CITY OF COSTA MESA
PROFESSIONAL SERVICES AGREEMENT
WITH
DUDEK

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this 2nd day of October, 2018 ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and DUDEK, a California corporation ("Consultant").

W I T N E S S E T H :

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to perform a comprehensive evaluation of the Fairview Park Wetlands and Riparian Habitat Project, as more fully described herein; and

B. WHEREAS, Consultant represents that it has that degree of specialized expertise contemplated within California Government Code section 37103, and holds all necessary licenses to practice and perform the services herein contemplated; and

C. WHEREAS, City and Consultant desire to contract for the specific services described in Exhibit "A" (the "Project") and desire to set forth their rights, duties and liabilities in connection with the services to be performed; and

D. WHEREAS, no official or employee of City has a financial interest, within the provisions of sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

1.0. SERVICES PROVIDED BY CONSULTANT

1.1. Scope of Services. Consultant shall provide the professional services described in the Scope of Work, attached hereto as Exhibit "A," and Consultant's Proposal, attached hereto as Exhibit "B," both incorporated herein by this reference.

1.2. Professional Practices. All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also warrants that it is familiar with all laws that may affect its performance of this Agreement and shall advise City of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3. Performance to Satisfaction of City. Consultant agrees to perform all the work to the complete satisfaction of the City and within the hereinafter specified. Evaluations of the work will be done by the City Manager or his or her designee. If the quality of work is not satisfactory, City in its discretion has the right to:

(a) Meet with Consultant to review the quality of the work and resolve the

matters of concern;

(b) Require Consultant to repeat the work at no additional fee until it is satisfactory; and/or

(c) Terminate the Agreement as hereinafter set forth.

1.4. Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal and California employment laws, including, but not limited to, those laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment; and all other Federal, State and local laws and ordinances applicable to the services required under this Agreement. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for, or on account of any liability under any of the above-mentioned laws, which may be incurred by reason of Consultant's performance under this Agreement.

1.5. Non-Discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military or veteran status, except as permitted pursuant to section 12940 of the Government Code.

1.6. Non-Exclusive Agreement. Consultant acknowledges that City may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7. Delegation and Assignment. This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of City. Consultant may engage a subcontractor(s) as permitted by law and may employ other personnel to perform services contemplated by this Agreement at Consultant's sole cost and expense.

1.8. Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement. Consultant's covenant under this Section shall survive the termination of this Agreement.

2.0. COMPENSATION AND BILLING

2.1. Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "C," attached hereto and made a part of this Agreement by this reference (the "Fee Schedule"). Consultant's total compensation shall not exceed Seventy-Eight Thousand Dollars ($78,000.00).

2.2. Additional Services. Consultant shall not receive compensation for any services provided outside the scope of services specified in the Consultant's Proposal unless the City or the Project Manager for this Project, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable.

2.3. Method of Billing. Consultant may submit invoices to the City for approval on a progress basis, but no more often than two times a month. Said invoice shall be based on the total of all Consultant's services which have been completed to City's sole satisfaction. City shall pay Consultant's invoice within forty-five (45) days from the date City receives said invoice. Each invoice shall describe in detail, the services performed, the date of performance, and the associated time for completion. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.4. Records and Audits. Records of Consultant's services relating to this Agreement shall be maintained in accordance with generally recognized accounting principles and shall be made available to City or its Project Manager for inspection and/or audit at mutually convenient times from the Effective Date until three (3) years after termination of this Agreement.

3.0. TIME OF PERFORMANCE

3.1. Commencement and Completion of Work. The professional services to be performed pursuant to this Agreement shall commence within five (5) days from the Effective Date of this Agreement. Said services shall be performed in strict compliance with the Project Schedule approved by City as set forth in Exhibit B. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

3.2. Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, material shortages, compliance with laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party.

4.0. TERM AND TERMINATION

4.1. Term. This Agreement shall commence on the Effective Date and continue for a period of one (1) year, ending on October 1, 2019, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties. This Agreement may be extended by one (1) additional one (1) year period upon mutual written agreement of both parties.

4.2. Notice of Termination. The City reserves and has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the City.

4.3. Compensation. In the event of termination, City shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of City's written notice of termination. Compensation for work in progress shall be prorated based on the percentage of work completed as of the effective date of termination in accordance with the fees set forth herein. In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the City or in the possession of the Consultant.

4.4. Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the City within ten (10) days of delivery of termination notice to Consultant, at no cost to City. Any use of uncompleted documents without specific written authorization from Consultant shall be at City's sole risk and without liability or legal expense to Consultant.

5.0. INSURANCE

5.1. Minimum Scope and Limits of Insurance. Consultant shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by City, except that Consultant's Professional Errors and Omissions liability insurer is not required to be admitted, but must be authorized:

(a) Commercial general liability, including premises-operations, products/completed operations, broad form property damage, blanket contractual liability, independent contractors, personal injury or bodily injury with a policy limit of not less than One Million Dollars ($1,000,000.00), combined single limits, per occurrence. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or shall be twice the required occurrence limit.

(b) Business automobile liability for owned vehicles, hired, and non-owned vehicles, with a policy limit of not less than One Million Dollars ($1,000,000.00), combined single limits, per occurrence for bodily injury and property damage.

(c) Workers' compensation insurance as required by the State of California. Consultant agrees to waive, and to obtain endorsements from its workers' compensation insurer waiving subrogation rights under its workers' compensation insurance policy against the City, its officers, agents, employees, and volunteers arising from work performed by Consultant for the City and to require each of its subcontractors, if any, to do likewise under their workers' compensation insurance policies.

(d) Professional errors and omissions ("E&O") liability insurance with policy limits of not less than One Million Dollars ($1,000,000.00), combined single limits, per occurrence and aggregate. Architects' and engineers' coverage

shall be endorsed to include contractual liability. If the policy is written as a "claims made" policy, the retro date shall be prior to the start of the contract work. Consultant shall obtain and maintain, said E&O liability insurance during the life of this Agreement and for three years after completion of the work hereunder.

5.2. Endorsements. The commercial general liability insurance policy and business automobile liability policy shall contain or be endorsed to contain the following provisions:

(a) Additional insureds: "The City of Costa Mesa and its elected and appointed boards, officers, officials, agents, employees, and volunteers are additional insureds with respect to: liability arising out of activities performed by or on behalf of the Consultant pursuant to its contract with the City; products and completed operations of the Consultant; premises owned, occupied or used by the Consultant; automobiles owned, leased, hired, or borrowed by the Consultant."

(b) Notice: "Said policy shall not terminate, be suspended, or voided, nor shall it be cancelled, nor the coverage or limits reduced, until thirty (30) days after written notice is given to City."

(c) Other insurance: "The Consultant's insurance coverage shall be primary insurance as respects the City of Costa Mesa, its officers, officials, agents, employees, and volunteers. Any other insurance maintained by the City of Costa Mesa shall be excess and not contributing with the insurance provided by this policy."

(d) Any failure to comply with the reporting provisions of the policies shall not affect coverage provided to the City of Costa Mesa, its officers, officials, agents, employees, and volunteers.

(e) The Consultant's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

5.3. Deductible or Self Insured Retention. If any of such policies provide for a deductible or self-insured retention to provide such coverage, the amount of such deductible or self-insured retention shall be approved in advance by City. No policy of insurance issued as to which the City is an additional insured shall contain a provision which requires that no insured except the named insured can satisfy any such deductible or self-insured retention.

5.4. Certificates of Insurance. Consultant shall provide to City certificates of insurance showing the insurance coverages and required endorsements described above, in a form and content approved by City, prior to performing any services under this Agreement. The certificates of insurance shall be attached hereto as Exhibit "D" and incorporated herein by this reference.

5.5. Non-Limiting. Nothing in this Section shall be construed as limiting in any way, the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for payments of damages to persons or property.

6.0. GENERAL PROVISIONS

6.1. Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

6.2. Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement.

Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

6.3. Project Managers. City shall designate a Project Manager to work directly with Consultant in the performance of this Agreement.

Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with City during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

6.4. Notices. Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: (a) at the time of delivery if such communication is sent by personal delivery, and (b) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

IF TO CONSULTANT:

DUDEK
27372 Calle Arroyo
San Juan Capistrano, CA 92675
Tel: (805) 450-1818
Attn: Jonis Smith

IF TO CITY:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Tel: (714) 754-5135
Attn: Cynthia D'Agosta

Courtesy copy to:

City of Costa Mesa
77 Fair Drive
Costa Mesa, CA 92626
Attn: Finance Dept. | Purchasing

6.5. Drug-Free Workplace Policy. Consultant shall provide a drug-free workplace by complying with all provisions set forth in City's Council Policy 100-5, attached hereto as Exhibit

"E" and incorporated herein by reference. Consultant's failure to conform to the requirements set forth in Council Policy 100-5 shall constitute a material breach of this Agreement and shall be cause for immediate termination of this Agreement by City.

6.6. Attorneys' Fees. In the event that litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

6.7. Governing Law. This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California.

6.8. Assignment. Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without City's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this Agreement. Regardless of City's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

6.9. Indemnification and Hold Harmless. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the performance of the Consultant, its employees, and/or authorized subcontractors, of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, its employees, and/or authorized subcontractors, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the Consultant, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon the work performed by the Consultant, its employees, and/or authorized subcontractors under this Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.10. Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and

all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

6.11. PERS Eligibility Indemnification. In the event that Consultant or any employee, agent, or subcontractor of Consultant providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing service under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

6.12. Cooperation. In the event any claim or action is brought against City relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require.

6.13. Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, files and tapes furnished or prepared by Consultant or any of its subcontractors in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City.

6.14. Public Records Act Disclosure. Consultant has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subcontractors,

pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code section 6250 *et seq.*). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code section 6254.7, and of which Consultant informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

6.15. Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code sections 81000, *et seq.*) and Government Code section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

6.16. Responsibility for Errors. Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall furnish clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement at no additional cost to City. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to City, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of City and to participate in any meeting required with regard to the correction.

6.17. Prohibited Employment. Consultant will not employ any regular employee of City while this Agreement is in effect.

6.18. Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over the document referenced.

6.19. Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

6.20. No Third Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Consultant and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

6.21. Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

6.22. Construction. The parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

6.23. Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

6.24. Waiver. The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

6.25. Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

6.26. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

6.27. Corporate Authority. The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so the parties hereto are formally bound to the provisions of this Agreement.

[Signatures on following page.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CONSULTANT

Signature _____ Date: Oct. 5, 2018

Dudek
Frank Dudek
[Name and Title] **Chairman / CEO**

95-3873865
Social Security or Taxpayer ID Number

CITY OF COSTA MESA

_____ Date: 10/19/18
Thomas Hatch
City Manager

ATTEST:

Manager for 10/23/18
Brenda Green
City Clerk

APPROVED AS TO FORM:

_____ Date: 10/19/18
Thomas Duarte
City Attorney

APPROVED AS TO INSURANCE:

_____ Date: 10/10/18
Ruth Wang
Risk Management

APPROVED AS TO CONTENT:

_____ Date: 10.16.18
Cynthia D'Agosta
Project Manager

DEPARTMENTAL APPROVAL:

Justin Martin
Parks and Community Services
Director

Date: 10/17/18

APPROVED AS TO PURCHASING:

Kelly Telford
Finance Director

Date: 10/18/18

EXHIBIT A

SCOPE OF WORK

SCOPE OF WORK
FOR
COMPREHENSIVE PERFORMANCE EVALUATION OF THE FAIRVIEW PARK WETLANDS AND RIPARIAN HABITAT PROJECT

Fairview Park (FVP) is the City's largest park, hosting 195 acres of open space - natural area, and 13 acres of landscaped park for a total of 208 acres. Within the 195 acres of open space there are two *Nationally Registered Cultural Resource Historic Sites* and five distinct habitat ecosystems which are home to many rare and endangered plant and animal species. The park acts as a regional gateway to the Santa Ana River Trail, the Orange Coast River Park, and adjacent Orange County Talbert Park, offering users multiple passive recreational opportunities.

The subject of this performance evaluation is the 40 acre Fairview Park Wetlands and Riparian Habitat Project (FVP W&RHP), which was constructed as a mitigation project between 2005 – 2013 in the lower basin and historical flood plain of FVP. The goal of the FVP W&RHP was to enhance the habitat in FVP and reduce storm water pollution, during wet and dry weather, from the Greenville-Banning watershed to meet National Pollution Discharge Elimination System (NPDES) regulations.

Three major components of the FVP W&RHP are:

1) 20 acres of riparian habitat as mitigation,
2) a water delivery system, and
3) a wetland treatment system of ponds and channels

The project was constructed in two phases:

Phase I was built between 2005 and 2009; improvements included installation of 17 acres of riparian habitat, grading of wetland ponds and streams, and installation of a temporary irrigation system. Funding for Phase I was provided by the US Army Corps of Engineers, a California Department of Parks and Recreation Habitat Restoration Grant, and the City's Park Development Fund. Since 2008 the City has contracted out the maintenance and monitoring of the restored habitat.

