for CEQA and NEPA documents, and providing air quality permitting and compliance support. Cross-trained in acoustical/noise modeling, and preparing hazardous materials business plans (HMBPs), risk management plans (RMPs) for hazardous substances. Environmental Biologist with more than 8 years of experience in project
Biological Surveys/Monitoring & Reporting Availability: 20% Labor Category: Senior Biologist II Education: B.S., General Biology	 management, habitat restoration, land management, technical report writing, and focused species surveys including coastal California gnatcatcher (permitted), least Bell's vireo, and numerous rare plant species. Experience working within Multiple Species Habitat Conservation Plan and habitat management plans.
Cailin Lyons NCCP/HCP Availability: 20% Labor Category: Principal Biologist I Education: MLA, Sustainability & Environmental Management; B.S., Environmental Management & Protection Candace Ehringer, RPA Agency Coordination, Permitting & Procurement Availability: 20% Labor Category: Principal Cultural Resource Specialist I Education: M.A., Anthropology; B.A., Anthropology Douglas Gordon-Blackwood Biological Surveys/Monitoring & Reporting;	 Senior biologist with over 10 years of expertise performing high-level conservation planning and environmental impact analysis. Experience includes general biological surveys, vegetation community mapping, jurisdictional delineations, habitat restoration, preserve management, resource management planning, rare plant surveys, nesting bird surveys, and species-specific surveys coastal California gnatcatcher, coastal cactus wren, least Bell's vireo, arroyo toad, and other sensitive willdife. Cultural resources manager with 21 years of experience in California providing technical and compliance oversight for archaeological survey, evaluation, and treatment; built environment studies, including the documentation and evaluation of buildings, structures, and districts; Tribal resources consultations; and paleontological resources survey and sensitivity assessments. Experience working with agencies and Tribes to identify Traditional Cultural Properties and tribal cultural resources. Proficient in the areas of CEQA, NEPA, Section 106, and AB 52 compliance. ISA certified arborist and biologist with 8 years of experience in biological resources and habitat restoration, and 13 years with arboriculture.
Availability: 20% Labor Category: Senior Biologist I Education: B.S., Botany	 Extensive survey experience for biological resource assessments, habitat and vegetation mapping, wetland delineations, nesting bird surveys, habitat restoration, arboricultural assessments, invasive species eradication, and biological compliance monitoring.
Jaclyn Catino-Davenport Biological Surveys/Monitoring & Reporting; MMRP Availability: 20% Labor Category: Senior Biologist I Education: B.S., Zoology	 Terrestrial biologist with over 8 years of experience conducting a variety of preconstruction surveys and monitoring Performs trapping, banding and surveying for a variety of special status avian species.
Julie Stout Agency Coordination, Permitting & Procurement Availability: 20% Labor Category: Managing Biologist II Education: B.S., Biological Sciences	 Senior biologist and regulatory permitting specialist with 14 years of experience preparing jurisdictional delineations and CRAM assessments, biological resources assessments, providing regulatory permitting and compliance efforts, mitigation plan development and implementation, compliance monitoring, and focused species surveys. Extensive agency consultation experience.
Karl Fairchild Biological Surveys/Monitoring & Reporting; MMRP Availability: 20% Labor Category: Senior Biologist I Education: M.S., Environmental Studies; B.S., Fish and Wildlife; B.A., International Studies	 Skilled field biologist and environmental compliance monitor with extensive experience identifying and managing sensitive biological resources. Holds current USFWS recovery permit for willow flycatcher surveys and CDFW scientific collecting permit. Extensive bird survey experience, can identify most North American birds by sight and sound, and is skilled at recognizing nesting bird behavioral cues.

Name	Technical Expertise
Karla Flores	 Six years of experience as a field biologist with a strong background in small
Biological Surveys/Monitoring & Reporting;	mammal biology
MMRP	• Experience leading surveys and monitoring for small mammals, focused
Availability: 20%	protocol, and federally protected species, as well as bat acoustic surveys.
Labor Category: Senior Biologist I	• Experienced in identifying sensitive bird species.
Education: M.S., Biology; B.A., Biology	Senior biologist with over 20 years of experience including trapping and
Relly RIOS	 Senior biologist with over 20 years of experience including trapping and specialized surveys such as wildlife corridor surveys
Biological Surveys/Monitoring & Reporting	 Holds current USFWS recovery permits for San Bernardino kangaroo rat and
Availability: 20%	coastal California gnatcatcher, Quino checkerspot butterfly, and El Segundo
Education: B.S. Biological Science	blue butterfly. Has assisted with habitat creation/restoration efforts for listed
Editation D.S., Diotogical Science	species such as the coastal California Gnatcatcher.
Lindsey Sheehan, PE	 Hydrologist and engineer specializing in hydraulics, sediment transport, and
Natural Treatment Systems	the restoration of wetland, river, estuarine, and coastal ecosystems.
Availability: 20%	• Work includes numerical modeling, GIS analysis, and hydrologic, geomorphic,
Labor Category: Managing Engineer II	and water and sediment quality technical analyses in support of wetland
Education: M.S., Environmental Fluid	restoration projects and nydrologic processes assessments.
Mechanics and Hydrology; B.S.,	constructed treatment wetlands while at Massachusetts Institute of
Environmental Engineering, Literature Minor	Technology.
Matthew Gonzalez	More than 13 years of monitoring experience in California
MMRP	 Regularly prepares monitoring reports and provides safety and sensitivity
Availability: 20%	trainings to construction and other project staff, as well as prepares technical
Labor Category: Cultural Resource Specialist	reports in support of CEQA, NEPA, Section 106, and environmental compliance
II	documents.
Education: B.A., Classical Archaeology	Trained archaeologist and cross-trained paleontologist
Robbie Sweet	 12 years of experience as a terrestrial biologist conducting biological resource
Biological Surveys/Monitoring & Reporting;	assessments and focused rare plant surveys, monitoring restoration projects,
Agency Consultation, Permitting and	wetland delineations, and preparing subsequent reporting tasks.
Procurement; Wetland Delineations; MMRP	 Has draited numerous technical documents, such as focused rare plant and protocol lovel survey reports, post construction monitoring reports, biological
Availability: 20%	assessment reports, restoration monitoring reports, and MND and FIR sections
Labor Category: Senior Biologist I Education: P.S. Environmental Science and	in support of CEOA.
Resource Management	
Terah Donovan	Extensive experience managing large-scale Habitat Conservation Plans in
Agency Consultation, Permittina &	California, from planning phase to plan implementation.
Procurement; NCCP/HCP	 Provides agency coordination and permitting for HCP/NCCP projects including
Availability: 20%	USFWS, CDFW, USACE, and RWQCB.
Labor Category: Principal Biologist I	
Education: MEM, Environmental	
Management, Conservation Science and	
Policy; B.A., Environmental Science	
Travis Marella, QSP	Senior fisheries/aquatic biologist with eight years of extensive experience in
Biological Surveys/Monitoring & Reporting;	rreshwater, estuarine, and marine ecosystems, sensitive species surveys, water
	technical reporting, and project management
Availability: 20%	 Holds USFWS recovery permit for tidewater goby.
Labor Category: Senior Biologist I Education: B.S. Environmental Studies	• Experience working with numerous sensitive fish, reptile, amphibian, avian.
Aquatic Ecology emphasis	and invertebrate species.
Aquate Leotogy emphasis	

SECTION 3 Experience

Table 3-1 provides as summary of ESA's relevant experience with biological resources services including species surveys, monitoring, permitting, agency consultations, and environmental compliance, including our recent experience with on-call services contracts. ESA's breadth of project experience provides IRWD with the best combination of regional perspective and local understanding of IRWD's environmental compliance needs.

Table 3-1: Summary of Relevant Experience

On-Call / As-Needed Contracts

IRWD General Environmental Services On-Call CEQA/ NEPA. ESA is currently providing IRWD with on-call CEQA/NEPA services, biological surveys, regulatory permitting, construction compliance monitoring, and associated technical analyses. Projects under this contract have ranged from categorical exemptions for battery storage facilities, to EIR addenda for treatment plant and groundwater well projects, to biological and cultural resources construction/mitigation monitoring.

IRWD Staff: Paul Weghorst, Christian Kessler, Jo Ann Corey, Richard Mori, Fiona Sanchez, Kellie Welch, Ian Swift, Ray Bennett, Lyndy Lewis

Eastern Municipal Water District As-Needed Environmental Services. EMWD As-Needed Environmental Services. Since 2013, ESA has provided EMWD with as-needed environmental services, including CEQA/NEPA documentation; technical studies for biological and cultural resources; air quality and climate change; noise and traffic; aesthetics; and Riverside County MSHCP compliance.

Client Contact: Joseph Broadhead, Principal Water Resource Specialist, P: 951.928.3777 ext. 4545

California Department of Water Resources On-Call Environmental Planning Services. ESA has been the provider of on-call Environmental Planning Services for the DWR Southern Division since 2006. ESA is preparing environmental analyses, biological surveys, technical documentation, and permitting, Endangered Species Act compliance, MSHP compliance, and construction monitoring for various projects along the State Water Project such as Castaic Dam High Intake Tower Access Bridge Retrofit Project, Perris Dam Remediation Program EIR and Permitting, Perris Dam Emergency Release Facility Project, and the East Branch Extension (EBX) Phase II.

Client Contact: Gina Radieve, Senior Environmental Scientist, P: 916.651.2458

Los Angeles County Department of Public Works Flood Management District, On-Call Environmental Services. ESA supported the LACDPW by providing a full array of environmental services under a 5-year on-call services contract. ESA's in-house team of professional planners, biologists, and technical specialists responded to a wide range of planning, permitting, and compliance needs for routine and emergency operations and maintenance activities with qualified technical experts in all environmental disciplines. Over 80 projects were authorized under this contract, including preparation of regulatory permits (404, 401, and 1602), biological and cultural resources surveys and reports, focused surveys for federally and/or state-listed species, wetland delineations, compliance/mitigation monitoring and reporting, air and water quality sampling, and preparation of CEQA documents.

Client Contact: Nandini Moran, Civil Engineer, P: 626.458.7810

Inland Empire Utilities Agency, On-Call Environmental Services. ESA has been providing on-call environmental services for IEUA since 2012, including for CEQA/NEPA compliance documentation; regulatory permitting; and technical services such as biological assessments, species surveys, jurisdictional delineations, regulatory permitting, SWPPPs, cultural resource surveys, and mitigation monitoring.