Phase II was built between 2009 and 2013; improvements included the completion of the constructed wetland ponds and water delivery system, a multipurpose trail, fencing, and signage. Funding for Phase II of the project was provided by grants from the Orange County Transportation Authority (OCTA), M2 Environmental Mitigation Fund, the Transportation Enhancement Fund (TE Grant), State of California's Recreational Trail Grant Program, the MiOcean Foundation and the City. Operations of the water delivery system is a function of Orange County Flood Control District and is monitored by the City's contract biologist.

The nine-year old riparian habitat has been very successful, providing great benefits to wildlife and park users. The matured ecosystem supports numerous protected plant species and several endangered nesting birds, and it is an active location on the states migratory bird route. The vegetation is supported by a constant year round, nutrient rich, water source through the water delivery and treatment system.

The original mitigation agreements that permitted the City to implement the riparian habitat required long-term commitments for maintenance, and placed ongoing restrictions on some

methods of vegetation management. As a result of the mitigation agreements, there are two overlapping conservation easements on the site.

The water delivery system (pump station and pipes) diverts untreated dry weather urban runoff and flows from storm events from the Greenville-Banning Channel, into the water treatment system (six ponds and connecting channels). Water was designed to flow slowly through the series of ponds and channels, improving overall water quality before being redistributed into the Placentia Drain (at the base of FVP bluffs), and associated downstream areas. This system has been in full operation for approximately five-years and needs to be evaluated for structural and operational efficiencies.

The success of these two interfacing systems (riparian habitat and water delivery/treatment) in establishing a wetlands area required careful evaluation of vector control in the design phase. Evaluation of the original Vector Control Plan, ongoing emergent vegetation management, and recommendations for improvements to, or suggestions for, alternative operations to address mosquito breeding are a necessary part of this project.

A. General Goals:

The City of Costa Mesa is seeking a multi-disciplinary consultant team (team) to conduct reviews, provide analysis and recommendations, and evaluate the performance of the original design, construction, maintenance, and current operation of FVPW&RHP, its water treatment system, and associated habitat restoration.

The team will include members with strong experience in:

- Construction, design, and operations of wetlands that operate as water treatment systems
- riparian habitat system review,
- mitigation grant conditions,
- vector control maintenance plans,
- wetland engineering
- hydrological systems
- geology
- habitat mitigation standards and regulatory reviews

B. Term

The review is to be completed within a three-month period of time. Public meetings will be conducted as information is developed, with final deliverable presentation(s) that may occur outside of the initial three - month period.

The City will provide all design documents, as built information, and ongoing maintenance practices and schedules for the evaluation team.

C. Minimum Consultant Qualifications:

The key project staff, furnished by the consultant and sub-consultants, must have at least five years' prior experience on similar types of projects. All consultants responding to this Request for Proposal (RFP) will be evaluated on the basis of their expertise, prior experience on similar projects, demonstrated competence, ability to meet the project schedule, adequate staffing, understanding of the project, and responsiveness to the needs and concerns of the City of Costa Mesa.

SCOPE OF CONSULTANT SERVICES

A. Analyze the project, perform field review and investigations, evaluate existing conditions, conduct literature search, research existing City plans and records, and meet with City staff to define the details of the project scope and objectives. Determine appropriate courses of action. Meet periodically with City staff and other agencies involved during the process of review for appropriate guidance and coordination (assume 5-6 meetings). The consultant shall take notes during the meetings and prepare meeting minutes that shall be submitted to the City for approval within one week after the meeting.

B. Provide Review, Analysis, and Recommendations for:

1. **Water flow system**
   - The water delivery system from Greenville-Banning Channel and pump station, verifying the entire path of the waters hydraulic gradients, percolation and evaporation rates.
   - A water budget considering percolation, evaporation, evapotranspiration inputs and outputs.
   - Water routing and resident times through the site, flow velocities and turnover to meet water quality and treatment requirements.
   - Water flows through the ponds and channels, depth of ponds, sediment impacts, outflow of system into Placentia Channel along the base of FVP bluffs.
   - The option and or need to drain ponds seasonally and potential resulting impacts on habitat and protected species.

2. **Pond and channel design and construction**
   - Original design and construction of six ponds and connecting channel system
   - Current operational capacity.
   - Existing levee failures and areas of slumping within the connecting channels of the pond system.
   - Aged levee stabilization netting and associated impacts to wildlife and slope stability.
   - Upper bluff and canyon runoff resulting in erosion, ponding, and future potential impact to system.

3. **Vector control operations and maintenance**
   - Original Vector Control Plans.
   - Current vegetation maintenance practices as they relate to insect management
   - Propose a seasonally adaptive maintenance regime to most effectively prevent / reduce mosquito breeding that is compatible with existing riparian habitat that supports special, listed and endangered species.

4. **Existing conditions and management of riparian habitat areas**
   - Provide an update on the condition of the habitat, its success, challenges, and future compatibility with the water delivery system.
   - Management and stabilization methods for emergent vegetation within the ponds that have developed outside of originally designed retaining areas.

5. **System compatibility with adjacent land uses**
   - Residential neighborhoods.
   - Regionally connected watershed drainage and associated flood management systems.
   - Erosion in and around the wetlands (i.e. toe of slope along FVP's bluffs, Placentia Drain, park canyon and adjacent slopes).

6. **Project funding limitations**
   - Restrictions/conditions placed upon the project by original funding sources.
   - Compare original funding restrictions to recommended future actions given to improve wetlands operations and/or water delivery system, including but not limited to any additional permitting and CEQA/NEPA compliance that may be necessary.

7. **Public Safety**
   - Any and all conditions at the site that may point to potential public safety concerns.

C. Deliverables:

1. Bi-weekly draft progress reports (as information is developed) for staff review.

2. Final document to contain sections that include evaluation, analysis, conclusions, and recommendations for the original design and construction, and current operations of the FVPW&RHP including:
- Water delivery system existing conditions and operational efficiency.
- Pond and channel existing conditions and operational efficiency.
- Vector management plans.
- Habitat existing conditions.
- Erosion and sediment.
- Adjacent land uses.
- Original funding restrictions/conditions.
- Potential public safety concerns.

3. Provide presentations (minimum of five) to interested residents, agencies, general public.


SUNSET FROM THE BLUFFS


WETLANDS


UPPER MESA GRASSLAND TRAIL

CITY OF COSTA MESA, FAIRVIEW PARK

CYNTHIA D'AGOSTA | (714) 754-5135 | CYNTHIA.DAGOSTA@COSTAMESACA.GOV

https://www.costamesaca.gov/index.aspx?page=1576

Costa Mesa

Parks & Community Services Department

FAIRVIEW PARK

Fairview Park (FVP) is the City's largest park, hosting 195 acres of open space - natural area, and 13 acres of manicured landscape for a total of 208 acres. Within the 195 acres of open space there are two *Nationally Registered Cultural Resource Historic Sites* and five distinct habitat ecosystems which are home to many rare and endangered plant and animal species. The park acts as a regional gateway to the Santa Ana River Trail, the Orange Coast River Park, and adjacent Orange County Talbert Park, offering users multiple passive recreational opportunities such as picnicking, kite flying, wildlife observation, environmental education, and miles of trails for walking or bicycling. The park also hosts a miniature railroad and model airplane flying field both run by partnering non-profits, and hosts a number of City-wide special events throughout the year.

Management Zones: (6)

- Archaeological sites
- Manicured park and parking area (13 acres [A])
- Transition zones: bluff side stairs; pedestrian bridge across Placentia Ave.; two traffic signal crosswalks (3rd planned); stairway entrance at Canary Drive; Fairview Channel
- Urban edges: Three different residential neighborhoods; Golf Course; regional park; high school; private school; major avenue with planted median
- Restoration sites (see below)
- Diversity of ecosystems (see below)

Ecosystems: (5)

- Grasslands support native grass scrubs including endangered species Southern Tar Plant and Burrowing Owl
- Wetlands are approximately 6 A of ponds (reclaimed water cleaned through system) and 20 A of restored riparian habitat supporting the endangered bird species least Bell's vireo
- Bluff shelf is approximately 30 A of native and invasive plant species
- Vernal pool complex totals 3.93 A supporting 6 rare plants and 2 endangered species of fairy shrimp. It is the last CA coastal vernal pool complex north of San Diego
- Canyon & Coastal Sage Scrub area supports CA Gnatcatcher endangered bird species

Active Restoration Sites: (4)

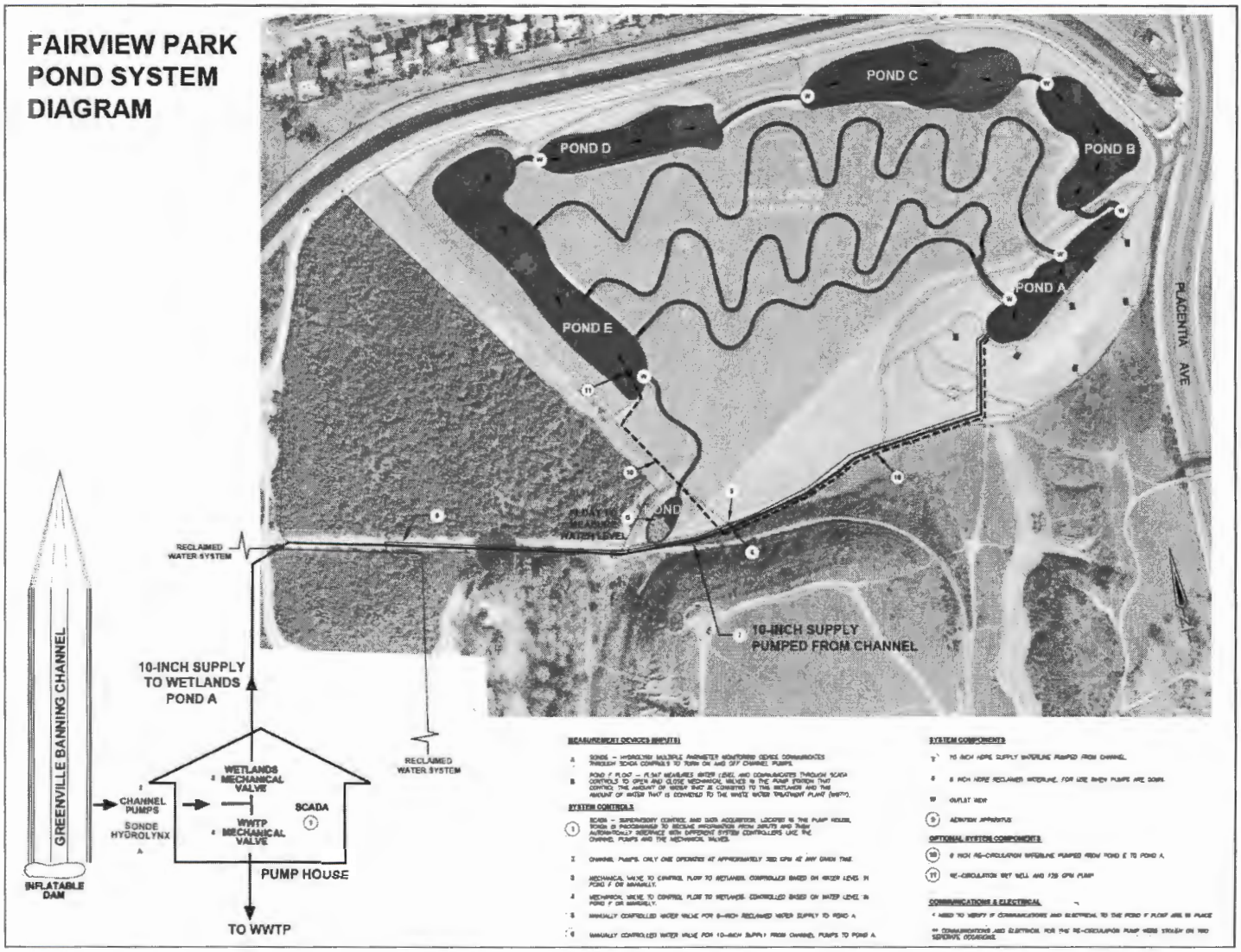
- Coastal Sage Scrub (18A)
- Riparian Scrub (20A)
- Canyon / Vandersloot Garden (.5 A)
- Vernal pools (2 A)

Strategic Partnerships:

- Non-profits: Orange County Model Engineers; Harbor Soaring Society; Institute for Conservation Research Education; Orange Coast River Park; Audubon Society; Fairview Park Alliance; Banning Ranch Conservancy
- FVP City Steering Committee: residents, Parks & Rec Commissioners, City Council, and City staff

Fairview Park is known to have more bird species than any other Orange County park and is a local favorite for spectacular sunsets!

FAIRVIEW PARK POND SYSTEM DIAGRAM



MEASUREMENT DEVICES (INPUTS)

A SONDE – HYDROLYNX MULTIPLE PARAMETER MONITORING DEVICE COMMUNICATES THROUGH SCADA CONTROLS TO TURN ON AND OFF CHANNEL PUMPS.

B POND F FLOAT – FLOAT MEASURES WATER LEVEL AND COMMUNICATES THROUGH SCADA CONTROLS TO OPEN AND CLOSE MECHANICAL VALVES IN THE PUMP STATION THAT CONTROL THE AMOUNT OF WATER THAT IS CONVEYED TO THE WETLANDS AND THE AMOUNT OF WATER THAT IS CONVEYED TO THE WWTP WATER TREATMENT PLANT (WWTP).

SYSTEM CONTROLS

(1) SCADA – SUPERVISORY CONTROL AND DATA ACQUISITION. LOCATED IN THE PUMP HOUSE, SCADA IS PROGRAMMED TO RECEIVE INFORMATION FROM INPUTS AND THEN AUTOMATICALLY INTERFACE WITH DIFFERENT SYSTEM CONTROLLERS LIKE THE CHANNEL PUMPS AND THE MECHANICAL VALVES.

2 CHANNEL PUMPS. ONLY ONE OPERATES AT APPROXIMATELY 300 GPM AT ANY GIVEN TIME.

3 MECHANICAL VALVE TO CONTROL FLOW TO WETLANDS. CONTROLLED BASED ON WATER LEVEL IN POND F OR MANUALLY.

4 MECHANICAL VALVE TO CONTROL FLOW TO WETLANDS. CONTROLLED BASED ON WATER LEVEL IN POND F OR MANUALLY.

5 MANUALLY CONTROLLED WATER VALVE FOR 8-INCH RECLAIMED WATER SUPPLY TO POND A.

6 MANUALLY CONTROLLED WATER VALVE FOR 10-INCH SUPPLY FROM CHANNEL PUMPS TO POND A.

SYSTEM COMPONENTS

7 10 INCH HDPE SUPPLY WATERLINE PUMPED FROM CHANNEL.

8 8 INCH HDPE RECLAIMED WATERLINE, FOR USE WHEN PUMPS ARE DOWN.

9 OUTLET WEIR

(10) AERATION APPARATUS

OPTIONAL SYSTEM COMPONENTS

(10) 6 INCH RE-CIRCULATION WATERLINE PUMPED FROM POND E TO POND A.

(11) RE-CIRCULATION WET WELL AND 735 GPM PUMP

COMMUNICATIONS & ELECTRICAL

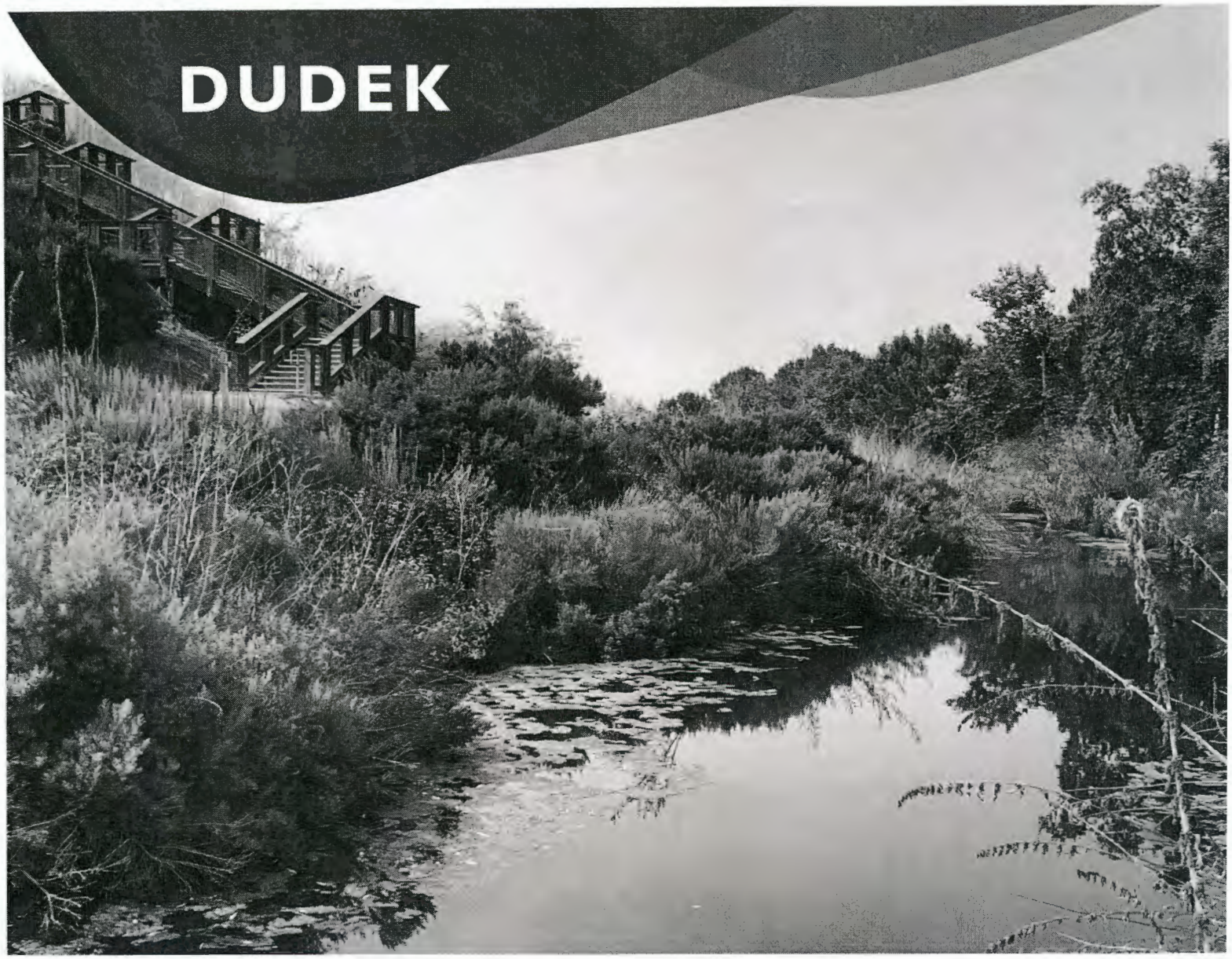
* NEED TO VERIFY IF COMMUNICATIONS AND ELECTRICAL TO THE POND F FLOAT ARE IN PLACE

** COMMUNICATIONS AND ELECTRICAL FOR THE RE-CIRCULATION PUMP WERE STOLEN ON 1ST SEPTEMBER, 2016/2018.

EXHIBIT B

CONSULTANT'S PROPOSAL

DUDEK



Comprehensive Performance Evaluation of the Fairview Park Wetlands and Riparian Habitat Project: RFP No. 19-01

PREPARED FOR
City of Costa Mesa

August 23, 2018

27372 Calle Arroyo . San Juan Capistrano, CA 92675 . 949.450.2525 . dudek.com

27372 CALLE ARROYO
SAN JUAN CAPISTRANO, CALIFORNIA 92675
T 949.450.2525 F 949 450 2626

August 23, 2018

Stephanie Urueta
City of Costa Mesa
City Hall
Office of the City Clerk
77 Fair Drive
Costa Mesa, California 92628-1200

Subject: RFP No. 19-01 Comprehensive Performance Evaluation of the Fairview Park Wetlands and Riparian Habitat Project

Dear Ms. Urueta,

Dudek is pleased to present our proposal to provide a Comprehensive Performance Evaluation of the Wetlands and Riparian Habitat within Fairview Park. Our team offers the multi-discipline technical skills needed to successfully analyze this multifaceted project, evaluate the current challenges and develop solutions to help you meet your goals in a timely and professional manner.

The Dudek team offers the following:

- **Diverse, Specialized Technical Expertise.** As a medium-sized firm, Dudek is small enough that project managers can make quick decisions, yet large enough that our diverse staff can tackle a spectrum of planning, engineering and environmental projects. We quickly mobilize the right technical experts from a deep pool of experienced professionals. Rigorous internal oversight and quality control review by senior staff ensure our clients receive cost-effective, timely and high-quality products.
- **Regional and Local Presence.** Our corporate headquarters are located in Encinitas, however our regional office in San Juan Capistrano, which serves the Orange County area and beyond, will be the location through which this project will be managed and staffed accordingly. Our regional offices in Riverside and Pasadena also provide additional staff resources with local knowledge and expertise. Additional technical support will be provided from our Encinitas office as needed. Our local presence and proximity to Fairview Park and the City offices, as well as the depth of technical staff we can utilize from our Southern California offices, provides us with staffing flexibility and strong technical capabilities. We can address all the issues associated with your project, and through our local office we have the ability to provide timely responses to meeting requests, site visits, community meetings and we can quickly meet project deliverable deadlines.

- **Highly Qualified Project Team.** We have evaluated your project needs and have assembled a team of local in-house experts appropriate to address the needs of your project including civil engineers, hydrology and hydraulics experts, water quality specialists, biologists, landscape architects, habitat restoration specialists and permitting staff. We feel that our team can address the complex issues you wish to explore through the analysis of your project and by developing practical solutions to address the current issues of concern.
- **Local Knowledge and Project Experience.** We have extensive local and regional experience in similar projects to the scope of your project, addressing water quality issues, water conveyance for lakes, ponds, ornamental water features and wetland habitats, as well as knowledge of water aeration, vector control measures and habitat health and functionality assessments. We also have direct project experience in Talbert Park immediately adjacent to Fairview Park, where we prepared an analysis of mitigation opportunities and constraints, as well as an evaluation of ground water resources and hydrology to support mitigation revegetation efforts, for the County of Orange. Our biology staff also have experience directly within Fariview Park participating in voluntary census for the Tricolored Blackbird Statewide Survey in 2014, 2015 and 2017 with U.C. Davis staff. We also have biology staff who live within a few miles of the site and know the project area, the native habitats and vegetation, and the park amenities intimately. Our landscape architects and habitat restoration specialists are highly experienced in designing, permitting, maintaining and monitoring wetland, upland and sensitive/endangered species mitigation projects similar to yours. We are experienced in compliance with resource agency permit requirements, and adherence to local, state and federal environmental requirements.
- **The Expertise to Develop Innovative Solutions.** We feel that we have the in-house knowledge and expertise to complete your study, provide analysis results, develop recommendations, innovative solutions and appropriate remedial measures to address the current site conditions. We understand that the functionality of the water quality system and the conveyance of water through the project is critical to the health and survival of the wetland mitigation/revegetation areas. We also understand that successful achievement of project goals and objectives is very important to demonstrate success and sustainability to the stakeholders and agencies that participated and helped fund this project. Our analysis and design solutions will take into account all site and environmental conditions so that the solutions that are reached are the least environmentally impactful and can comply with the jurisdictional and resource agency permit requirements and expectations.

We are excited to provide our proposal for your review and consideration and we hope you find our qualifications and proposed scope of work to more than adequately address the type of professional multi-disciplinary expertise you are looking for to develop solutions to your project needs.

Sincerely,

Frank Dudek
CEO

Jonis Smith
Project Manager

Frank Dudek is authorized to sign on behalf of Dudek.

RFP No. 19-01 C02275

VENDOR APPLICATION FORM
FOR
RFP NO. 19-01
COMPREHENSIVE PERFORMANCE EVALUATION OF THE FAIRVIEW PARK WETLANDS AND RIPARIAN HABITAT PROJECT

TYPE OF APPLICANT: ☒ NEW ☐ CURRENT VENDOR

Legal Contractual Name of Corporation: Dudek

Contact Person for Agreement: Jonis Smith

Corporate Mailing Address: 605 Third Street

City, State and Zip Code: Encinitas, California 92024

E-Mail Address: jsmith@dudek.com

Phone: 800.450.1818 Fax: 760.632.0164

Contact Person for Proposals: Katie Newton

Title: Accounting Financial Analyst E-Mail Address:

knewton@dudek.com Business Telephone: 760.479.4137

Business Fax: 760.632.0164 Is your business: (check one)

☐ NON PROFIT CORPORATION ☒ FOR PROFIT CORPORATION

Is your business: (check one)

☒ CORPORATION ☐ LIMITED LIABILITY PARTNERSHIP

☐ INDIVIDUAL ☐ SOLE PROPRIETORSHIP

☐ PARTNERSHIP ☐ UNINCORPORATED ASSOCIATION

RFP No. 19-01 C02275

Names & Titles of Corporate Board Members
(Also list Names & Titles of persons with written authorization/resolution to sign contracts)

Names	Title	Phone
Frank Dudek	CEO	800.450.1818
Joe Monaco	President	800.450.1818
Peter Quinlan	Vice President Hydrology	800.450.1818
Bob Ohlund	Vice President Engineering	800.450.1818
Mark Girard	President, Habitat Restoration Sciences	760.479.4210
Tom Larkin	Outside Director	800.450.1818
Gerry Salontai	Outside Director	800.450.1818

Federal Tax Identification Number: 95-3873865

City of Costa Mesa Business License Number: _____

(If none, you must obtain a Costa Mesa Business License upon award of contract.)