Client Contact: Bonita Fan, Senior Environmental Resources Planner – Regulatory Compliance, P: 909.993.1716

Individual ESA Projects

Irvine Ranch Water District, Syphon Reservoir Geotechnical Investigations Project IS/MND. The Geotechnical Investigations Work Plan (GIWP) is providing details about the geologic and geotechnical baseline conditions at Syphon Reservoir. This work is necessary in order to inform the design of an enlarged reservoir, which will provide the IRWD service area with a more reliable water supply. The Final IS/MND was adopted by IRWD in June 2019. ESA provided extensive biological surveys and cultural surveys in support of the IS/MND; assisted IRWD with AB52 process for Tribal consultation; facilitated coordination with USFWS and CDFW for mitigation associated with the County of Orange NCCP and Grant Deed restrictions for the site; and secured a Jurisdictional Determination from the U.S. Army Corps of Engineers and Streambed Alteration Agreement from CDFW in less than one year.

IRWD Staff: Jo Ann Corey, Fiona Sanchez, Scott Toland, Richard Mori

IRWD Total Nitrogen/Total Phosphorus Offset Plan.

ESA prepared the Offset Plan to address the requirements of the NPDES Amended Order to allow for the diversion of dechlorinated tertiary effluent from Michelson Water Recycling Plant to Reach 1 of San Diego Creek under emergency conditions. The plan documented how IRWD intends to monitor, calculate, and report total nitrogen and phosphorous removal credits to the Santa Ana RWQCB.

IRWD Staff: Fiona Sanchez, Richard Lao, Ian Swift, Jose Zepeda, Linda Orozco

Table 3-1: Summary of Relevant Experience

IRWD Peters Canyon Water Capture and Channel Reuse Pipeline Project. ESA assisted IRWD with developing a cost-effective solution for the disposal of Peters Canyon Channel flows that contain high nitrate and selenium concentrations. The Peters Canyon Channel Water Capture and Reuse Pipeline Project will divert high selenium nuisance surface and groundwater flows to the Orange County Sanitation District for treatment and reuse. ESA provided a Reduced Discharge Technical Study and biological technical reports to document project impacts to flow and water quality downstream from the proposed diversion points, including impacts within Peters Canyon Channel, San Diego Creek, and IRWD's San Joaquin Marsh. ESA completed a hydrology and water quality study to assess the potential for impacts to the function of habitats in the San Joaquin Marsh from these diversions. ESA also prepared an IS/MND which was certified and approved by the IRWD Board of Directors in April 2015.

IRWD Staff: Ray Bennett, Jo Ann Corey, Paul Weghorst, Ian Swift, Joe McGehee

IRWD San Joaquin Marsh Operating Guidelines and Resource Management Plan Update. ESA is assisting IRWD to update and refine the IRWD (2006) San Joaquin Marsh (SJM) Operating Guidelines. Through this process, IRWD seeks to develop an effective and comprehensive operation protocol to manage the 300-acre SJM freshwater wetland ecosystem for natural water treatment and document the protocol in a new SJM Operating Guidelines and Resource Management Plan (OG&RM Plan). These wetlands, consisting of a set of over a dozen connected ponds and cells, and adjacent lowland and transitional habitat areas, naturally treat urban runoff from San Diego Creek (SDC), which in turn helps protect the environment of Upper Newport Bay and the ocean. Key objectives are to balance influent and effluent flows, enhance water quality, maximize nutrient removal, provide constant flows for stream operations, and provide and maintain critical migratory habitat for shorebirds and waterfowl. ESA has completed a water quality assessment and is preparing to update the OG&RM Plan.

IRWD Staff: Ian Swift, Mo Wise

DWR, East Branch Extension (EBX) Phase II. ESA prepared an EIR, including biological and cultural surveys, which analyzed several pipeline alignments across the Santa Ana River, as well as provided planning and permitting support. ESA met with the USACE, USFWS, CDFW, and RWQCB personnel on several occasions to review the project. ESA worked closely with DWR staff to complete permit applications, including the Biological Assessment pursuant to Section 7 of the FESA. ESA coordinated with agency staff as needed to complete the application packages and provided agency staff information as requested to complete the permits. ESA successfully obtained all the natural resources permits needed to begin construction on the project, including Section 404, 401, incidental take authorizations, Streambed Alteration Agreements, and Section 7 approvals. As a component of the Section 7 compliance with USFWS, ESA prepared a restoration plan for the project impact areas, including upland and wetland areas. The restoration project is in the process of requesting regulatory agency sign-off after 3 years, which is 2 years ahead of schedule.

Client Contact: Christine Carlton, Chief, Environmental Coordination Section, DOE; P: 916.653.9734 Financial Size: \$3,521,565; Project Dates: 2007-2016

Los Angeles County Department of Public Works, Dominguez Gap Wetland Vegetation Management, Permitting, and

Monitoring. As part of the operations and maintenance activities of the Dominguez Gap Wetland, a constructed treatment wetland, the LA County Flood Control District (LACFCD) removed wetland vegetation annually to maintain the functionality of the wetland and for vector control maintenance. ESA worked with LACFCD staff to develop an appropriate method for vegetation management activities, prepared a notification of lake or streambed alteration for submittal to CDFW, worked with LACFCD to obtain appropriate permits/ authorization from USACE and the Los Angeles RWQCB, and performed biological monitoring in compliance with permit conditions.

Client Contact: Nandini Moran, Civil Engineer, P: 626.458.7810 Financial Size: \$12,800; Project Dates: 2014-2016

City of Newport Beach, Big Canyon Selenium Reduction, Natural Treatment and Creek Restoration. ESA is working with our project partners on the design, permitting, and implementation of selenium reduction measures, stormwater collection and treatment using natural treatment system, and creek and riparian habitat restoration for the first phase of the Big Canyon Preserve Water Quality and Restoration Project. ESA provided the CEQA documentation, prepared and submitted the permits under an aggressive timeline for all the project components that include diversion of dry-weather flows to the local sanitary sewer, diversion of creek flows to avoid impact from selenium seeps, construction of a treatment wetland facility within the reserve and restoration of the creek. Permits were prepared, submitted, and approved within a 12-month timeline. ESA also provided water quality expertise and stream hydrology and geomorphology experience in the design of the creek restoration. ESA completed biological monitoring and restoration oversight of the phase 1 construction in 2017. ESA also prepared the Habitat Mitigation and Monitoring Report and Restoration and Revegetation/ Landscape Plans and Specifications. ESA is working with the UC Riverside, City of Newport Beach, and CDFW to address an infestation of the invasive shot-hole borer.

Client Contact: Robert Stein, Assistant City Engineer P: 949.644.3322 Financial Size: \$300,000; Project Dates: 2015-2018

Table 3-1: Summary of Relevant Experience

San Bernardino Valley Municipal Water District, Sterling Natural Resource Center Project. ESA prepared an EIR for the San Bernardino Valley Municipal Water District (SBVMWD) as the lead agency for the proposed construction of a new wastewater treatment facility, the Sterling Natural Resource Center (SNRC) in Highland, California. ESA conducted surveys for the state- and federally-listed endangered least Bell's vireo; the federally-threatened San Bernardino kangaroo rat; the federally-threatened Santa Ana sucker; and for two state and federally endangered plant species, the Santa Ana River woollystar and slender-horned spineflower; and conducted a hydrology study of the Santa Ana River. ESA also prepared permit applications needed to construct facilities and divert flows from Rapid Infiltration and Extraction facility, including Section 404 (USACE), SAA 1600 (CDFW), and a Biological Assessment to comply with Section 7 (USFWS). The USFWS issued a Biological Opinion for the project that provided for take of Santa Ana sucker in 2016.

Client Contact: Heather Dyer, Water Resources Project Manager, P: 909.387.9256

Financial Size: \$650,000; Project Dates: 2015-2017

California Water Services Company, Palos Verdes Peninsula Water Reliability Project. ESA provided a full suite of environmental services for the Palos Verdes Peninsula Water Reliability project. The proposed project involves the construction of approximately seven miles of buried potable water pipelines and a new booster pump station to replace the current water distribution system serving the Palos Verdes Peninsula. The project would cross multiple jurisdictions, including the cities of Rolling Hills Estates and Rancho Palos Verdes, and portions of unincorporated Los Angeles County. ESA conducted a Biological Resources Assessment and Phase I Cultural Resources Assessment for the proposed project, prepared an Initial Study/MND, and assisted in obtaining local, state and federal permits including the Section 404 permit, Section 401 Water Quality Certification, and Section 1602 Streambed Alteration Agreement. ESA is currently conducting nesting bird surveys and monitoring during construction of the project, to ensure compliance with required mitigation measures and regulatory permits.

Client Contact: Dale Gonzales, Environmental Manager, P: 408.367.8324 Financial Size: \$215,000; Project Dates: 2010-Present

Alta Environmental Projects

IRWD, Alternative Excess Recycled Water Supply Management Strategy, Preliminary Feasibility Study. Alta prepared an Alternative Recycled Water Management Strategy for IRWD. The study assessed surplus recycled water during periods of excess supply using existing public infrastructure and under-utilized flood storage in the Peters Canyon Reservoir. In addition to requiring only limited capital, operation and maintenance costs, this strategy eliminated the need to discharge to the OCSD or Upper Newport Bay, provided for increased water conservation and facilitated restoration of habitat, aesthetic and recreational beneficial uses of affected and utilized receiving waters, and reduced the need for disposal of recycled water. Alta also provided a preliminary feasibility assessment and summary of design maintenance elevations and storm runoff storage elevations and volumes. Alta evaluated the potential feasibility of use of Peters Canyon Reservoir for storage of excess produced recycled water, prepared maps and narratives identifying the watershed tributary to Peters Canyon Reservoir and developments in the watershed since modifications to the reservoir in the early 1980's, existing stream courses in the watershed, and planned modifications to drainages associated with planned development. The project study was completed on time and within budget.

Client Contact: Ian Swift, Natural Resources Manager, P: 949.453.5864 Financial Size: \$15,000; Project Dates: 2017-2018.

City of Carlsbad, NPDES MS4 Monitoring and Assessment. Alta is performing monitoring and assessment of the water quality and quantity of discharges from the MS4, pollutant sources and/or stressors, and supporting effectiveness assessment of the water quality improvement strategies implemented as part of the Water Quality Improvement Plan (WQIP). Alta's scope of services includes implementing non-storm water persistent flow MS4 outfall discharge monitoring, dry weather special study monitoring, Illicit Discharge Detection Elimination investigations, MS4 outfall visual observations, and assessment and reporting of the monitoring programs. Alta is implementing the dry weather special study to characterize temporal flow and fecal indicator bacteria at selected persistently flowing major MS4 outfalls during dry weather conditions.