City of Costa Mesa Business License Expiration Date: _____

Table of Contents

SECTIONS

TABLE

APPENDICES

Project Understanding

Dudek understands that the City of Costa Mesa, Parks & Community Services Department is in need of a comprehensive performance evaluation of the Fairview Park wetlands and riparian habitat areas, including the ponds and water delivery and conveyance systems. We understand that this evaluation is primarily a wetland engineering analysis intended to evaluate the hydrological, structural and operational efficiencies of the ponds, water conveyance systems, and water treatment facilities which provide water quality benefits through the treatment of dry weather urban runoff, as well as suppling a water source for the wetland mitigation/riparian habitat areas. Other important components of the project include an understanding of the biological resources, an evaluation of vector control issues, the health of the overall system, and an understanding of the habitat mitigation/revegetation components of the project, that might pose constraints on the development of remedial solutions. This analysis would look at the current functionality of the water distribution and conveyance systems, including delivery systems, ponds, channels, and structural components, in comparison to the original design and to determine how the current challenges can be remedied without adversely affecting the wetland/riparian mitigation areas. These issues need to be evaluated and analyzed in detail so that practical solutions can be developed that are the least environmentally damaging from a CEQA/NEPA standpoint and support the long-term goals of the overall project.

It is our understanding that while the wetland mitigation vegetation has developed extremely well up to this point, the water circulation/conveyance systems, that were intended to support the vegetation, are not functioning as intended in terms of water conveyance through the ponds, channels and vegetation. In many locations dense wetland vegetation has developed that has compromised the functioning of the ponds and are blocking the water input pipes. We understand that the City has previously removed, and is currently in the process of removing, significant amounts of cattails/tules from the ponds and channels where flows have been compromised. The City intends to have a sub-contractor remove more of the problematic vegetation with motorized equipment in the future to help keep water flowing through the system and manage habitat for local wildlife.

The primary project components to be evaluated and analyzed include the following:

- One of the main problems involves Pond A, where the main water input was intended to supply 350 gallons/minute, with a backup system from the Banning Channel, adjacent to Talbert Park, which also utilizes a recirculation system from Pond F, these components are not functioning as intended. It appears that the backup system does not provide adequate flow when there is a lack of water from urban runoff in the Banning Channel. It appears that in low flow conditions the rubber dam outflow device is turned-off, not diverting enough water into the pump system. In addition, the recirculation system from Pond F back to Pond A does not function properly, the cause of which is currently unknown. The primary evaluation and analysis of the project will focus on further evaluating these problems and devising solutions to re-establish adequate flows into Pond A from the backup system and the recirculation system from Pond F.

- In addition, water is unintentionally leaving Pond F and is flowing aboveground towards the south, parallel to the park and bluffs, heading towards Talbert Park. The cause of this is currently unknown. Only a small amount of water was intended to leave Pond F, so devising a solution to this issue is also a priority.
- There is also a question regarding the current depth of the ponds. An evaluation of the current depths will help determine how much sediment is accumulating and will help determine what conditions have changed from the original design. In addition, some of the levees and weirs appear to be too high to function properly. It also appears that some of the channels between the various ponds need to be reconfigured to better facilitate water conveyance.
- The dense stand of cattails (tules) and other marsh and riparian vegetation which is blocking access to the inlets into the ponds is compromising flow and is also causing vector problems. The dense vegetation also inhibits vector control measures from being successfully implemented, The Orange County Vector Control is currently working with the City to address these problems, but additional expertise in addressing these issues will be needed by the project team, to help develop appropriate solutions, while not adversely affecting the marsh vegetation.
- Water quality filter "planter boxes" at the downstream end of each pond, have also become overgrown with native wetland vegetation that is compromising the proper operation of the system. These issues will need to be addressed to develop appropriate solutions to allow these devises to function as intended.
- It is our understanding that the City would like to develop a long-term management plan so that regular maintenance and the removal of selective vegetation blocking system operation will allow water flow to be reestablished through the ponds to help support the wetland mitigation/restoration vegetation as was originally intended.

1. Dudek will prepare an Implementation plan addressing the following:
   i. Methods and controls used to manage a project of this type.
   The Dudek project manager will coordinate directly with the City and the project team specialists, assigning work duties, explaining reporting requirements, providing requested information to the City, keeping track of staff labor and expenditures, and coordinating project invoicing so that the project stays on track and within budget. The principal in charge will provide guidance, technical oversight regarding water quality issues, and quality control/quality assurance (QA/QC) review and support, to ensure that all project deliverables are technically sound and of high quality. The principal can step in when necessary to provide leadership support, but for the most part will be behind the scenes helping to assure the project moves along smoothly as intended.
   ii. Methodology for soliciting and documenting viewpoints of internal City and external public stakeholders. Dudek will solicit information and opinions from the City and the public in jointly coordinated public presentations/meetings. Dudek will document all internal City and external public viewpoints which will be carried forward in the project documents. Dudek will coordinate with the City to provide follow-up public feedback as deemed appropriate.
   iii. Other project management, implementation strategies, or techniques Dudek intends to use in carrying out the work include review of weekly and monthly project accounting billing reports, which will be utilized to track project budget status. This information will be used to coordinate with and direct Dudek staff on completion of project tasks. Each invoice provided to the City will provide a description by task, of the work completed during each billing period, showing hours and staff billing level, including the total of prior billings, the amount of current billings and the remaining budget.
2. A detailed description of the services Dudek will provide to meet the goals of the City for this project are described below under Scope of Services
3. A detailed project schedule showing all tasks, the duration of each task, the milestones for project deliverables and the total timeframe for project completion are shown on on the attached Table.
4. Dudek assumes that the City will provide all applicable project documents, studies and analyses previously prepared/conducted. The City will provide as-built topographic mapping and survey data showing existing elevations. As-built plans will be provided in a CAD format, if available. Any GIS information developed for the project will also be provided. The City will designate a City project manager to serve as the main point of contact for Dudek coordination. City engineering staff familiar with the project will provide Dudek with information and clarifications of existing conditions and the functioning of the existing water delivery and conveyance system. City staff will expedite all City document review and comment cycles to provide timely feedback for Dudek submittals and final work products. The City will coordinate, schedule and facilitate all City and Community meetings, with Dudek attending to provide the technical input and presentation of project findings and solutions. Dudek will attend up to five community/public meetings to solicit feedback on the project solutions. Dudek will also attend up to five meetings with City staff to review project status and to discuss findings and project alternatives. This includes City offices and/or site meetings. Dudek will provide the research, evaluation and analysis services as outlined in the scope of services description below.

5. Dudek will utilize applicable state of the art field technology for the collection of field data including the use of GPS equipment, "Collector" applications for data collection and upload from remote devises, soil augers, water quality sampling equipment and other equipment as needed for field analysis. Dudek will take representative water samples for analysis by a water testing laboratory to evaluate water chemistry. Dudek will also take representative soil samples for analysis by a soil's testing laboratory, to evaluate soil fertility and agricultural suitability, with recommendations for soil deficiencies. Dudek has all employees conducting field work attend first aide and project safety training to avoid problems in the field and informs them on how to address problems should they arise. Drone surveys can also be provided at an additional cost if needed to provide aerial mapping for detailed analysis of dense vegetation areas, limits of ponded areas that are inaccessible by foot and difficult to filed verify. This also provides an excellent record of current conditions and is an excellent analytical tool.
6. Dudek has a specific recruitment and hiring procedure established through our in-house "Dayforce" applications, which allows us target specific social media sites such as "Linked-In" and "Indeed", as well as public websites where we post current job openings. Our automated procedures allow interested candidates to quickly review job opportunities, apply for positions online and get rapid review and feedback from Dudek staff. The candidate screening process, review by senior staff, interviewing and employment offerings are processed quickly, providing prospective candidates with timely information. Our recruitment strategies target specific areas of technical expertise appropriate to the discipline needing qualified staff. The listings show detailed job offerings and qualifications needed, so prospective candidates can evaluate their skills and background to determine if there is a match with their skills and interest. Dudek will make our recruiting site accessible through the City of Costa Mesa website, which will allow former City employees who are seeking work, or who have started their own consulting businesses, the ability to see if there is a fit for utilizing their skills with Dudek. This current project does afford opportunities for past City employees to become involved as sub-consultants to Dudek, should there be a match. They could potentially assist with the gathering of past project information, assistance in public facilitation, as well as potentially being a liaison between City and Dudek staff.

Scope of Services

Dudek will analyze the project through a collaborative and comprehensive approach, looking at all existing information, evaluating existing site conditions and system functionality, and developing practical solutions to address the areas of concern. Dudek will accomplish this by conducting initial meetings with City staff to understand the goals and objectives of the project, the community concerns, the regulatory framework and to gain a technical understanding of the system functionality. Issues of concern that have developed over time will be evaluated, with the goal of establishing priorities for the system evaluation, analysis and the development of potential solutions. Dudek will then acquire and review all applicable documents associated with the project including, original plans and specifications, as-built drawings, topographic, geological, hydrological and mechanical systems information. Dudek will also review previous biological studies, resource management plans, resource agency mitigation permitting, restoration and revegetation requirements, long-term success criteria, and the reporting requirements of the funding agencies. Dudek will also review current biological monitoring reports documenting maintenance and monitoring efforts and will identify any remedial recommendations previously proposed to address areas of concern.

Dudek will then conduct a detailed site analysis with multiple Dudek technical specialists to ground-truth existing site conditions, collect field data and review all system components. Site information

will be collected using GPS, Collector and other field equipment to document the existing site conditions so that the information can easily be pulled into our GIS database for evaluation. Any CAD information available from the City will also be downloaded for use in the evaluating the water distribution and circulation systems.

Dudek will provide review, analysis and recommendations addressing the following issues:

Research

Dudek will provide detailed literature search to find existing maps, records, and as-built plans for the site. We will then conduct a field review investigation of the site and facilities to evaluate existing conditions. Dudek staff will field measure each weir between the ponds and wetland(s). The weirs are the hydraulic controls and dictate the flow hydraulics between the discreet cell in the system and therefore the overall system. Our research will conclude with a meeting with City staff (engineers and operations personnel) to further refine the existing facility operations, and to refine the project objectives and details. The research phase will provide sufficient information to effectively analyze the existing conditions, identify deficiencies, and develop design solutions to mitigate the deficiencies and improve the site.

Water Circulation System Operation Evaluation

Weir Flow Hydraulics - Dudek will evaluate the hydraulics of the Fairview Park wetlands using site and pond survey data assumed to be provided by the City of Costa Mesa. Based on the design flowrate for the Greenville-Banning pump station, Dudek will determine the average flow velocity and resident times/turnover rates of flow in each discreet pond and in the treatment train using detailed accurate weir flow hydraulic calculations at each hydraulic control section between the ponds. Dudek will calculate an accurate weir flow coefficient (C-value) for each weir based upon the guidelines provided in the *Brater and King Handbook of Hydraulics*. If it is determined that the weirs are actually operating as "submerged weirs" due to insufficient hydraulic gradient between each weir, Dudek will perform submerged weir calculations to determine the correct conveyance characteristic of each weir accounting for the tailwater condition resulting in a submerged weir using the submerged weir calculation methodology provided in the *Brater and King Handbook of Hydraulics.* Dudek will provide specifications and details for installation of flow measurement devices measuring flow into the wetland Pond A from the Greenville-Banning Channel pump station and the flow leaving the wetland Pond F and flowing into the Placentia Channel.

Wetland Water Budget Calculation - Dudek will obtain a representative soil sample from each of the ponds and will send the samples to a soils lab to test the grain size distribution, clay content, and plasticity index to get an estimate of water loss in the ponds due to percolation. The evaporation rate for Fairview Park will be determined using NOAA or California Department of Water Resources evaporation data to determine water loss from the ponds via evaporation. The appropriate evapotranspiration rate will be determined for the site using published data from the California Irrigation Management Information System (CIMIS) to calculate water losses from site via vegetation and trees. Using data obtained from the flow measurement devices to be installed as described above, Dudek will create a complete water budget for the wetland pond areas to determine water circulation rates and losses in the ponds and wetlands. This will be used to develop a complete accounting of water in the system and circulation through the system. With this complete picture, we will be able to determine and prescribe several alternative solutions to resolve the deficiencies within the system.

The recommended deficiency mitigation solutions will also address existing levee failures and areas of slumping within the connecting channels of the pond system, aged levee stabilization netting and associated impacts to vegetation, wildlife and slope stability, and upper bluff and canyon runoff resulting in erosion, ponding, and future potential impact to the system.

Vector Control Operations and Maintenance - We will look at the vector control management plan, as well as existing site conditions to determine where the major problems exist that have led to the current vector control problems. Access for County vector control vehicles and staff for pesticide application will be evaluated, as well as the amount of open water related to vegetation the width of the surrounding the ponds which are likely harboring mosquitos. We will also look at water circulation issues and aeration issues to see how the system is functioning to minimize stagnant water and algae growth.

Existing Conditions and Management of Riparian Habitat Areas – We will evaluate the existing riparian habitat areas to determine if the desired species and plant diversity are being achieved and will evaluate the health of the system related to potential pest invasion such as the Shot-hole Borer, which is known to be causing die-off of willows and other riparian tree species in the area.

System Compatibility with Adjacent Land Uses – We will look at the operation and maintenance of the area as it relates to recreational park users, the adjacent residential and commercial properties. The effects of noise, odor, vector problems, negative visual problems and/or view blockage will be evaluated. Public meetings conducted in collaboration will be conducted to determine adjacent stakeholder concerns and potential remedies.

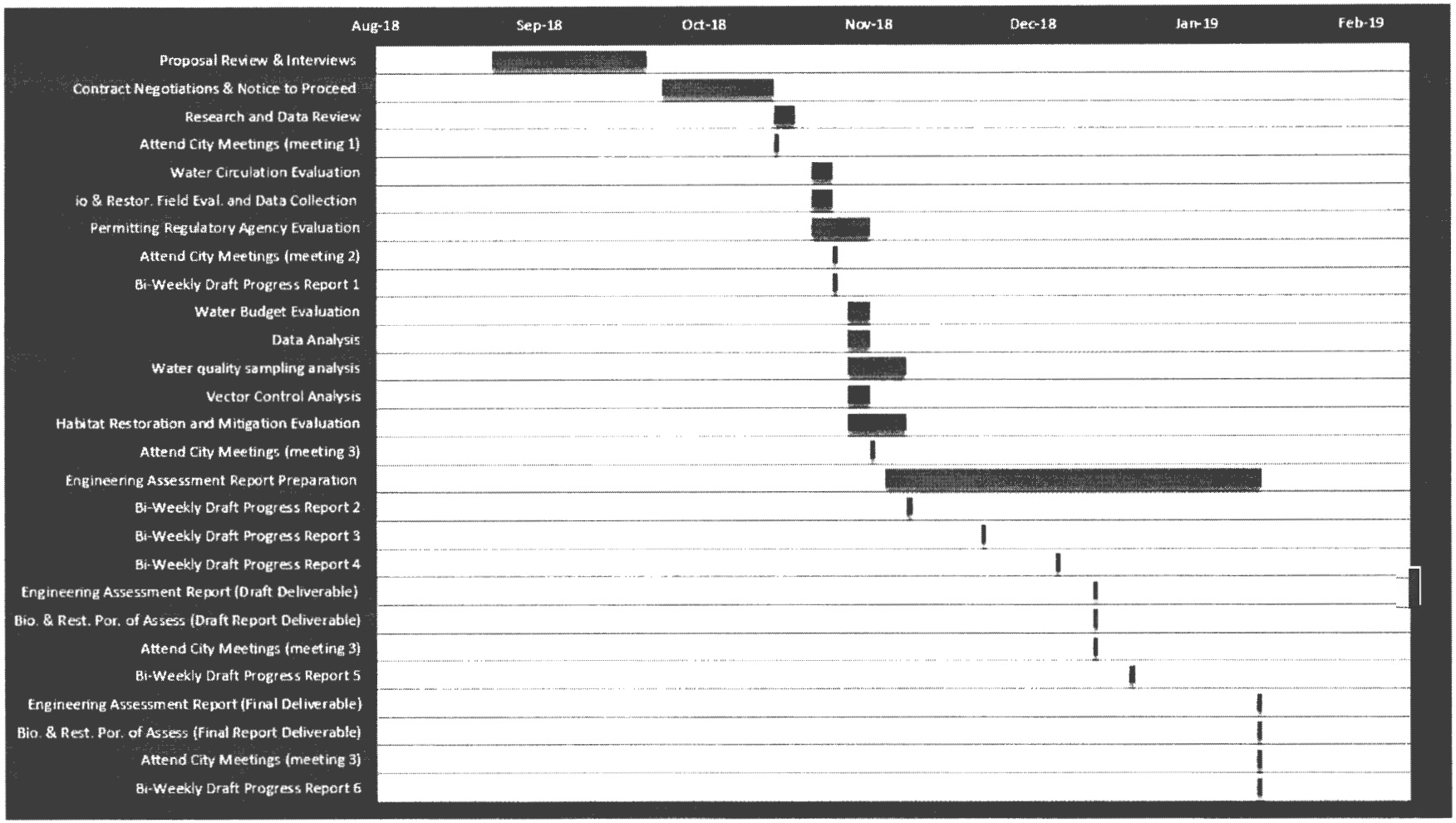
Project Funding Limitations – We will look at the original funding sources and their reporting/documentation requirements, timing of grant funding, other potential funding sources, and how remedial work can be phased over time, depending upon the availability of funds.

Public Safety – We will evaluate public safety issues, related to existing conditions, how the public might be affected during remedial construction measures, as well as over the long-term how the public can be protected from hazards. Fencing and signage treatments will be explored as deterrence to entering hazardous areas. Interpretive signage as well as restrictive signage will be explored to both protect the public and to educate them about the sensitive nature of the habitat areas, as well as potential hazards and safety concerns.

Deliverables:

- Dudek will prepare bi-weekly draft progress reports documenting project progress and provide a look ahead for when documents will be ready for City review and comment.
- Dudek will prepare a final evaluation report with applicable figures/graphics and appendices as required to convey the intended information. The report will be organized by the discipline assigned to each topic, (i.e., engineering, hydrology, geology, hydrology, biology, mitigation/ restoration, maintenance, permitting and funding. The final report will be based upon comments received from the City during review of draft versions of the report.
- Dudek coordinate the preparation of public presentations/meetings (assuming a minimum of 5 presentations) to City staff, interested residents, agencies, other stake holders and the general public. The comments received during these meetings will be documented and incorporated into the project where deemed possible by the City. The public will ber provided with feedback indicating how their concerns have been integrated into the project where feasible.
- Dudek will provide final copies of the evaluation report upon City approval. Hard copies, as well as digital copies, will be provided to the City for distribution as requested. Dudek will conduct all document reproduction services in-house.

Dudek proposes the following schedule.



***Note:** If the notice to proceed date changes from the assumed date above, then the corresponding dates for the various tasks will shift accordingly.

The Dudek Advantage

We are a California-based environmental firm with 12 offices and more than 400 planners, scientists, civil engineers, contractors, and support staff. We assist private and public clients on a broad range of projects that improve our clients' communities, infrastructure, and natural environment. From planning, design, and permitting through construction, we help move projects forward through the complexities of regulatory compliance, budgetary and schedule constraints, and conflicting stakeholder interests.

Our professionals find practical, cost-effective approaches to help you achieve your specific project goals. We work to build your trust, which allows us to offer constructive solutions with your project's long-term success in mind.

Our team focuses on:

- **Natural Resource Management** We provide science-based analysis for preserve design and species survey methodologies, coupled with habitat planning, permitting, design, and installation expertise.
- **Infrastructure Development** We have in-depth experience managing projects where science, regulatory requirements, and community and stakeholder interests converge. We guide clients through analysis, permitting, and implementing private development and public infrastructure projects.
- **Regulatory Compliance** Our scientists and planners have established strong working relationships with the local staffs of California and federal regulatory agencies. Our knowledge of agency expectations, inter-agency agreements, and local regulations involving your project are vital for keeping projects moving forward and obtaining final approvals.

As a mid-sized firm, we provide the personal service of project managers who stay with your project from start to finish, combined with the breadth and depth of capabilities characteristic of larger firms in order to meet your project's requirements. Our project managers are empowered to be problem-solvers with the ability to make decisions in a timely fashion to keep project momentum moving forward. We are proud of our low employee turnover; our staff's long tenure means the project manager you see at the bidding stage will likely be with you at project completion.

Dudek Services

Agency Permitting
Biological Surveys and Monitoring
CEQA/NEPA Compliance
Coastal Planning/Permitting
Cultural Resources
Civil Engineering
Construction Management
Environmental Planning
Habitat Restoration and Management
Hazardous Materials Testing
Hydrology
Urban Forestry
Wildfire Protection Planning
Water Conservation Planning
Water Infrastructure Planning & Design

Dudek at a Glance

- *Multidisciplinary environmental and engineering services*
- *400+ employees*
- *Eleven California offices*
- *Founded in 1980; employee-owned*
- *Top 100 U.S. Environmental Firms (Engineering News-Record)*
- *92% rating for reliability, timeliness, and responsiveness (Dun & Bradstreet, 2016)*
- *More than 160 on-call environmental contracts throughout California*

Our History

The firm was co-founded in 1980 in Encinitas, California by Frank Dudek as a small civil engineering consulting practice working for municipal wastewater agencies and private land developers in San Diego County. The firm steadily grew its civil engineering practice through the 1980s, expanding throughout Southern California.

In 1990, the firm started an environmental practice in response to expanding state and federal environmental regulations. Primarily through organic growth and limited acquisitions of small firms, In the past 38 years of operation, Dudek has grown to a 400-person multi-discipline environmental and engineering firm with offices throughout California, Hawaii, and Oregon. Dudek is ranked as one of the Top 100 U.S. Environmental Firms (Engineering News-Record, 2017). Joe Monaco serves as president with Frank Dudek as CEO/chairman of the board.

Dudek is a registered California corporation with headquarters at 605 Third Street, Encinitas, California, 92024, 760.942.5147.

Early on, the firm enabled direct purchase of shares by employees. In addition, the firm started an employee stock ownership plan (ESOP) in the early 2000s, and has regularly funded the ESOP from profits. As a result, the company is positioned to successfully fund ownership transfer and continue as an independent, employee-owned firm.

The firm maintains a flat organizational structure that empowers project managers to be decision-makers and entrepreneurial. Internal administrative processes are kept to a minimum to limit internal bureaucracy and to enable project managers to be flexible and responsive to meet client needs.

Corporate Officers

Dudek's Board has authorized policy, supported by our corporate bylaws, which states only Dudek corporate officers who are appointed/approved by the Board have the authority to legally bind the corporation. Dudek's corporate officers can be reached at our Encinitas address, and include:

Frank Dudek, PE
CEO
760.479.4227

Joe Monaco, AICP
President
760.479.4296

Peter Quinlan, RG
Vice President Hydrogeology
760.479.4127

Bob Ohlund, PE
Vice President Engineering
760.479.4120

Emily Hart
Secretary
760.479.4232

Christine Moore
CFO
760.479.4873

D. Michael Metts, PE
Asst. Secretary
760.479.4111

Subsidiaries

Habitat Restoration Sciences Inc. (HRS), founded in 2004, is a wholly owned subsidiary of Dudek. HRS is a licensed contractor specializing in native habitat restoration. HRS is headquartered at 1217 Distribution Way, Vista, California, 92081.

Offices

Dudek operates 12 offices throughout California, as well as in Oregon and Hawaii. This project will be managed locally out of the San Juan Capistrano office which opened in 2011 and is located at 27372 Calle Arroyo, San Juan Capistrano, California 92675.

Community Involvement

Dudek supports our clients and community stakeholders through an active program of volunteerism and donations to local civic, educational, and professional development organizations. We believe the most impactful investments are made to local organizations that have a direct impact on local communities. We are proud to support our local communities, and we value the ongoing relationships that we foster through our participation.

We are involved on a financial, professional, and employee level with various schools, charitable and professional organizations, and the in the community itself. We are strong supporters of the city of Encinitas, the Community Resource Center, the Boys and Girls Clubs, the Greater San Diego Inner-City Games, Community Housing Works, and various scholarship programs including the Society of Hispanic Engineers scholarship program.

Other organizations we are involved in include the following:

- Boy Scouts of America
- Cesar Chavez Middle School
- Guajome Park Academy
- Rancho Santa Ana Botanic Garden Arbor Day
- Rotary Club of Carlsbad
- Encinitas – Greening Our Community
- San Diego Engineering Society
- San Diego Archaeology Center
- San Dieguito Academy
- TeamMates Mentoring
- Water For People

Dudek is proud to support the community, and we value the ongoing relationships we continue to foster.