Client Contact: Tim Murphy, Watershed Protection Manager, P: 760.602.7587 Financial Size: \$40,000/year; Project Dates: 2015-Present

SECTION 4 Schedule

Responsiveness

ESA is a seasoned on-call environmental consultant serving public and private entities. In some cases, project assignments are initiated on short notice with a quick turn-around time required. In many cases, ESA has signed a master services agreement specifically to facilitate quick project turnarounds. Depending on the nature of the project, ESA is poised to respond within hours, if needed. Moreover, due to our Irvine office's proximity to IRWD Headquarters and central location within the overall jurisdiction, we can participate in on-site meetings or be at an IRWD project site with short notice, if necessary; these attributes are incumbent of an extension of staff. ESA prides itself on the ability to deliver high quality



consultation and documentation to meet the specific needs of specific task assignments under other on-call contracts and ESA will perform and provide this high quality work for all projects undertaken for IRWD.

Project Schedule

ESA believes that time is always of the essence and will address each request and task order in that respect. ESA is committed to keeping the project on schedule when circumstances are within our control. ESA understands that delays in development and infrastructure improvements during the environmental review process invariably lead to an increase in the overall budget for the project. ESA often employs Microsoft Project as a flexible scheduling tool that is readily updated to reflect potential changes in the schedule beyond ESA's control, should they arise, with adjustments quickly expressed in real time, and the ESA project management team will work with IRWD to use the preferred scheduling tools. Through continuous tracking, the Project Manager will be able to determine at any point in the process, if there is any deviation from the planned schedule and budget and make necessary adjustments.

SECTION 5 Fee Schedule

The range of rates shown for each staff category reflects ESA staff qualifications, expertise and experience levels. These rate ranges allow our project managers to assemble the best project teams to meet the unique project requirements and client expectations for each opportunity. Subcontract services will be invoiced at cost multiplied by 1.15.

Environmental Science Associates | 2020 Schedule of Fees

Labor Category	Level I	Level II	Level III
Senior Principal Biologist/Environmental Scientist/Planner	220	230	240
Principal Biologist/Environmental Scientist/Planner	200	210	215
Managing Biologist/Environmental Scientist/Planner	160	175	185
Senior Biologist/Environmental Scientist/Planner	135	145	155
Biologist/Environmental Scientist/Planner	95	105	120
Project Technician	80	190	100

Item	Rate/Day	Rate/Week	Rate/Month
Vehicles – Standard size	\$ 40	\$ 180	
Vehicles – 4x4 /Truck	85		
Hydroacoustic Noise Monitoring Equipment	150		
Field Traps	40		
Wildlife Acoustics Bat Detector	125	400	
Wildlife Trail Camera	30	100	
RTK-GPS	300	1,200	
RTK-GPS Smartnet Subscription	50	200	
Trimble GPS	75	350	900
iPad/Android Tablet + 1m GNSS External Sensor (Trimble R1, Bad Elf)	75	350	900
iPad/Android Tablet only (includes Garmin Glo external sensor)	50	225	600
Garmin GPS or equivalent	25		250

Expenses

- A. Travel Expenses
 - Company vehicle IRS mileage reimbursement rate
 - Common carrier or car rental, lodging, meals and related travel expenses direct expenses multiplied by 1.15
- B. Communications Fee
 - In-house costs for phone, e-mail, fax, regular postage, walk-up copier, and records retention project labor charges multiplied by 3%

C. Printing/Reproduction Rates

Item	Rate/Page	Sample Pricing
Black & White – 8.5 x 11	\$0.10	
Black & White – 11 x 17	\$0.20	
Color – 8.5 x 11	\$0.40	
Color – 11 x 17	\$0.70	
B&W – Plotter (Toner – ECO Quality)	\$0.40/sf	24x36 B/W CAD drawing would cost \$2.40 per sheet
B&W – Plotter (Toner – Presentation Quality)	\$1.00/sf	24x36 B/W CAD drawing would cost \$6.00 per sheet
Color – Plotter (Inkjet – ECO Quality)	\$2.00/sf	24x36 Color Drawing would cost \$12 per sheet
Color – Plotter (Inkjet – Presentation Quality)	\$4.00/sf	24x36 Color Drawing would cost \$24 per sheet
CD	\$10.00	
Digital Photography	\$20.00 (up to 50 images)	
All Other Items (including bindings and covers)	At cost plus 10%	

Alta Environmental Schedule of Fees

	IRWD Contract Rates		IRWD Contract Rates		
Title	Key Personnel	Hourly Rate	Title	Key Personnel	Hourly Rate
Senior Principal		\$ 295.00	Associate II	M. Hallack	\$ 140.00
Principal	David Renfrew	\$ 265.00	Associate I		\$ 130.00
Senior III	G. Engelhorn	\$ 200.00	Specialist III		\$ 100.00
Senior II	J. Peterson	\$ 190.00	Specialist II		\$ 95.00
Senior I	J. McMillen	\$ 180.00	Specialist I		\$ 80.00
Staff III	M. Renaud	\$ 175.00	Financial Analyst III		\$ 200.00
Staff II (Engineer)		\$ 165.00	Financial Analyst II		\$ 115.00
Staff I		\$ 155.00	Administrative I		\$ 75.00
Associate III		\$ 150.00	Intern		\$ 70.00

SECTION 6 Joint Venture and Subcontractors

ESA does not propose to utilize any joint venture during the course of this contract. As mentioned previously, we have invited Alta Environmental to join our team to provide Water Quality, Storm Water Monitoring, and Reporting services. Alta's qualifications and experience can be found in *Section 3*, and the qualifications and experience of their staff can be found in *Section 2* and **Appendix A**.

SECTION 7 Conflict of Interest

To the best of our knowledge, ESA does not have existing personal, financial, and/or organization conflicts of interest prohibited by law."

SECTION 8 Insurance

If selected to provide the services under this contract, ESA is prepared to furnish IRWD with acceptable evidence showing that the insurance coverage required has been procured. ESA has insurance coverage of \$1 million each for general liability, property damage, worker's compensation, automobile, and professional liability. We will provide proof of insurance through our carrier, Woodruff-Sawyer & Co., upon award of this contract. A copy of our certificate can be found in **Appendix B**.

SECTION 9 Contract

ESA has reviewed the copy of IRWD's professional service agreement, attached to the RFP and we have no modifications to the standard terms and conditions.



PRODUCER License # 0E67768

IOA Insurance Services 4370 La Jolla Village Drive Suite 600 San Diego, CA 92122

INSURED

CERTIFICATE OF LIABILITY INSURANCE

MCGRAWM DATE (MM/DD/YYYY)

37974

42471

		11/12/2019
THIS CERTIFICATE IS ISSUED AS A MATTER OF INF CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGAT BELOW. THIS CERTIFICATE OF INSURANCE DOES REPRESENTATIVE OR PRODUCER, AND THE CERTIFIC/	FORMATION ONLY AND CONFERS NO RIGHTS UPON THE CER TIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFO NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING IN ATE HOLDER.	TIFICATE HOLDER. THIS RDED BY THE POLICIES SURER(S), AUTHORIZED
IMPORTANT: If the certificate holder is an ADDITIONA If SUBROGATION IS WAIVED, subject to the terms ar this certificate does not confer rights to the certificate ho annucces License # 0E67768	L INSURED, the policy(ies) must have ADDITIONAL INSURED point and conditions of the policy, certain policies may require an endo older in lieu of such endorsement(s).	rovisions or be endorsed. rsement. A statement on
A Insurance Services 70 La Jolla Village Drive Jite 600 an Diego, CA 92122	NAME: PHONE (A/C, No, Ext): (619) 788-5795 50206 E-MAIL ADDRESS: Ali.Smith@ioausa.com	FAX (A/C, No): (619) 574-6288
···· - ··· ··· ·······················	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A : RLI Insurance Company	13056

INSURER B : Mt Hawley Insurance Company

INSURER C: Crum & Forster Insurance Company

ENVISCI-05

Environmental Science Associates 550 Kearny St., Suite 800

San Francisco, CA 94108

COVERAGES CERTIFICATE NUMBER:

INSURER D :

INSURER E INSURER F :

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	SUBR	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP	LIMIT	s
Α	Χ	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	\$ 2,000,000
		CLAIMS-MADE X OCCUR	Х	х	PSB0007416	12/1/2019	12/1/2020	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 1,000,000
	Χ	Cont Liab/Sev of Int						MED EXP (Any one person)	s 10,000
								PERSONAL & ADV INJURY	\$ 2,000,000
	GEN	LAGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 4,000,000
		POLICY X PRO- JECT LOC						PRODUCTS - COMP/OP AGG	\$ 4,000,000
		OTHER:						Deductible	s 0
Α	AUT	OMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	Χ	ANY AUTO	Х	х	PSA0002468	12/1/2019	12/1/2020	BODILY INJURY (Per person)	\$
		OWNED AUTOS ONLY SCHEDULED AUTOS						BODILY INJURY (Per accident)	\$
		HIRED NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	\$
	X	Comp.: \$1,000 X Coll.: \$1,000							\$
В	Χ	UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	\$ 10,000,000
		EXCESS LIAB CLAIMS-MADE			PSE0003196	12/1/2019	12/1/2020	AGGREGATE	\$ 10,000,000
		DED X RETENTION \$ 10,000							\$
Α	WOR	KERS COMPENSATION						X PER OTH- STATUTE ER	
	ANY	PROPRIETOR/PARTNER/EXECUTIVE	N / A	Х	PSW0004135	12/1/2019	12/1/2020	E.L. EACH ACCIDENT	\$ 1,000,000
	(Man	datory in NH)	N/A					E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
	If yes	, describe under CRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
С	Pro	f Liab/Ded. \$50K			PKC108908	9/17/2019	12/1/2020	Per Claim/Aggregate	5,000,000
С	Poll	Liab/Ded. \$50K			PKC108908	9/17/2019	12/1/2020	Occurrence/Aggregate	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Proof of Insurance for Environmental Science Associates Issued for Evidence of Insurance Purposes Only

CERTIFICATE HOLDER	CANCELLATION
Sample Certificate c/o Environmental Science	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
Associates 550 Kearny Street, Suite 800 San Francisco, CA 94108	AUTHORIZED REPRESENTATIVE T. Kelly Howlell
ACORD 25 (2016/03)	© 1988-2015 ACORD CORPORATION. All rights reserved.