In addition to our community efforts, Dudek has recently launched our own employee fundraising program. DuGood is an annual philanthropy program with team-driven community participation, fundraising, and corporate financial matching to benefit charities across the state. In the program's inaugural year, Dudek raised and donated $32,400 to 16 different organizations.

Biology Lead Ryan Henry served as the Orange County coordinator for the volunteer-based Tricolored Blackbird Statewide Survey in 214, 2015, and 2017. Fairview Park was identified as a historic location of tricolored blackbirds (Agelaius tricolor). The study is hosted by Dr. Robert Meese of UC Davis.

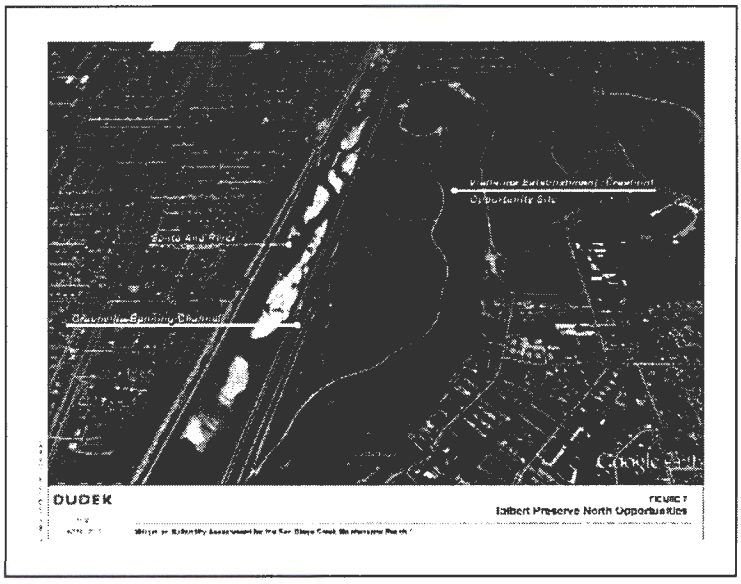
Relevant Project Experience

Dudek's multidisciplinary team offers the City a comprehensive approach for this project. Our experts leverage many years of experience in CEQA/NEPA Planning, Engineering, Hydro-Geology, Water Quality, Compliance Monitorng Habitat Restoration and Biological Monitoring, Landscape Architecture, Biological Resources, Vector Control and Pest Management, Urban Forestry, Cultural Resources, Regulatory Permitting, Grant Writing, and Construction Installation and Maintenance expertise. Dudek can pull from these in-house resources to support the City's needs in a one-stop solution. Detailed qualifications for the Dudek team are provided in the Staffing section of this proposal.

Relevant current and past contracts that are similar in scope to this project are provided below, including descriptions of scope, length of service and client reference contact information.

Talbert Preserve OC Public Works Compensatory Wetlands Mitigation Strategy Project

Client: Orange County Public Works
Dates: 2015
Project Reference: James Volz, P.E., 714.647.3904



In 2015, Dudek conducted site investigations, analysis, evaluations and prepared recommendations for wetlands mitigation opportunities at the Talbert North Preserve in Costa Mesa, adjacent to Fairview Park. The Preserve was assessed for suitability for the establishment of quality riparian vegetation for least Bell's vireo. The study area is located east of the Santa River Channel and Greenville-Banning Flood Control Channel, and is isolated from river hydrology by flood control berms associated with these channels and no evidence of surface hydrology was observed, however historical data indicated that it had been at one time. After a thorough analysis it was determined that Implementation of a wetlands mitigation project at this location could result in 40-plus acres of ACOE and CDFW wetlands mitigation credits.

Groundwater data was collected from three groundwater monitoring wells. Data indicated that groundwater varied from 11 to 15 feet below ground surface, which was roughly consistent with the channel bed elevation of the Santa Ana River. Water quality was measured and data indicated that groundwater was approximately 25% the salinity of seawater.

The mitigation concept was developed to re-establish (create) riparian hydrology and riparian vegetation communities that were self-sustaining and suitable for least Bell's vireo habitat, through the diversion of storm water flow from the Greenville-Banning Channel into the proposed mitigation site. Minor grading of channels and wetland drainage patterns would be implemented to facilitate distribution of flow through the mitigation site and conduct water to the south end of the site.

Multiple beneficial uses would be derived from this mitigation approach, including establishment (creation) of approximately 43 acres of self-sustaining riparian (federal and state jurisdictional)

wetlands and suitable habitat for least Bell's vireo; enhancement of an additional 3 acres of exiting wetlands vegetation; bio-filtration of urban storm water runoff from the Greenville-Banning Channel prior to ocean discharge; and increased groundwater recharge that would offset seawater intrusion.

Lake Calavera Boardwalk Improvement and Wetlands Mitigation Project

Client: City of Carlsbad
Dates: April 2011–Present (August 2018)
Project Reference: Liz Ketabian, Park Planner/Trails Manager, 760.434.2978

The City of Carlsbad Parks and Recreation Department contracted Dudek to provide environmental support services for the Lake Calavera Boardwalk Trails Project. In association with this work, Dudek's habitat restoration designers prepared construction plans, revegetation plans, irrigation plans, details, and specifications for the wetland mitigation creation areas associated with the project, including:

- Preparation of conceptual wetlands mitigation and monitoring plan
- Resource agency permitting coordination
- Preparation of construction plans with legend and construction details
- Preparation of irrigation plans with legend and construction details
- Preparation of revegetation plans with legend and construction details
- Preparation of construction specifications and bid assistance

Heritage Park

Client: City of Cerritos
Dates: 2001 - 2003
Project Manager: Todd Kuh, Parks Superintendent, 562.916.1224

Heritage Park is a 15-acre park that gets heavy usage due to the close proximity to residents, Cerritos High School, and the Paul Revere-Boston Harbor themed kids play island. The island lake was renovated in 2003 to update the Bostonian themed buildings and the lake amenity. Dudek was hired by the City of Cerritos to redesign the 30,000 sq-ft lake and improve the appearance, operational controls, and add water features. The lake has a very narrow cross section that is approximately 30-ft wide on average with a maximum depth of 4-5ft. The lake fill water is treated recycled water from the Los Coyotes treatment plant in Cerritos. Dudek designed the lake to have a 1-ft thick clay liner and a concrete protective cap over the liner. The lake edge varies from a sandy beach lake edge, to a concrete bulk head, to a concrete slump wall naturalized lake edge. Dudek designed all of the lake pump stations and water recirculation facilities as well as each of the fountain water features. The lake also includes a simulated Boston Harbor battle ship where simulated cannon blasts are created using compressed air released below the water surface. Dudek designed and created a scale model of the canon blast nozzles and then designed the full scale model. The lake is home to a large flock of ducks and aquatic turtles. The lake liner system was designed to include a sludge removal trench to assist lake maintenance crews with removal of muck on the lake bottom to control odors and botulism bacteria.

Harveston Community Lake

Client: Lennar Communities
Dates: January 2001 – April 2005
Project Manager: Raymond Becker, VP of Community Development, 909.774.0789

Harveston Lake is a popular 8-acre community lake in Temecula, California. It has a maximum depth of 15-ft and a total lake edge perimeter of approximately 3,800 lf. Dudek was hired by the community developer, Lennar Communities, to design a lake that would be a valued asset in the community. Dudek designed multiple lake edges to incorporate a lake side walkway, a simulated sand beach, the boat dock, fishing piers, an amphitheater, a boat launch ramp, and a fish stocking area. Multiple lake edge types allows the community to see and interact with the lake in various locations and in various ways. Dudek designed the lake to have a several 30-ft tall fountains for aesthetics and aeration. The lake was designed with a the 1-ft thick clay liner with a soil cement protective cover, a safe edge depth of 1-ft and a 4:1 bottom slope. Dudek designed all of the lake operation facilities to be unobtrusive and blend in with the park landscaping including the lake aeration and circulation pump stations and piping systems.

Trump International Golf Course Hole #9 Lake

Client: Ocean Trails Golf Course
Dates: April 2002 – October 2004
Project Manager: Jeff Kaplinski, Bridgegate Development & Management Company LLC, 661.295.3900

Trump National Golf Club Los Angeles is a public golf club in Palos Verdes, California featuring a 7,242-yard course designed by Pete Dye and Donald J. Trump Signature Design. It is ranked among the Top 100 Courses You Can Play by Golf Magazine. Trump National Golf Club Los Angeles was formerly known as the $126 million Ocean Trails Golf Club, an 18–hole course designed by Pete Dye, which was about to open when a landslide occurred and the 18th hole slid toward the Pacific Ocean in 1999. A massive geotechnical project was launched to reconstruct the 18th hole using 1,250,000 cubic yards of earth to fill it. The stabilization work and the slide caused cosmetic damage to the course. The cost of repair was just over $20 million. Dudek was hired by the owners of Ocean Trails Golf Course Robert and Edward Zuckerman to re-design the 9-hole lake. The stated goal of the lake design was that there was absolutely no chance of leaking. So Dudek designed the 40,000-sf Lake-9 with a containment and sensing system that exceeded the standards of nuclear waste ponds. The Hole No.9 lake was designed with three (3) layers of reinforced polypropylene liner. Between the bottom and middle layer a leak detection system was installed to sense any leakage from the 2 liner layers above it. The lake was designed with a natural grass entry edge and a soil cement protective cover to the 4-ft depth to prevent punctures from golfers seeking errant balls on the lake edge. Dudek also designed the lake aeration and circulation system to be completely hidden from the untrained eye using rocks and landscaping features on the golf course to screen and hide the facilities.

Rancho Jurupa Regional Park Expansion

Client: Riverside County Regional Parks and Open Spaces District
Dates: March 2010 – September 2010
Project Manager: Marc Brewer, Senior Park Planner, 951.955.4308

Dudek provided project management and lead design services for a team of architects, landscape architects, and engineers for expanding and improving the Rancho Jurupa Regional Park. Expansion and improvement plans consisted of new sewer lift station, pressure reducing station, RV hookups, new clubhouse, park entrance; water quality BMP's including bioswales, camp store, miniature golf, and water playground. Dudek was responsible for water and sewer improvements, grading plans, drainage improvements, road improvements, fire line, and connecting to the domestic system and disconnecting from wells.

During construction, Dudek was responsible for construction assistance in SWPPP preparation and CGP permitting, submittal review, Requests-for-Information (RFI's), and construction changes. Dudek also provided inspection services for the renovation and expansion of the park project.

Pioneer Park Parking Lot and Dog Park Improvements

Client: City of La Quinta
Dates: August 2009 – October 2010
Project Manager: Bryan McKinney, Principal Engineer, 760.777.7045

The City of La Quinta (City) hired Dudek to provide civil engineering services to prepare construction plans and specifications for the City's Pioneer Park Parking Lot and Dog Park Improvements (Project). Dudek initiated a pre-design meeting with City staff to formalize the design approach. Dudek arranged for the preparation of a geotechnical report for the Project exploring subsurface conditions with borings in three areas and included recommendations for pavement structural sections, earthwork, allowable bearing stresses, and foundations. Dudek also arranged for topographical mapping of the project areas, and conducted a search of utilities serving the Project area.

The design plans and specifications displayed existing topography, utilities and property lines, details of proposed landscaping, and parking lot improvements, including hardscape elements, and site construction elements (fences, railings, benches, and shade structures). Also included was a planting plan and associated irrigation system design. Low Impact Development (LID) features included permeable asphalt concrete (AC) paving systems, bio-swale retention systems, and drought tolerant plantings. Dudek also designed a Water Quality Management Plan (WQMP) for the Project.

Mayflower Park

Client: Riverside County Regional Parks and Open Spaces District

Dates: April 2008 – July 2008

Project Manager: Claire Clark, Senior Park Planner, 951.955.4310

Dudek/RGA team performed design services for a 20-acre portion of Mayflower Park, located on the Colorado River, in the city of Blythe. The purpose of this project was to extend water and sewer services along Colorado River Road to Mayflower Park. Key to the success of this project was maintaining compliance with the various jurisdictional agency requirements. Dudek's team prepared environmental documents to comply with the California Environmental Quality Act (CEQA) and the design and bidding documents required to construct the needed facilities.

The pipelines were designed within the existing road right of way in compliance with the City of Blythe and Riverside County standards. On-site improvements at the park included a new wastewater dump station for recreational vehicle and boat use, a new waterline that was connected to the existing park distribution system, and roadway rehabilitation.

RGA was responsible for landscape design, amenity design and design of the sculptures at the park entry. The park amenities include camping areas, a boat launch and RV storage facilities. Stakeholders include the California Department of Fish and Game, the City of Blythe and the County or Riverside.

Financial Stability

Dudek is an employee-owned corporation that has been profitable each year since its founding in 1980. The firm is in sound financial condition and has no financial or legal issues that would impede our ability to provide the services sought for this contract. Dudek has a strong, experienced, fiscally responsible management team, allowing the firm to finance operations with internally generated funds. **Appendix B** includes the firm's most recent audited financial statement.

Litigation

No Dudek environmental document has ever been successfully challenged. Dudek works hard to maintain a positive record of service with our clients and avoid litigation through quality work and responsible practices and has never filed a petition for bankruptcy. In the past 5 years, Dudek has been named as a co-defendant in the following two cases.

City of Carlsbad vs. Ledcor Construction Inc.
On June 13, 2016, the City of Carlsbad filed a civil complaint in California Superior Court, County of San Diego, against Ledcor Construction Inc. Dudek was named as a co-defendant. The suit is related to construction of the City's First Responder Training Center. Dudek served as construction manager for the City on the project. The case is pending.

Case Title	*City of Carlsbad vs. Ledcor Construction Inc.*
Case Number	37-2016-00019850-CU-CD-CTL
Case Location	San Diego County
Outcome	Pending

East Sacramento Partnership for a Livable City v. City of Sacramento et al.
The East Sacramento Partnerships for a Livable City sued the City of Sacramento challenging the EIR used to approve a proposed 330-unit residential development. Dudek is named as one of multiple co-defendants for our role in preparing the CEQA documentation and processing. The Superior Court upheld the EIR and dismissed the suit. The plaintiff appealed in 2015.

Case Title	*East Sacramento Partnership for a Livable City v. City of Sacramento et al.*
Trial Court Case Number	34201480001851CUWMGDS
Appeal Case Number	C079614
Case Location	Sacramento
Outcome	Case pending before appeal court

Staffing

Resumes for proposed Dudek staff are included in **Appendix A**.

Table 1 outlines requested contact information, education and CEQA/NEPA project experience for key staff.

Table 1 Key Dudek Staff

Name	Position	Telephone/ Fax/Email	Education	Years of Experience	NEPA/CEQA Projects
Jonis Smith	Project Manager Chief Engineer Hydrology/Hydraulics	949-373-8334 off/ 949-450-2626 fax / jsmithn@dudek.com	California State University, Long Beach MS, Civil Engineering (Construction Management), California State University, Long Beach BS, Civil Engineering,	23	• Storm Drain Deficiency Program FY 2016-2017, Rancho Palos Verdes, California • Centennial Park Lake Circulation and Aeration Study, Santa Ana, California • Foothill Transportation Corridor State Routs (SR)241, Sec. 3, Transportation Corridor Agency, Co. Of Orange, California
Bryn Evans	Senior Project Manager QA/QC, Water Quality Assessment	760-479-4143 off/ 760-632-0164 fax / bevans@dudek.com	University of California, Los Angeles MA, Biology, University of California, Santa Barbara BS, Aquatic Biology	17	• Coastal Canyon Watershed and ASBS Assessment and Management Plan, Newport and Irvine Coasts, California • Baseline Warter Quiality Assessment of the Big Canyon Creek Restoration Area, Newport Beach, California
John Minchin, RLA	Senior Habitat Restoration Specialist, Landscape Architecture Mitigation Assessment and Restoration	760-479-4279 off/ 760-632-0164 fax / jminchin@dudek.com	B.S. Landscape Architecture, Cal Poly San Luis Obispo	38 yrs.	• East Grove (Hidden Trails) Wetland Mitigation Program, William Lyon Homes, Escondido, San Diego County, California • Portola Center Residential Community, SCE Viejo parcel Wetlands and Waters mitigation Program, Baldwin and Sons, Lake Forest, California • Stadium Wetlands Mitigation Program, Biological Monitoring, City of San Diego, California • Carlsbad Energy Center, Perimeter Landscaping and Revegetation, NRG, Carlsbad, California • Fairbanks Ranch Golf Course, Wetland Mitigation Project, The Bay Club, Fairbnaks Ranch, California
Stuart Fraser	Habitat Restoration Specialist, Landscape Architecture, Habitat Assessment Field Work	760-479-4274 off/ 760-632-0164 fax / sfraser@dudek.com	California University Pomona MLA, Landscape Architecture Humboldt State University BS, Wildlife Management	15	• Portola Center Residential Community, SCE Viejo parcel Wetlands and Waters mitigation Program, Baldwin and Sons, Lake Forest, California • Upper Chiquita Reservoir Emergency Storage Project, Santa Margarita Water District, Orange County, California • Oso Creek Restoration and Protection Project, City of Mission Viejo, California. • Western Realco Alessandro Business Park Environmental Impact Report (EIR), City of Riverside, California.
Lindsey Mobley	Habitat Restoration Specialist, Habitat Assessment Field Work	760-496-4458 off/ 760-632-0164 fax / lmobley@dudek.com	California Polytechnic State University BS, Environmental Management and Protection, Minors in Biological Sciences and Sustainable Environments	2	• Monitoring of various habitat restoration/mitigation projects for local jurisdictional and governmental projects that required CEQA and resource agency approvals.

Table 1 Key Dudek Staff

Name	Position	Telephone/ Fax/Email	Education	Years of Experience	NEPA/CEQA Projects
Ryan Henry	Biology Lead Biological Analysis and Vector Control Management	949-373-8321 off/ 949-450-2626 fax / rhenry@dudek.com	University of Irvine, California BS, Applied Ecology	15	• Merriam Specific Plan Amendment, NNP, Stonegate Merriam LLC, Unincorporated San Diego County, California • Campus Office (Riverwalk), JH Snyder Company, Los Angeles County, California • Audie Murphy Ranch, Brookfield Homes, Riverside County, California • Biological Resource Assessment, Environmental Planning, and Permit Processing, County of Orange Resources and Development Management Department, California • Upper Chiquita Reservoir Emergency Storage Project, Santa Margarita Water District, Orange County, California
Tommy Molioo	Biological Assessment & Analysis	949-373-8308 off/ 949-450-2626 fax / tmolioo@dudek.com	University of Denver MS, Environmental Policy and Management Minot State University,BA, Biology	11	• Dry Lake Solar Project, Playa Solar, Clark County, Nevada • PA Compliance/Telecommunication Facilities, Southern and Central California
Chris Oesch	Biological Assessment & Analysis Pest and Pathogen Analysis	760-479-4268 off/ 760-632-0164 fax / coesch@dudek.com	Humboldt State University MS, Environmental Systems Eastern Mennonite University BA, Sustainable Agriculture Development,	12	• Upper Chiquita Reservoir Emergency Storage Project, Santa Margarita Water District, Orange County, California • Aquatic Bio-Assessment Study – Rare Habitat Baseline Study, Newhall Land and Farming Company, Santa Clarita, California • Tentative Parcel Map 26363 – Wetland Creation, Enhancement, and Exotic Removal, Newhall Land and Farming Company, Santa Clarita, California.
Shelah Riggs	Permitting Specialist, CEQA/NEPA Expertise and Resource Agency Permit Compliance	951-300-2184 off/ 951-300-2105 fax / sriggs@dudek.com	California State University, Fullerton MS, Environmental Studies California State University, Fullerton BA, Geography	13	• Arroyo Flood Control and Enhancement Project, University of California, Riverside (UC Riverside), Riverside, California • On-Call Regulatory Permitting Services, Harbors, Beaches, and Parks Regional Parks Repair Project, Orange County Public Works (OCPW), Orange County, California • Via Bellota Landslide Project, City of San Clemente, Orange County, California • CEQA, Regulatory Permitting, Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Review On-Call Services, County of Riverside, California • Carryover Storage and San Vicente Dam Raise Project EIR/Environmental Impact Statement (EIS), San Diego County Water Authority (SDCWA), San Diego, California

Cost Proposal

As required by the RFP, the Cost Proposal has been provided in a separate sealed envelope.

Disclosure

Dudek does not have any past or current business and/or personal relationships with any current Costa Mesa elected official, appointed official, City employee, or family member of any current Costa Mesa elected official, appointed official, or City employee.

Sample Professional Services Agreement

Dudek has one exception to the Sample Professional Services Agreement with respect to the insurance requirements. We would like to alter paragraph 5.1 as shown:

5.1 Minimum Scope and Limits of Insurance. Consultant shall obtain, maintain, and keep in full force and effect during the life of this Agreement all of the following minimum scope of insurance coverages with an insurance company admitted to do business in California, rated "A," Class X, or better in the most recent Best's Key Insurance Rating Guide, and approved by City except that Consultant's Professional Errors and Omissions Liability Insurer must be authorized but does not have to be admitted:

Dudek's Professional Errors and Omissions Liability Insurer is Steadfast Insurance Company. Steadfast is an insurer authorized by the state of California to insure in California and has an A+ rating. This insurer is financially strong, evidenced by the A+ rating, but is not admitted.

Checklist of Forms to Accompany Proposal

The following required forms are included in **Appendix C** of this proposal.

- Vendor Application Form
- Company Profile & References
- Ex Parte Communications Certificate
- Disclosure of Government Positions
- Disqualifications Questionnaire

Appendix A

Resumes

Jonis C. Smith, PE, CFM

Senior Project Manager, Engineer

Jonis Smith is a professional engineer with 23 years' experience in all aspects of project management, stormwater management, flood control engineering, water quality permitting, low impact (LID) stormwater management design, construction management, and water resource system design. He has successfully engineered and managed the conceptual design, preliminary design, final design, and construction processes for numerous public, pseudo-public, and private projects. He is adept in all aspects of obtaining resource agency permits and construction permits. He has successfully processed numerous Federal Emergency Management Agency (FEMA) (Conditional Letter of Map Revision (CLOMR), Letter of Map Revision (LOMR), Physical Map Revision (PMR), and Letter of Map Amendment (LOMA)) applications. He is a valuable resource sought by both public agencies and private clients seeking advice and engineering services for FEMA floodplain mapping issues.

Education

California State University, Long Beach
MS, Civil Engineering (Construction Management), 2000

California State University, Long Beach
BS, Civil Engineering, 1995

Accreditations and Licenses

State of California Registered Professional Engineer RCE 58654

State of Arizona Registered Professional Engineer RCE 46552

Certified Floodplain Manager No. US-14-07485

Professional Affiliations

Floodplain Managers Association

Project Experience

Development

Indian Wells Crossing, The Kiner Group, Indian Wells, California. Served as project manager for the Whitewater River Indian Wells Crossing site development. Dudek's engineers and environmental scientists obtained data from previous studies and local agencies, evaluated the Indian Wells Crossing site plan, and then proposed channel top of bank alignment to determine relevant design parameters for flood control improvements. These included constructability, maintenance access, adherence to agency policies, and design requirements. Conclusions presented in the Basis of Design Report were formulated from channel roughness, hydraulic, and channel scour analyses. Other elements of the report included flood control protection, Whitewater River hydrology & hydraulic Analysis, FEMA Floodplain Management Criteria, recommended flood control improvements, environmental and construction permits, construction cost estimate. Dudek then prepared the channel improvement design plans, the associated jurisdictional waters/wetlands permit applications, and mitigation plans; and provided associated regulatory agencies coordination.

Stormwater Management/Design

Storm Drain Deficiency Program FY 2016-2017, Rancho Palos Verdes, California. Design engineer responsible for preparation of construction plans for the City's FY 16-17 storms drain infrastructure improvement program, which was part of City's effort to improve its aging storm drain infrastructure. These improvements follow the recommendation of the 2015 Master Plan of Drainage (MPD) that was performed by Michael Baker International, which is part of a comprehensive infrastructure rehabilitation program. Dudek's project covered improvements identified on the MPD as priority 1, located in three separate drainage areas, namely: Los Angeles

Harbor East, Palos Verdes Estates North, and Palos Verdes Estates West. The project involves a comprehensive planning and design process that include: review of existing information, CEQA documentation, analysis and identification of the final required improvements, engineering design of these improvements (plans, specifications, estimates), bid analysis & preferred bidder identification, construction support, and update of City's GIS database with As-built plans. The project is schedule for construction in 2017.

San Juan Creek Bike Trail Reconstruction Water Quality BMP Design, Bonterra Consulting, Dana Point, California. Served as project manager guiding the design and analyses for the proposed bike trail water quality BMP system. Provided watershed hydrology, hydraulics, water quality system design for the 500-linear-foot site.

San Diego Creek/Lake Forest Drive Bridge, County of Orange, Irvine, California. Served as plan review engineer performing watershed hydrology analysis and storm drain system design (design flowrate Q100 = 12,000 cfs) for the 6,500-unit residential development in the 7,500-acre watershed.