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EXHIBIT "I"

PSOMAS

January 30, 2020

Balancing the Natural and Built Environment

Fiona M. Sanchez, Director of Water Resources Irvine Ranch Water District 15600 Sand Canyon Avenue Irvine, CA 92618

Subject: Proposal for On-Call Biological Monitoring and Permitting Services

Dear Ms. Sanchez:

Psomas is pleased to provide a proposal to the Irvine Ranch Water District (IRWD) for On-Call Monitoring and Permitting Services. Psomas' team of highly qualified professionals have a long and successful history applying their knowledge of biological and regulatory expertise to assist clients with project strategies, document and permit preparation, and implementation of post-project requirements. Several of the biological team members proposed have recently worked for IRWD under Psomas' On-Call CEQA and NEPA Consultation On-Call Contract.

Our team routinely works with local public agencies on a wide variety of infrastructure construction, operations, and maintenance projects for water agencies, public works, utilities, and transportation agencies. Our work includes assisting with project concept planning and carries through field surveys, reporting, permit processing, and all phases of project mitigation monitoring (from pre-construction surveys to post-construction documentation). Psomas will provide qualified technical staff who will work collaboratively with IRWD to complete projects within established budgets and required timeframes while helping to navigate numerous environmental laws and regulations.

The Psomas Team will be led by Amber Heredia as Project Manager for this Contract; she will also be the day-today contact with IRWD. Amber is a Senior Project Manager with 23 years of experience managing biological monitoring and permitting services for a variety of project types including water and wastewater infrastructure, flood control, and utility projects. Of particular importance to this effort is Amber's experience implementing various multiple species habitat conservation plans in the region, including substantial experience with the Orange County Central-Coastal Natural Communities Conservation Plan (NCCP)/Habitat Conservation Plan (HCP).

Ann Johnston, will serve as Principal-in-Charge and Quality Assurance (QA)/Quality Control (QC) Manager for this effort. Ann has 31 years of experience in overseeing biological resource documentation and permitting. Ann's professional focus is on finding solutions to development challenges where potential impacts to biological resources may occur. As Vice President and Principal of Psomas, Ann Johnston is authorized to legally bind Psomas in a contract with IRWD.

Psomas' Resource Management Team includes many qualified Biologists. This allows us to balance workload to serve IRWD quickly and efficiently, and ensures availability for multiple, concurrent IRWD task orders. We have also included MBC Aquatic Sciences (MBC) to support Psomas on water quality, storm water monitoring, and reporting tasks.

We appreciate the opportunity to submit the enclosed proposal. Please feel free to contact us with any questions at 714.751.7373 or Ann.Johnston@Psomas.com, or Amber.Heredia@Psomas.com.

Sincerely,

PSOMAS Johnaton Ann M. Johnston /

Vice President/Principal

Smper Otherdia

Amber O. Heredia Senior Project Manager

3 Hutton Centre Drive Suite 200 Santa Ana, CA 92707

Tel 714.751.7373 www.Psomas.com

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Dedicated to balancing the natural and built environment, Psomas provides sustainably engineered solutions to public and private clients. Psomas, a California Corporation, founded in 1946, is a multifaceted consulting firm with over 600 employees, providing our core services of environmental consulting, civil engineering, survey and mapping, and construction management. While the firm as a whole offers a wide variety of services, Psomas' Resource Management Services is capable of supporting the needs that are relevant to the Irvine Ranch Water District's On-Call Biological Monitoring and Permitting Services contact. Psomas' Resource Management Services specialize in providing the following services in support of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documentation.

Regulatory Compliance Expertise

- Federal Endangered Species Act (FESA)
- California Endangered Species Act (CESA)
- Clean Water Act (CWA)
- Migratory Bird Treaty Act (MBTA)
- California Fish and Game Code
- California Coastal Act
- Porter-Cologne Water Quality Act
- Natural Community Conservation Plan (NCCP) Planning Act

Agency Coordination Experience

- California Department of Fish and Wildlife (CDFW)
- Army Corps of Engineers (USACE)
- US Fish and Wildlife Service (USFWS)
- US Environmental Protection Agency (USEPA)
- Regional Water Quality Control Board (RWQCB)
- State Water Resources Control Board (SWRCB)
- South Coast Air Quality Management District (SCAQMD)
- County of Orange and Local Cities
- Natural Communities Coalition (NCC), formerly Nature Reserve of Orange County (NROC)

Psomas' goal is to establish long-lasting, positive, and productive working relationships with our clients. Our project management style is rooted in our commitment to provide accurate and comprehensive consulting services; timely and cost-effective reports and documents; and regulation compliant document processing.

PROJECT APPROACH

Psomas will provide Irvine Ranch Water District (IRWD) with as-needed environmental permitting and monitoring services. Ann Johnston (Principal in Charge), Amber Heredia (Biological Project Manager), and Jennifer Marks (CEQA Project Manager) have worked together for over 20 years. As such, the project management team works seamlessly together and will respond quickly to IRWD's needs, which may include strategic planning discussions, scopes of work, preconstruction surveys, monitoring, and/or a variety of other survey or documentation needs. Psomas has built its reputation on providing high-quality technical documents and being extremely responsive to clients' needs, especially when timing is critical to keeping a project on schedule. Psomas has the depth of experience to provide practical and solution-oriented advice to our clients.

Ann and Amber have both worked with multiple Participating Entities in the Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP), including IRWD, The Irvine Company, and the County of Orange (OC Public Works, OC Waster & Recycling, OC Parks, and OC Land and Development). As such, they have a thorough understanding of the plan's implementation. Psomas has earned the trust of the regulatory agencies and has an excellent reputation with each of them for providing high-quality work. Psomas has a team of biological, regulatory permitting, and CEQA specialists who provide the technical skills and knowledge of regulatory requirements needed, while MBC Aquatic Sciences will provide water quality monitoring that may be needed to accomplish IRWD's needs during the on-call contract period as described in the tasks below.

The Psomas Team also has extensive experience working with other water infrastructure agencies, including Santa Margarita Water District, Eastern Municipal Water District, Riverside County Flood Control and Water Conservation District, OC Sanitation District, OC Public Works, and Los Angeles County Public Works. This experience brings an understanding of working on linear projects through or adjacent to native habitats. Environmental documentation should be tailored to the project, and not a one-size-fits-all approach. Where applicable, Psomas highlights limited duration of project activities and/or limited extent of impacts (e.g., construction within a roadway adjacent to habitat or within an existing facility) to accurately characterize indirect project impacts on biological resources.

The discussions on the following pages identify the tasks that may be required as part of this on-call contract. We have briefly identified our expertise with the expected tasks and highlighted work efforts undertaken for other clients that demonstrate our experience in providing the services requested by IRWD. Examples of projects completed for public agencies are referenced to highlight

our expertise for each task. Select project descriptions are included in Attachment A, Relevant Project Experience.

Task 1: Land Use Planning

Environmental Services at Psomas includes two teams, Environmental Planning and Resource Management. Both teams are extremely familiar with land planning processes in the County and cities within and adjacent to the IRWD service area. Staff from both the Environmental Planning and Resource Management Teams have worked on projects for the cities in the service area, including Irvine, Lake Forest, Costa Mesa, Newport Beach, Tustin, and Orange. Our two disciplines are complementary and regularly collaborate on issues and ideas, allowing us to serve our clients well and provide efficient, strategic, and cost saving products. However, our teams also often work independently with other firms, as each project has a unique combination of players.

As a result of this long-held structure, the Biologists, Regulatory Specialists, and Restoration Ecologists on our Resource Management Team are embedded into the Psomas land use projects and work closely with their Environmental Planning co-workers on a daily basis. Our Resource Management staff have provided decades of biological resource support documentation for Environmental Planning staff, including biological surveys and jurisdictional delineations in support of CEQA/ NEPA documentation, biological resources sections of CEQA/NEPA documents, response to comments, and attendance/presentations at public hearings.

Psomas understands the goals and objectives of the IRWD and is familiar with the planning processes of the varying public entities (cities/County) where IRWD projects occur. Given the linear nature of many IRWD projects, a single project could span multiple jurisdictions, which sometimes have competing or conflicting objectives. Psomas will assist IRWD in understanding potential issues and will work collaboratively with the various entities to address issues before they become problematic, as we have with IRWD and other public and private entities in the region. Our recent work effort with IRWD on the Irvine Pipeline North Conversion Project and associated Zone A to Rattlesnake Reservoir Pump Station Project are excellent examples of our Resource Management Team's ability to work with Environmental Planners and IRWD engineers.

Additional projects that highlight our land use planning capabilities include:

- Santa Margarita Water District, Chiquita Water Reclamation Plant Solar Project
- Santa Margarita Water District, Coto de Caza Pump Station Expansion

- Eastern Municipal Water District, Murrieta Road Transmission Pipeline Project
- Riverside County Flood Control and Water Conservation District, Good Hope-Olive Avenue Storm Drain Project
- Lowe Enterprises, West Alton Parcel Development Plan
- County of Orange, Alton Parkway Extension Project

Task 2: Regulatory Agency Consultation, Permit Application, and Procurement

Psomas has experience and excellent working relationships with the USFWS, CDFW, RWQCB, SWRCB, USEPA, USACE, NCC (formerly NROC), and SCAQMD. Psomas works with one or more of these agencies on nearly every project, especially those that involve permitting impacts to jurisdictional waters.

Dr. Brad Blood, Regulatory Permitting Manager, has over 40 years of experience in biological consulting with a specialty in jurisdictional permitting. He understands that where jurisdictions overlap, each agency's regulations and requirements must be met; however, he also works towards the same mitigation strategy with each agency so that the same mitigation plan will address the requirements of multiple agencies to the extent possible. Through his extensive experience in processing regulatory permits, he has developed close working relationships with personnel in the regulatory agencies.

Regulatory consultations often include an additional layer of compliance with FESA and CESA. Amber Heredia and Ann Johnston have both provided support in numerous Section 7 Consultations, including those for some of the most contentious projects in Orange County. They have attended many pre-application field meetings to discuss the findings and proposed mitigation strategies to avoid and minimize impacts on Threatened, Endangered, and other special status species. They have authored many Biological Assessments (document for Section 7 of the Endangered Species Act) and Determination of Biological Superior or Equivalent Preservation Reports (i.e., corresponding document under the Western Riverside Multiple Species Habitat Conservation Plan [MSHCP]).

Amber is currently the lead author of a HCP (document under Section 10 of the Endangered Species Act) for Operation and Maintenance of Big Tujunga Dam for the Los Angeles County Department of Public Works. As lead author on this Draft HCP, which is nearing completion, Amber has led monthly meetings with LA County Public Works, Los Angeles Department of Water and Power, USFWS, and CDFW since December 2016. She has also addressed comments from each of the agencies during preparation of each HCP section. Through this process, Amber has provided a bridge between water agency engineers/hydraulic experts and resource agency staff. As Principal-in-Charge, Ann has provided oversight throughout the process.

Our Resource Management Team as a whole is experienced in implementing the long-term requirements of regulatory permits, including attending meetings with resource agency staff. Psomas has provided biological support services for the San Diego Creek, Reach II (Interstate [I]-405 to Campus Drive) Operation and Maintenance Project under our ongoing on-call contract with the County of Orange. Psomas conducts various biological surveys and meets with resource agency staff prior to the annual fall maintenance activities. Jonathan Aguayo, Psomas Senior Biologist, has earned the respect of resource agency staff and has attended the annual field meeting without the Project Manager for several years.

Below are some example projects that involved regulatory agency permitting and coordination:

- Los Angeles County Public Works, HCP for Big Tujunga Dam Operation and Maintenance Project
- OC Public Works, San Diego Creek Reach II Operation and Maintenance Project
- OC Public Works, Edinger Avenue Bridge Repair Project
- County of Orange, Biological Assessment for the Alton Parkway Extension
- Transportation Corridor Agencies, State Route (SR)-241 Extension Biological Assessment

Task 3: Wetland Delineation

Psomas Regulatory Specialists and Biologists have the technical background, experience, and necessary training to conduct wetland delineations subject to the regulations of the USACE, CDFW, and RWQCB. Using the most recent guidelines from the resource agencies, Regulatory Specialists conduct field surveys/assessments to define the jurisdictional boundaries of each agency. Our Regulatory Specialists have also been trained to conduct California Rapid Assessment Method (CRAM) Analyses, Surface Water Ambient Monitoring Program (SWAMP) Assessments, and Candidate Mitigation Site Evaluations, if needed. Our delineations are then incorporated into the required documentation needed for specific projects, which may include Preliminary Jurisdictional Site Assessments and/or Jurisdictional Delineation Reports.

Psomas has the experience required to provide IRWD with wetland delineation services in support of capital, operations, and maintenance projects. Our team has conducted jurisdictional delineations and obtained regulatory permits for numerous projects throughout Southern California. Psomas also has experience in obtaining Long-Term Streambed Alteration Agreements and Section 401 Water Quality Certifications.

In addition to providing regulatory services, Psomas has also worked with other consulting firms to incorporate delineations conducted by other firms into our project documentation. Amber Heredia was the Project Manager for the I-405 Widening from SR-55 to I-5 Natural Environment Study (NES) (i.e., Biological Technical Report for Caltrans) prepared for Orange County Transportation Authority (OCTA). The NES was prepared consistent with the OCTA Measure M Project HCP and the San Diego Creek Special Area Management Plan (SAMP); Psomas also incorporated baseline data (e.g., known species occurrences) from the Central-Coastal NCCP/HCP, as applicable, since the project occurred within the boundaries of the Central-Coastal NCCP/HCP. The NES analysis included incorporation of a jurisdictional delineation prepared by another consulting firm. Amber summarized the SAMP and ICF's Jurisdictional Delineation, determined project impacts, and prepared a NES mitigation measure consistent with the SAMP.

The following are some example projects for wetland delineations:

- OC Public Works, Edinger Avenue Bridge Repair Project
- OC Public Works, Wagon Wheel Creek Restoration Project

Task 4: Biological Survey, Monitoring, Assessment

The Psomas Resource Management Team is comprised of Biologists who have a mix of botanical and wildlife expertise with technical specialties that cover any special status plant or wildlife species that occurs in Orange County. Each Biologist is trained to conduct general reconnaissance surveys, biological constraints assessments, and habitat assessments for Threatened and Endangered species. Because of this, we can send one Biologist to assess the potential for multiple resources issues. If follow-up focused surveys are necessary, our inhouse team contains a range of specialists. Additionally, our team includes multiple individuals with similar expertise, allowing us to concurrently staff multiple projects, often on short notice. Our specialists conduct habitat assessments, focused surveys to determine the presence or absence of special status species, and monitoring during project construction. Our Resource Management Team is supported by multiple Geographic Information System (GIS) staff, who have access to georeferenced digital imagery to provide field maps that can be emailed to Biologists for use on iPads, allowing for quick mobilization as well as quick transmission of

survey results back to GIS, and timely mapping of survey results back to the client. Time can become a critical factor during monitoring for a construction project. Psomas Team technical staff have provided a variety of biological consulting services for public agencies and private entities in Southern California, with many projects occurring in the vicinity of IRWD projects in Orange County. Our team's extensive qualifications are demonstrated by the type and range of biological services we have provided to our clients for over 25 years. A summary of these services has been provided below. **Biological Analysis, Documentation, and Implementation Services**

- Literature Reviews
- Vegetation and Habitat Mapping
- Wildlife Movement Analyses, Design Support, and Monitoring
- Plant and Wildlife Habitat Assessments
- Special Status Plant and Wildlife Focused Surveys
- Arborist Surveys
- Nesting Bird Surveys
- Bat Roost Surveys
- Camera Monitoring of Burrows
- Biological Opportunities/Constraints Reports
- Habitat Assessments
- Biological Technical Reports
- Biological Assessments (to support FESA Section 7 consultations)
- Biological Resources Sections for CEQA/NEPA Documentation
- CDFW Wildlife Consistency Determinations/Take Authorizations (to support CESA consultations)
- Various NCCP/HCP Reporting and Permit Compliance Documentation
- Agency Consultation and Regulatory Permitting
- Habitat Mitigation Planning
- Mitigation Monitoring and Reporting
- Construction Monitoring and Contractor Education
- Benthic Macroinvertebrate (BMI) Bioassessments
- CRAM and SWAMP Assessments
- Peer Review of Technical Analyses

Special Status Species

- Fairy Shrimp
- Arroyo Chub
- Arroyo Toad
- Western Spadefoot
- Western Pond Turtle
- Coastal California Gnatcatcher
- Southwestern Willow Flycatcher
- Least Bell's Vireo
- Western Yellow-Billed Cuckoo
- Tricolored Blackbird

- Burrowing Owl
- Special Status Bats

Amber Heredia has 21 years of experience working with biological resources in Orange County, including several projects within the Central-Coastal NCCP and IRWD's service area. Her experience began as a field biologist and evolved into project management, in some cases over the course of the long-term environmental process for certain projects (e.g., Alton Parkway Extension, SR-241 Extension). A project manager with an understanding of conducting field surveys is beneficial to preparing scopes of work tailored to the level of effort needed based on project type and location, as well as for reviewing project documentation prepared by Psomas Biologists.

The following are some example projects that involved biological analysis, documentation and implementation services

- The Irvine Company, Planning Area 33
- OC Public Works, San Diego Creek Reach II Operations and Maintenance Project
- Lowe Enterprises, West Alton Project
- OC Public Works, Alton Parkway Extension
- OC Waste & Recycling, FRB Landfill Spadefoot Management Plan
- OC Public Works, La Pata Restoration Project

Task 5: Threatened and Endangered Species Regulation, Monitoring, and Reporting

As described under Task 2, Psomas has conducted consultations under both Section 7 and 10 of the Endangered Species Act. Psomas has prepared Biological Assessments consistent with Section 7 for various projects, including the Alton Parkway Extension (addressing least Bell's vireo, a Conditionally Covered species under the NCCP/HCP) and the SR-241 Extension (addressing thread-leaved brodiaea, coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, and arroyo toad). Psomas is nearing completion of the Draft HCP for the Big Tujunga Dam Operation and Maintenance Project, which will provide a 30-year permit to the Los Angeles Department of Public Works. The Draft HCP includes eight Covered Species (i.e., least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, arroyo toad, western pond turtle, Santa Ana sucker, arroyo chub, and Santa Ana speckled dace) and included an extensive hydraulic modeling effort to assess the effects of Dam operation on downstream riparian species.

Psomas also routinely provides biological monitoring consistent with the requirements of environmental documentation and project permits. This includes biological monitoring typically required by CEQA/ NEPA documentation, FESA/CESA, California Fish and Game Code, and USACE, CDFW, and RWQCB jurisdictional permits (i.e., Section 404, Streambed Alteration Agreements, and Section 401 Certifications). Psomas Biologists also have experience implementing measures required by the Coastal-Central NCCP/HCP. Amber has managed biological monitoring for numerous construction projects. To ensure compliance with multiple permits for larger projects, Psomas prepares a Biological Monitoring Checklist to summarize measures from all permits (with cross-reference back to the source) and requires that each Biological Monitor fill out the form daily. Psomas is currently implementing this strategy on the OC Sanitation District Santa Ana River Interceptor Rock Removal Project, which includes daily monitoring throughout the project.

Psomas prepared the Biological Resources Construction Plan (BRCP) for the Santa Margarita Water District Chiquita Water Plant Solar Project, as consistent with the Southern Subregion HCP and approved by the USFWS. Psomas conducted pre-construction surveys for coastal California gnatcatcher and a Biologist permitted for coastal California gnatcatcher monitored all vegetation clearing. Following vegetation clearing, the Biological Monitor visited the site weekly and prepared weekly reports that were submitted to the resource agencies to document project compliance. Upon completion of the project, a final report was prepared to summarize all biological monitoring efforts.

Psomas also provides on-call services to OC Public Works for the San Diego Creek Reach II (I-405 to Campus Drive) Operation and Maintenance Project. This includes annual focused surveys for least Bell's vireo and southwestern willow flycatcher to document the number of pairs using the riparian habitat between I-405 downstream to Jamboree Road (Reach II and Reach I). Prior to fall maintenance, Psomas conducts a pre-construction tree survey to flag trees to selectively remove consistent with project permits and guidance from the resource agencies. During the fall maintenance, Psomas provides full-time monitoring of tree removal and non-native invasive removal work within the 40foot buffer (i.e., riparian habitat area); weekly reports are prepared and submitted to the resource agencies (following review by OC Public Works). Psomas also provides weekly monitoring to spot-check maintenance work outside the 40-foot buffer; monitoring forms are submitted to OC Public Works for their files. Following completion of the annual maintenance, a post-construction vegetation map is completed per permit requirements, and an Annual Report is prepared that includes a Mitigation Monitoring Reporting Plan compliance matrix; both are submitted to the resource agencies following approval by OC Public Works.

The following are examples of projects that included threatened and endangered species regulation, monitoring, and reporting:

- Los Angeles County Public Works, Big Tujunga Dam Operation and Maintenance Project HCP
- County of Orange, Alton Parkway Extension Biological Assessment
- Transportation Corridor Agencies, SR-241 Extension Biological Assessment
- OC Sanitation District, Santa Ana River Intercept Rock Removal Project Biological Monitoring
- OC Public Works, San Diego Creek Reach II Operation and Maintenance Project Biological Monitoring
- Santa Margarita Water District, Chiquita Water Reclamation Plant Solar Project Biological Monitoring

Task 6: Mitigation Monitoring and Reporting

Psomas has the experience and expertise to provide an array of biological monitoring services, from simple pre-construction nesting bird surveys required as a Mitigation Measure from an environmental document to the design, implementation, and monitoring of 100+ acres of coastal sage scrub required as a result of consultations with the regulatory agencies.

In addition to the pre-construction surveys and biological monitoring described above in Task 5, Psomas has extensive experience in habitat restoration services that include the preparation and implementation of Habitat Mitigation Monitoring Plans (HMMPs). Our Restoration Biologists have the necessary technical expertise and project experience to provide a variety of restoration planning and management tasks for coastal sage scrub, riparian, and oak woodland habitat types found in Orange County. These tasks include habitat restoration design and planning, mitigation site selection, restoration implementation monitoring, and native plant palette recommendations. Psomas has implemented numerous successful HMMPs, which have resulted in successful habitat establishment, compliance with resource agency performance criteria, and subsequent buy-off from the resource agencies.

Richard Lewis is a Senior Restoration Ecologist with 26 years of experience in developing and directing complex habitat creation and restoration programs for public and private sector clients throughout Southern California. His Santa Anita Oak Woodland Mitigation Site uses cutting edge techniques for habitat creation and has been recognized with awards from the American Council of Engineering Companies (ACEC) and the American Society of Civil Engineers (ASCE). Additionally, Richard is leading restoration efforts for the Alton Parkway Extension, both on-site creation of

habitat along a Wildlife Corridor that will link with the wildlife corridor being built through the Great Park, and off-site enhancement of habitat along Aliso Creek that includes extensive removal of non-native invasive plants along a large portion of the creek. On the off-site portion of the project, Richard has worked with OC Public Works to install additional cactus plantings to extend habitat for the coastal cactus wren that occupies the site. Additionally, Richard is leading the Peters Canyon enhancement project, which provides off-site mitigation for OC Public Works' San Diego Creek Reach II Operation and Maintenance Project. All of the Orange County restoration projects mentioned are occupied by both coastal California gnatcatcher and least Bell's vireo. The presence of listed species complicates restoration site maintenance and increases biological monitoring requirements; however, the presence of listed species demonstrates the value of habitat creation/enhancement of these projects and often aids greatly in resource agency sign-off.

Several projects have been highlighted to demonstrate Psomas' expertise and ability to provide Mitigation Monitoring and Reporting services.

- Los Angeles County Public Works, Santa Anita Oak Woodland
- OC Public Works, Alton Parkway Extension (On-site and Off-site Mitigation)
- OC Public Works, San Diego Creek Reach II Operation and Maintenance Project (Peters Canyon Wash Mitigation)
- Solution Content State Avenue Extension Project

Task 7: Water Quality, Stormwater Monitoring, and Reporting

Psomas has provided clients with water quality monitoring and reporting in compliance with regulatory permits for many years. Brad Blood has a long-standing relationship with our subconsultant MBC Aquatic Sciences. MBC Aquatic Sciences' staff of scientists and technicians is actively engaged in a wide range of marine, estuarine, freshwater, and terrestrial studies. MBC and its staff have earned a reputation for thorough and accurate work, and high-quality products. Since its inception in 1969, MBC has conducted numerous ecological studies, biological assessments, and habitat restoration programs on the West Coast, in the Gulf of Mexico, and Alaska.

Together, they will manage the water quality, storm water monitoring and reporting for IRWD projects. As described under Tasks 2 and 3, Brad has extensive experience with obtaining and complying with jurisdictional permits (USACE, CDFW, RWQCB, and CCC). Brad is familiar with the SAMP permitting process, as he completed SAMP permitting for the Wagon Wheel Creek Restoration Project located in the San Juan Creek/ Western San Mateo Creek Watershed SAMP. Psomas prepared a Letter of Permission (LOP) under the SAMP for the USACE, a 1602 Streambed Agreement for the CDFW, and a Water Quality Certification for the RWQCB.

MBC provides water quality monitoring services in a variety of marine, estuarine, and freshwater habitats such as studies of streams, rivers, and lakes. MBC Scientists recently designed a study to determine likely sources of bacterial contamination in Bishop Creek (Bishop, CA). This study includes weekly collection and bacteriological analysis of water samples, and samples for molecular source tracking (MST). MBC has performed stormwater sampling in Orange and Los Angeles Counties since the 1990s. MBC also regularly collects sediments for analysis of chemistry, toxicity, and biological community composition. They are experienced in a wide variety of water and sediment study methods and work with clients to provide cost-effective solutions. In the last two years, they has partnered with Psomas to complete hydrographic and topographic surveys of Irvine Lake, and the completion of more than 20 jurisdictional delineations in California.

Several projects have been highlighted to demonstrate Psomas' and MBC's expertise and ability to provide these services.

- OC Parks, Wagon Wheel Restoration Project (Psomas)
- Irvine Ranch Water District, Special Studies of Upper Newport Bay (MBC)
- City of Los Angeles, NPDES Receiving Water Monitoring And Technical Studies (MBC)

Task 8: Natural Treatment System

Psomas has experience in the design, implementation, and management of Natural Treatment Systems (NTS). Our team of Engineers, Restoration Ecologists, and Biologists have developed NTS that have reduced the introduction of pollutants (i.e., bacteria, suspended solids, nitrogen, selenium, and phosphorus) generated from urban runoff to receiving waters via a series of structural and green elements within the treatment train.

These efforts have involved Engineers working collaboratively with Hydrologists, Restoration Ecologists, Botanists, and Biologists to develop integrated treatment facilities that capture and treat urban runoff, while at the same time creating habitat value and aesthetic amenities for neighborhoods. Psomas understands IRWD's needs for NTS and, at the same time, has worked with other public entities to develop multi-beneficial features that work in concert with the NTS. Features we have successfully integrated into an NTS include, but are not limited to, neighborhood-serving park amenities; outdoor classroom amphitheaters; educational kiosk/

6

signage describing the park's function, flora, and fauna; and recreational walking trails with observation bridges/ platforms around the treatment wetlands. Psomas' Restoration staff review plant palettes to ensure that the plan would include native species and/or species that would not be detrimental to surrounding habitat areas.

An exceptional example of Psomas' expertise with NTS is the South Los Angeles Wetlands Park. The Wetlands Park is a regional storm water treatment facility to serve a 525-acre tributary watershed. The Wetlands Park project represents a bold, integrated engineering solution that successfully captures and improves local runoff while creating a new neighborhood-revitalizing amenity. The project is helping to transform a community by turning a former Metropolitan Transportation Authority (MTA) brownfield site into a rare public park space in a highly urbanized setting. This urban wetland was designed to support the survival of soil, biota, flora, and fauna during both the "wet" and "dry" seasons, while simultaneously maximizing urban runoff treatment year round. This was accomplished via a supervisory control and data acquisition (SCADA)-controlled, centrally monitored, three-cell wetland treatment system that diverts and treats 100 percent of dry-weather runoff from the existing adjacent 63-inch storm drain during the summer and winter, while also providing first-flush treatment during rain events in the winter. The treatment facilities include diversion from a major existing subsurface storm drain; structural pretreatment, high and low flow pump station; and a 3-cell, 4.5-acre treatment wetland. The project was delivered in partnership with City of Los Angeles Bureaus of Engineering and Sanitation, Recreation and Parks, MTA, and Council District 9. It also won several awards, including the American Council of Engineering Companies' National Recognition Award.

Task 9: Natural Community Conservation Plan/Habitat Conservation Plan

IRWD's service areas primarily located within the Central-Coastal Subregion of the NCCP/HCP. IRWD is a participating jurisdiction in the NCCP/HCP and, as such,it is subject to the terms of the Implementation Agreement. Participation in the NCCP/HCP allows compatible land uses and development to follow stream thoroughly very familiar with the NCCP/ HCP and understands that IRWD activities related to infrastructure facilities, including construction of new infrastructure and ongoing operations and maintenance, repair, and reconstruction activities, are Permitted Activities. Psomas will ensure that biological surveys, impact assessments, and mitigation measures are consistent with the Central-Coastal NCCP/HCP, thus providing IRWD with the full benefits of a signatory agency.

Psomas prepared the HMMP for the Peters Canyon Wash Project which provides mitigation for the San Diego Creek Reach II Operation and Maintenance Project. The HMMP includes exotic vegetation control and native plant species establishment within the Peters Canyon Wash Habitat Mitigation Easement area. The HMMP was developed in coordination with the NCC and in compliance with USACE and CDFW requirements for mitigation of impacts to jurisdictional resources.

During mitigation planning for the Alton Parkway Extension, Amber prepared and presented a PowerPoint to the NROC (now NCC) about the planned roadway, its biological impacts, and the planned mitigation measures. She engaged in discussion of the effects of the roadway on wildlife movement and presented the plan for minimizing effects on both small wildlife (e.g., spadefoot toad) and medium to large-sized wildlife (e.g., bobcats). Amber provided response to comments from NROC and worked with engineers to incorporate modifications to fencing requested by NROC.

Amber is also familiar with many of the NCCP/HCP Reserve lands as she obtained special permission from NROC and OC Parks to access open space areas to conduct her Masters research, *Distribution of Riparian Bird Species in an Urbanizing Landscape*, which analyzed the distribution of riparian bird species across a gradient of urbanization in Orange County.

Psomas has conducted several projects within the Central-Coastal NCCP/HCP. As described above under Task 5, Psomas prepared biological documentation for the Alton Parkway Extension Project, which proposed mitigation measures consistent with the NCCP/HCP and included a Biological Assessment for a Conditionally Covered species (i.e., least Bell's vireo). Additionally, Psomas has conducted biological studies for Planning Area 33 for The Irvine Company, which included preparation of a Biological Technical Report, focused surveys, and the Biological Resources section of the Initial Study/Mitigated Negative Declaration (IS/MND) consistent with the NCCP/HCP.

In addition to work within the Central-Coastal NCCP/ HCP, Psomas has conducted work in the Southern Subregion HCP. As described above under Task 5, this included preparation of a BRCP and biological monitoring consistent with the Southern Subregion HCP. Psomas is currently working on a project for OC Parks to complete a minor amendment to the HCP to adjust the boundary of open space areas, which may include a land swap in the vicinity of Robinson Ranch/Trabuco Canyon. The following projects have been highlighted to demonstrate Psomas' expertise with NCC (formerly NROC) and other NCCP or HCPs.

- OC Public Works, Peters Canyon Wash HMMP (San Diego Creek Reach II Operation and Maintenance Project)
- OC Public Works, Alton Parkway Extension
- The Irvine Company, Planning Area 33
- Santa Margarita Water District, Chiquita Water Treatment Plant Solar Project
- OC Parks, Robinson Ranch Project

Task 10: Project Coordination

Psomas will be responsible for ongoing coordination with IRWD and other team members. Throughout our history, Psomas' Resource Management Team has assumed the role of both consultant and subconsultant on a variety of projects. Depending on the assigned task, Psomas will assume either a primary project management role and be responsible for the management of a project team or will serve as a member of a larger team and take direction from another party, as directed by IRWD. Due to our extensive experience throughout Southern California, Psomas has positive working relationships with hundreds of consulting firms across multiple professional disciplines; we look forward to the chance to collaborate with peers in these fields.

One example of our coordination efforts and ability to work successfully with other teams is our work for Parsons on the I-405 Widening Project from SR-55 to I-5. On this project, Psomas prepared the NES which was later summarized into the Environmental Impact Report (EIR) by Parsons. Additionally, Psomas coordinated with ICF who provided the Jurisdictional Delineation for all Measure M projects.

Task 11: Staff Rates

Hourly rates for staff members proposed, along with their titles/roles, are listed below. Additional staff for Regulatory, Biological, Habitat Restoration and Environmental services are available for task orders, as needed, but would not be assigned without prior written approval from IRWD.

STAFF RATES				
Key Personnel	Contract Role/Title	Hourly Billing Rate		
Psomas				
Ann Johnston	Principal-in-Charge, QA/QC Manager	\$257		
Amber Heredia	Senior Project Manager/ Senior Wildlife Biologist	\$193		
Brad Blood, PhD	Senior Regulatory Specialist	\$207		
Allison Rudalevige	Regulatory Specialist/ Senior Botanist/ Restoration Biologist	\$137		
Sean Noonan, AICP	Regulatory Specialist/ Environmental Planner	\$166		
Lindsay Messett	Senior Wildlife Biologist	\$139		
Jonathan Aguayo	Senior Wildlife Biologist/ Restoration Biologist	\$137		
Steve Morris	Wildlife Biologist	\$107		
Daniel Jaques	Botanist	\$102		
Matthew Heideman, PE, QSD/QSP, ENV SP	Civil Engineer	\$220		
Richard Lewis III	Senior Restoration Ecologist	\$166		
Jennifer Marks	Senior Project Manager	\$220		
Megan Larum	Environmental Planning	\$118		
Michael Deseo	GIS Analyst	<mark>\$14</mark> 5		
Robert Becker	GIS Technician	\$102		
MBC Aquatic Sciences				
David Vilas	Senior Scientist	\$192		
Robert Moore	Senior Scientist	\$192		
Michael Lyons	Senior Scientist	\$192		

REIMBURSABLE COSTS

Item	Rate
Mileage	Federal Standard Mileage Rate
Reprographics (Outside)	at cost plus 10%
Reprographics (Inside)	Request Printing fee sheet
Other Out-of-Pocket Expenses	at cost plus 10%
Subconsultants	at cost plus 10%
Plotting: Color Bond	\$1.50 per square foot
Plotting: Color Photo Gloss	\$2.50 per square foot
Aerial Maps: Fewer than 500 acres	\$200
Aerial Maps: 500-1,500 acres	\$350
Aerial Maps: Greater than 1,500 acres	\$500

Task 12: Project Task Item Estimates

Psomas has experience with working under on-call and open-end contracts with many clients. We have a proactive approach to client service; an ability to coordinate and manage technical subconsultants; and an ability to deliver quality work products within project schedule and cost constraints. One aspect of our client portfolio that speaks highly of our responsiveness and quality of work is the number of long-term clients and On-Call/As-Needed Environmental Services contracts we have maintained with public sector agencies and utilities. We have established long-term relationships with clients, some for more than 20 years, providing services and work products including jurisdictional delineations and regulatory permitting, general and focused biological surveys, technical reports, permit compliance monitoring and reporting, construction monitoring and reporting, and agency negotiations.

Following is a list of some of the key long-term water, utility, and public works clients for which Psomas has provided As-Needed or On-Call Biological Consultant Services, with the total years of service for each client included in parentheses:

- Transportation Corridor Agencies (25 years)
- County of Orange (24 years)
- Los Angeles County Public Works (24 years)
- Santa Margarita Water District (22 years)
- Southern California Edison Company, Eastern Hydro Division (21 years)
- Orange County Sanitation District (13 years)
- Orange County Water District (10 years)
- Metropolitan Water District of Southern California (9 years)
- OC Parks (5 years)
- Riverside County Flood Control and Water Conservation District (5 years)
- Orange County Transportation Authority (10 years)
- Eastern Municipal Water District (1 year)

Under these contracts, Psomas has provided scopes of work, estimated costs, and schedules for hundreds of individual projects. Each scope, cost, and schedule is prepared to fulfill our clients' needs by providing cost- and time-efficient services that meet the project objectives without burdening projects with unnecessary tasks. When it is unknown whether additional services would be necessary, Psomas often includes optional tasks, which can be authorized later in the work effort, allowing IRWD to know what costs would be for additional services up-front. With the depth of staff and experience of each team member, Psomas will be able to meet the schedules of concurrent assignments. While each of the key staff members will have responsibilities to other projects, Psomas will ensure that each team member will have adequate availability to meet IRWD's project requirements. Psomas is careful not to commit 100 percent of any staff member's time, thereby ensuring availability of qualified staff to fulfill project responsibilities as well as unanticipated requests that may arise throughout the duration of a project. Psomas regularly adjusts staff schedules to meet the needs of various on-call clients.

Task 13: Team Experience

Ann Johnston, Principal-in-Charge, is a seasoned professional who has prepared or overseen the preparation of biological resources documentation for some of the most controversial projects in Orange County. Ann possesses a depth of knowledge on regulatory processes, extensive experience in impact analysis and document review, practical approach to problem-solving, and a friendly demeanor.

Amber Heredia possesses strong project management skills and is known for being very responsive to her clients. She is highly organized and strikes the right balance of attention to detail and efficiency. She is excellent at coordinating with internal team members to ensure that deadlines are met. She takes great pride in producing well-written documents that clearly present technical information and is excellent at following required templates. Amber is well-respected by her peers and the resource agencies for producing well-written and accurate documents.

Dr. Brad Blood has built working relationships with resource agency staff related to jurisdictional permitting. He has an extensive knowledge of the everchanging implementation of jurisdictional permitting requirements and experience in obtaining permitting anticipated to be needed by IRWD. He oversees highly skilled Regulatory Permitting Specialists.

Richard Lewis is passionate about habitat restoration and is known throughout Orange, Los Angeles, and Riverside counties for designing and implementing exceptional habitat mitigation programs. His often simple suggestions to supplement or enhance habitat mitigation programs are frequently incorporated by his clients because they are anticipated to accelerate achieving performance criteria, which can lead to substantial cost savings, and/or to provide alternative measures of performance that increase the odds of project sign-off (e.g., demonstration of occupation by Threatened or Endangered species).

Allison Rudalevige, Lindsay Messett, and Jonathan Aguayo are well-rounded Senior Biologists. Each can conduct habitat assessments, vegetation mapping, general plant and wildlife surveys and monitoring, but each also has several specialties. Allison conducts focused surveys for fairy shrimp and special status plants, jurisdictional delineations (including CRAM, SWAMP), and restoration monitoring. Lindsay and Jonathan both have the necessary permits and experience to conduct focused surveys for coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, burrowing owl, nesting bird/raptor surveys, and western spadefoot (including translocation). Additionally, Jonathan conducts surveys for arroyo toad, red-legged frog, and yellow-legged frog, and trapping for western pond turtle while Lindsay can conduct Benthic Macroinvertebrate (BMI) surveys. Both Allison and Jonathan regularly conduct restoration monitoring for Richard. All Psomas' Biologists are experienced with various biological monitoring tasks.

Staff that will be assigned to the IRWD contract include Senior Managers, Technical Leads, and supporting staff who have been, and are currently, responsible for providing technical support and management oversight of many water district, flood control, and other public works contracts. Thanks to our longstanding history of work on public works projects, staff assigned to this contract understand the importance of coordinating closely with agency managers and engineers, operational/maintenance staff, and resource agency personnel to ensure that project construction and maintenance projects move forward in a manner that meets project objectives and schedule constraints, while at the same time complying with resource agency permit requirements for biological and water quality resource protection.

Project Team resumes, including years of experience, education, special knowledge and skills, pertinent permits, and brief descriptions of relevant project experience can be found in Attachment B.

Task 14: References

Psomas' Environmental Services is currently working on and has completed CEQA/NEPA task orders for IRWD via an on-call services contract. The following is a list to date of work completed and ongoing along with key IRWD staff.

Zone A to Rattlesnake Reservoir Pump Station IS/ MND (December 2019)

Jo Ann Corey, Environmental Compliance Specialist

 3.7 MG Zone 1 Reservoir IS/MND (March 2018) Jo Ann Corey, Environmental Compliance Specialist

- Irvine Lake Pipeline (ILP)-North Conversion Project: Santiago Hills C + Reservoir
 - California Gnatcatcher Survey (October 2016) Jo Ann Corey, Environmental Compliance Specialist
 - Burrowing Owl Survey (October 2016) Jo Ann Corey, Environmental Compliance Specialist
- ILP North Conversion Project: Baker Raw Pumping Station
 - Special Status Plant Surveys (June 2017)

Jo Ann Corey, Environmental Compliance Specialist

- Coast California Gnatcatcher Survey (June 2017) Jo Ann Corey, Environmental Compliance Specialist
- ILP- North Conversion Project IS/MND (December 2015)

Jo Ann Corey, Engineering Technician III

 ILP-North Conversion Project Mitigation Monitoring

Jo Ann Corey, Engineering Technician III

One of the projects Psomas recently completed for IRWD pursuant to this contract is an IS/MND for the ILP North Conversion Project and the associated Zone A to Rattlesnake Reservoir project. The project would involve the conversion of a segment of the ILP from untreated water to recycled water and all associated improvements to IRWD's water distribution system required to accommodate this conversion. Psomas' point of contact at IRWD pursuant to this project is Jo Ann Corey, Engineering Technician III, in the IRWD Engineering Department. A complete description of this project is provided in Attachment A, Relevant Project Descriptions.

Additionally, Psomas has provided a letter of reference from the Eastern Municipal Water District that speaks to Psomas' technical expertise, responsive service, and budget and schedule compliance. This letter is provided in Attachment C, Letter of Reference.

Schedule

Psomas understands that good communication requires a level of transparency with our clients regarding schedule and budget. In order to present an accurate picture of the project schedule and budget to IRWD on a regular basis, the Psomas management team will actively track each project's progress through our in-house management software, allowing us real-time project statistics. With this information, our management team can quickly make the necessary adjustments to reallocate resources and make any necessary reassignments to ensure schedules are met and budgets are not exceeded. Our commitment to schedule and budget has been demonstrated through our past work with IRWD on the Irvine Lake Pipeline North Conversion Project and our extensive work since 1996 with OC Public Works and since 1998 with Santa Margarita Water District.

Joint Venture

Psomas will not engage in a Joint Venture. Psomas, as the Prime, is adding one subconsultant, MBC Aquatic Services (MBC) for this On-Call Contract. MBC will provide support on Task 8 Water Quality, Storm Water Monitoring, and Reporting. Psomas has the depth of expertise with its current staff to complete all other work efforts associated with this On-Call contract within IRWD's budget and schedule requirements.

Conflict of Interest

Psomas has no conflicts of interest that would preclude our capacity to uphold this contract.

Contract

Psomas has reviewed the professional service agreement and has no proposed modifications to the standard terms and conditions.

Insurance

Psomas insurance coverage for both professional liability and general liability meets the requirements stated in the RFP. ACORD certificates demonstrating current coverages are provided in Attachment D to this proposal. Psomas' insurance certificates will be presented to IRWD upon contract award.

ATTACHMENTS

Attachment A: Relevant Project Descriptions Attachment B: Resumes Attachment C: Letter of Reference Attachment D: ACORD Insurance Forms



Psomas

Botanist

Psomas

Key Personnel	Availabili
Jonathan Aguayo	50%
Robert Becker	75%
Brad Blood, PhD	50%
Michael Deseo	50%
Matthew Heideman	20%
Amber Heredia	40%
Daniel Jaques	90%
Ann Johnston	20%
Megan Larum	50%

Senior Scientist

Robert Moore Senior Scientist MBC Aquatic Sciences

Key Personnel	Availability					
Richard Lewis III	30%					
Michael Lyons	65%					
Jennifer Marks	65%					
Lindsay Messett, CWB	40%					
Robert Moore	50%					
Steve Morris	90%					
Sean Noonan, AICP	40%					
Allison Rudalevige	30%					
David Vilas	75%					

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Team Availability

The table to the left estimates the percentage of time each alphabetically listed staff member would have available to commit to IRWD-assigned tasks. Psomas is committed to devoting the staff resources necessary in a timely matter to ensure exceptional client service. We are highly qualified in providing on-call monitoring and permitting services to public agencies and are careful to ensure key staff members are available for the oncall contract as needed to fulfill any schedule demands that may arise.

Irvine Ranch Water District On-Call CEQA/ NEPA Consultation Services

Irvine and Orange County, CA

OWNER/CLIENT

Irvine Ranch Water District

REFERENCE

Jo Ann Corey (949) 453-5362 corey@irwd.com

DATES

8/2014 to 1/2016

FINANCIAL SIZE

Varies by individual task order

Psomas has provided environmental services to the Irvine Ranch Water District (IRWD) since 2010 and we currently under contract to provide on-call services (this is our second oncall contract, which was awarded in August 2016; our first on-call contract was awarded in January 2014). Under our first On-Call Contract, Psomas prepared an Initial Study/Mitigated



Negative Declaration (IS/MND) for the Irvine Lake Pipeline North Conversion Project. The project would involve the conversion of a segment of the ILP from untreated water to recycled water and all associated improvements to the IRWD water distribution system required to accommodate this conversion. The proposed project involves improvements and modifications to several IRWD facilities in the cities of Orange and Irvine. A portion of the ILP from the Baker RWPS near the Peters Canyon Reservoir to the Rattlesnake Reservoir Complex would be converted to a recycled water line. The ILP North Conversion Project includes capacity for both existing and future planned untreated water demands. Project actions would include construction of a 2.4 MG recycled water reservoir as a partially buried circular tank and associated inlet and outlet structures; conversion of an existing booster pump station to allow for pumping of recycled water to two separate zones; reconfiguring an existing water facility to serve as a back-up source of recycled water; and construction of pipelines within existing roadways in the cities of Irvine and Orange.

In addition to preparation of the IS/MND for the project, Psomas prepared the air quality analysis, biological resources assessment, cultural resources assessment, greenhouse gas analysis, and noise assessment pursuant to CEQA requirements. Because the project would qualify for grant funding, Psomas coordinated with the U.S. Department of the Interior Bureau of Reclamation



to define any additional environmental documentation requirements and completed the additional work pursuant to CEQA-Plus.

A portion of the project is located in the Central/Coastal Subregion of the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) and IRWD is a participating jurisdiction and is subject to the terms of the NCCP/HCP Implementation Agreement. Therefore, the Biological Resources Assessment addressed compliance with the NCCP/HCP.

PSOMAS

San Diego Creek Reach II Operation and Maintenance Plan/ Peters Canyon Wash Habitat Mitigation Program |Psomas

Orange County, CA

OWNER/CLIENT

Orange County, OC Public Works

REFERENCES

Jennifer Shook, Manager, OC Mitigation and Construction Compliance (714) 955-0615 jennifer.shook@ocpw.ocgov.com

Cort DiStanislao, Sr. Environmental Resources Specialist (714) 955-0263 cort.distanislao@ocpw.ocgov. com

DATES

3/2013 to Present

FINANCIAL COSTS (BIO/MONITORING)

\$681,027.32

This project involves biological surveys and monitoring to support on-going operation and maintenance of San Diego Creek, Reach II (Interstate-405 downstream to Campus Drive). OC Public Works conducts annual maintenance conduct vegetation and sediment removal along the creek for flood-control purposes. The County holds long-term permits with the



regulatory agencies (USACE Section 404, CDFW 1602, RWQCB 401, USFWS Biological Opinion, CDFW Incidental Take Permit), which each contain measures required during implementation of maintenance work. The permits require protection of a 40-foot strip of riparian vegetation along the east bank of the channel to be protected as habitat for the least Bell's vireo. Vegetation outside the 40-foot buffer is removed annually. Additionally, project permits allow removal of native trees from within the buffer; however, three trees with diameter at breast height (dbh) greater three inches must be retained per every 100 feet. Each year, prior to the annual maintenance, Psomas conducts pre-construction visual surveys for western pond turtle, pre-construction flagging/selection of native trees to be removed/retained, pre-construction field meeting with USFWS, CDFW, USACE, and RWQCB, full-time biological monitoring (one experienced with least Bell's vireo as approved by the USFWS and CDFW) for work within the 40-foot buffer, weekly monitoring reports to the resource agencies throughout maintenance work, periodic biological monitoring for work outside the 40-foot buffer, post-construction vegetation mapping, and preparation of an annual report. In addition, Psomas conducts annual focused surveys for least Bell's vireo and southwestern willow flycatcher along both Reach I and Reach II (I-405 downstream to Jamboree Road) to document habitat use and opportunistic observations of nest success. In 2019, a total of 19 territories were recorded (8 in Reach II, 11 in Reach I). Similar numbers have been observed during previous years. Because of the number of territories, the focused survey reports for this project are very detailed.



Psomas prepared a Habitat Mitigation and Monitoring Program (HMMP) to address mitigation requirements associated with basin desilting activities conducted by OC Public Works in San Diego Creek. The HMMP includes exotic vegetation control and native plant species establishment within the Peters Canyon Wash Habitat Mitigation Easement area in compliance with CDFW and USACE requirements for mitigation of impacts to jurisdictional resources. The HMMP follows the USACE's guidelines and complies with standard resource agency requirements for riparian habitat mitigation. The HMMP was also developed in compliance with the Orange County Fire Authority (OCFA) Guidelines for Fuel Modification

PSOMAS



Before Mitigation



After Mitigation

Plans and Maintenance Program (January 2008) since a portion of the mitigation area is subject to OCFA's fuel maintenance requirements. The HMMP includes (1) an assessment of both impact and future mitigation site conditions and development of success criteria; (2) a discussion of the proposed mitigation program; and (3) guidelines for site preparation, plant establishment, long term site maintenance, long-term site performance monitoring, and site status documentation. Additionally, the HMMP addresses potential channel degradation and related impairment to hydrological functions by including guidelines for the implementation of the Incised Template from the USACE's 2009 A Special Area Management Plan (SAMP) for the San Diego Creek Watershed, Orange County, California.

Psomas also provided support for OC Public Works' community outreach activities. This included attendance at community meetings and development of presentation boards and brochures that summarized the exotic plant species control and native plant species establishment program for the Peters Canyon mitigation program. Psomas performed a biological constraints survey and a modified version of the full Physical Habitat Evaluation (PHAB) in compliance with CDFW requirements. Collection of PHAB data was in accordance with the guidelines set forth in the California Water Board's 2007 document entitled Standard Operating Procedures for Collecting Benthic Macroinvertebrate Samples and Associated Physical and Chemical Data for Ambient Bioassessments in California. Psomas compiled the data for use as baseline data in future annual monitoring reports.

Psomas conducted a red-legged frog habitat assessment of the Peters Canyon mitigation site to identify the potentially suitable habitat for the red-legged frog. The results of the survey were incorporated into the Biological Constraints Report.

Approximately 681 mature, exotic trees (e.g., eucalyptus and palm) and a huge volume of non-native understory vegetation and accumulated non-native branches/leaves, were removed along Peters Canyon Creek to facilitate the recovery of native riparian vegetation and to reduce fire fuel risks for adjacent residential areas. Psomas developed detailed implementation specifications for incorporation into OC Public Works' contractor bidding package. Contractor specification information included a detailed methodology description for site preparation; non-native plant species removal (including large trees) and follow-up control; procurement of local native container plant and seed mix species; container planting and seed mix application; performance of longterm site maintenance; and implementation of protection measures that ensure the protection of natural resources, including least Bell's vireo and coastal California gnatcatcher. The implementation specifications were developed in compliance with the approved HMMP and project permits. Prior to off-site mitigation implementation in February 2013, least Bell's vireos had not been documented in the relevant reach of Peters Canyon Creek. As of the 2017 survey season, a total of eight least Bell's vireo breeding territories have been identified by Psomas biologists in the areas where exotic trees were removed and subsequent weed control is being performed.

Psomas is currently monitoring the implementation of the mitigation program at Peters Canyon Wash, including the removal of non-native plant species and the establishment of native plant species. All habitat mitigation planning, survey performance, and monitoring have been completed in a timely manner in compliance with the OC Public Works' schedule for the project.

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