City of Irvine Planning Area-1 Storm Drain System, County of Orange, Irvine, California. Served as plan review engineer performing watershed hydrology analysis and storm drain system design for the 6,500-unit residential development in the 7,500-acre watershed.

City of Irvine Planning Area 1/Neighborhood 2 Storm Drain System, The Irvine Company, Irvine, California. Served as project engineer performing watershed hydrology analysis and storm drain system design for the 6,500-unit residential development in the 7,500-acre watershed.

Pond Features/Lakes

Percolation Pond Site Expansion Project, City of Santa Maria, California. Served as the Project Manager for the Percolation Pond Site Expansion Project (Project) which involves expanding the percolation ponds to dispose of the WWTP's ultimate treated effluent capacity of 13.5 MGD. Dudek's engineers explored and ultimately designed pumping, pipeline and expanded percolation facilities on 241 acres of land owned by the City, that were previously being contract farmed. Phase I of the Project designed facilities to accommodate 25% of the WWTP effluent capacity. Dudek's engineers also investigated the use of a Bio-Filter to fix and remove dissolved nitrogen from the effluent prior to percolation.

Centennial Park Lake Circulation and Aeration Study, Santa Ana, California. Project manager for the evaluation and remediation study for the Centennial Park Lake. Field work and existing project evaluation included soft sediment samples to analyze the lake bed retardation properties and water samples, taken of the course of three months, to monitor the quality of the water. A Lake Operations and Maintenance Manual was written for the city on urban lake habitat preservation. The proposed design alternatives included recirculation pumps, aeration pods, manmade reefs, bio-remediation areas, and educational signage to educate the public of their essential role in sustaining the habitat.

Transportation

Foothill Transportation Corridor State Route (SR)-241 Section 3, Transportation Corridor Agency, County of Orange, California. Served as project engineer performing analysis and design of flood control facilities and surface drainage systems for the future 14-mile extension of SR-241 to the Interstate (I)-5/Section 3 to 2.5 miles.

I-405/SR-55 Transitway/Airport Storm Drain, Caltrans, Costa Mesa, California, Served as design engineer performing design and analysis of Airport Storm Channel and surface drainage systems for I-405/SR-55 HOV flyover construction and freeway interchange improvement for the 10th busiest freeway interchange in the nation.

Bryn S. Evans, CPSWQ

Senior Project Manager

Mr. Evans is a Certified Professional of Stormwater Quality (CPSWQ) with 17 years of experience working in the San Diego water quality and regulatory environment. As a trained marine ecologist and field terrestrial runoff research scientist, Mr. Evans brings a unique and qualified perspective to stormwater and water quality projects at the land/water interface. For the past seven years, Mr. Evans has focused on municipal National Pollutant Discharge Elimination System (NPDES) permit compliance efforts in the urban environment. Mr. Evans is experienced in collaborating with, and leading, multi-disciplinary teams conducting water quality monitoring, design and implementation of non-structural and structural stormwater best management practice (BMP) programs, special studies and water quality related research. Mr. Evans has developed strong working relationships with Regional Water Quality Control Board (RWQCB) leadership and staff and a host of federal, state, and local municipal and agency representatives engaged in watershed-based water quality improvement efforts. Projects include management, coordination and completion of sampling, analysis and reporting of multi-media sampling and monitoring programs, watershed assessments, source identification and evaluation of mitigation/reduction of impacts due to urban runoff, and environmental restoration projects.

Education

University of California, Los Angeles
MA, Biology, 2000

University of California, Santa Barbara
BS, Aquatic Biology, 1995

Certifications

Certified Professional in Storm Water Quality (CPSWQ) # 875

Project Experience

Multi-Agency Stormwater Management

Tijuana River Water Quality Improvement Plan, City of Imperial Beach, City of San Diego and County of San Diego, San Diego, California. Participating as a core team member leading development of the NPDES-required Water Quality Improvement Plan (WQIP) for the Tijuana River watershed. Responsible for agency efforts to develop innovative and quantifiable jurisdictional stormwater program enhancements to satisfy regulatory requirements within available municipal agency operational capacity parameters. Also responsible for the development of NPDES permit-required special study to address issues with the watershed highest priority water quality conditions.

Tijuana River Channel Maintenance Operations and Regulatory Review, City of San Diego, San Diego, California. Mr. Evans served as the project manager for an integrated assessment of City policy, management decision history and evaluation of regulatory and legal options related to channel maintenance activities in the Tijuana River Valley. The project reviewed City options related to flood area management and was used to inform management decisions to engage federal, state and local partners.

Tijuana River Restoration Project, San Diego, California. Project Manager/Facilitator for a group of federal, state and local agency, municipal, non-governmental organization, and other watershed stakeholders [Tijuana River Valley Recovery Team (TRVRT)] in the development of an integrated effort to address sediment and trash pollutants in the Tijuana River Valley. The overall mission of the TRVRT is to reduce impacts of sediment and trash on natural, cultural and recreational

resources. Given the binational watershed and the breadth of jurisdictional agencies involved, the RWQCB sponsored the TRVRT as an alternative to the development of a sediment and trash TMDL for the Tijuana River. Mr. Evans led development of the Recovery Strategy document that provides a plan to reduce the effects of sediment, trash, and other pollutants, balance infrastructure needs, improve ecological function and maintain public recreational uses of valley resources.

Stormwater Monitoring

Coastal Canyon Watersheds and ASBS Assessment and Management Plan, Newport and Irvine Coasts, California. As Assistant Project Manager, Mr. Evans completed a water quality and flow assessment of the coastal canyon creeks that flow into the Newport and Irvine Coast ASBSs. The results were used to respond to the SWRCB "ASBS Exception" letter for the ASBS. Mr. Evans managed the development of sampling and monitoring plans and quality assurance plans in accordance with RWQCB and SWAMP guidelines to meet the approval of the RWQCB and provided oversight for public use, bioaccumulation, toxicity and restoration monitoring programs for the ASBS. In addition, he assisted in the development of the ASBS/Watershed Management Plan that outlines the management actions and projects required to meet water quality compliance goals and coastal long-term preservation and restoration goals.

Baseline Water Quality Assessment of the Big Canyon Creek Restoration Area. Newport Beach, California. As Project Manager, Mr. Evans managed the development of sampling and monitoring plans and quality assurance plans in accordance with RWQCB and SWAMP guidelines to meet the approval of the RWQCB as well as coordinated field monitoring effort, data management and reporting tasks to both RWQCB and project stakeholders. Project involved wet and dry monitoring of the influent and effluent of a proposed restoration area that discharges to the 303(d) and TMDL listed Upper Newport Bay. The project provided baseline water quality data to both provide BMP design guidance and assessment of the effectiveness of implemented BMPs under a grant funded projects to improve water quality in Newport Bay.

Crystal Cove Coastal Development Permit Monitoring, Orange County, California. As Task Leader, Mr. Evans led a team to monitor the effectiveness of biofiltration swales BMPs in treating stormwater runoff that were constructed in the vicinity of Crystal Cove in Orange County, California. The monitoring was conducted to satisfy the special conditions of a California Coastal Commission Coastal Development Permit (CDP). Grab samples were collected at biofiltration swales influent and effluent locations over three wet weather monitoring seasons to evaluate the treatment efficiency for common roadway pollutants such as volatile organic compounds (VOCs), oil and grease, and Total Petroleum Hydrocarbon compounds. Mr. Evans led the team charged with preparation of the Annual Monitoring and Analysis Report which summarizing sample collection efforts and laboratory data for the 2007-08 monitoring season and two previous water quality monitoring seasons conducted by a previous contractor.

Ballona Creek Total Maximum Daily Load (TMDL) Municipal Separate Storm Sewer System (MS4) Water Quality Assessment. As Task Leader, Mr. Evans coordinated field and data management activities for investigation of source loads and tributary flows from sub watersheds during wet and dry weather flows. Project provided TMDL support because water quality data indicated that beneficial uses in the creek are impaired. Bacteria, metals, and toxic pollutant concentrations in Ballona Creek do not meet the respective objectives for beneficial uses or the numeric goals contained in Los Angeles Regional Water Quality Control Board (RWQCB) Water Quality Control Plan for the Los Angeles Basin (Basin Plan). Worked with Project Manager to select appropriate sampling sites and managed field teams to collect water quality samples and transport to accredited laboratory for chemical analysis.

John Minchin, RLA

Landscape Architect/Habitat Restoration Specialist

John Minchin has over 38 years' of professional experience in the design, construction, and management of landscape architectural and habitat mitigation/restoration projects in California. He has specialized in native habitat restoration and mitigation services since 1989.

Education

California Polytechnic State University, San Luis Obispo BS, Landscape Architecture Cum Laude, 1980

Certifications

Registered Landscape Architect (RLA), State of California License No. 2225

Mr. Minchin has extensive experience in the design of habitat mitigation and restoration projects throughout California, ranging from wetlands to uplands, and specific programs for sensitive, rare and endangered species. His experience includes preparation of preliminary habitat mitigation/restoration designs; development of conceptual habitat mitigation plans, monitoring and reporting plans (i.e., MMRP reports); oversight for preparation of revegetation construction documents (i.e., plans, details, and specifications); QA/QC of CADD-generated drawings and details; construction cost estimating; construction administration; construction compliance monitoring; and coordination of long-term biological monitoring and reporting programs.

Relevant Project Experience

Resource Management

Buena Vista Creek Walk Wetland Mitigation Project, City of Vista, San Diego County, California. Prepared a conceptual wetland mitigation plan for wetland mitigation and revegetation for recreational trail improvements bordering Buena Vista Creek. Work included creation of wetlands and enhancement of existing wetlands through the removal of exotic/invasive species. Work included coordination with project engineers for creek bank erosion control stabilization through the use of plantable gabion structures.

El Cuervo Wetland Mitigation Project, Los Penasquitos Canyon Preserve (Off-Site Mitigation for Sorrento Creek Flood Control Project), City of San Diego Transportation and Drainage Design Division, San Diego County, California. Prepared conceptual wetland mitigation and monitoring plan, and final revegetation construction documents, for over 12 acres of coastal riparian and wetland habitat establishment, restoration and enhancement within Los Peñasquitos Canyon Preserve. Work involved coordination with sewer line relocation, park access road and recreational trail improvements. Significant grading and associated drainage connections were necessary to provide surface hydrology through partial diversion of the creek flows during high flow events. Conducted construction monitoring and long-term biological monitoring and reporting of the wetland mitigation program.

Encinitas Ranch Golf Course Wetland Mitigation, The Carltas Company, Encinitas, San Diego County, California. Prepared detailed mitigation construction documents (i.e., plans and specifications) for wetland mitigation at the Encinitas Ranch Golf Course. Coordinated installation, construction monitoring, and long-term biological monitoring of the wetland mitigation program. Coordinated final acceptance by CDFG. Also performed biological construction monitoring for the entire Golf Course during construction to assure protection of native coastal sage scrub, chaparral, and wetland habitats.

Lake Calavera Boardwalk Improvement Project, City of Carlsbad Parks and Recreation Department, California. Provided habitat restoration and landscape architectural services for the Lake Calavera Boardwalk Trails Project. Prepared construction documents specifications and bid documents for boardwalk and bridge construction, revegetation planting and irrigation plans, details, and specifications. Coordinated long-term biological monitoring and reporting, and provided maintenance coordination.

San Dieguito Lagoon Non-tidal Habitat and Public Access Plan, KTU+A Landscape Architecture and San Dieguito River Park Joint Powers Authority (JPA), Del Mar, San Diego County, California. Coordinated biological field mapping and preparation of an upland revegetation/habitat restoration program for the San Dieguito Lagoon, non-tidal habitat, and public access plan. Work evaluated feasibility of restoration of disturbed habitats and potential for expansion of wetland and upland habitats associated with an interpretive recreation trail along the San Dieguito River. Work was coordinated with the overall San Dieguito Lagoon Enhancement Plan (tidal restoration and enhancement project) conducted by SCE.

Stadium Wetland Mitigation Construction and Biological Monitoring program, City of San Diego, San Diego River in Mission Valley, adjacent to Qualcom Stadium. San Diego, California. Provided project management coordination with City of San Diego and Dudek staff, and oversight and QA/QC of biological compliance monitoring during installation of the 57 acre stadium wetlands mitigation project in Mission Valley, San Diego. Coordinated staff field monitoring of grading, irrigation and planting installations, as well as bird monitoring and project status reporting.

Upper Oso Habitat Restoration and Mitigation Project, Rancho Santa Margarita, California. Prepared landscape revegetation construction documents, (i.e., planting and irrigation plans, details and specifications) utilizing all native species, for an 83-acre upland and wetland revegetation project in O'Neil Regional Park. Coordinated and monitored construction, and provided long-term biological monitoring and reporting with City of Rancho Santa Margarita engineering staff.

Water/Wastewater

Programmatic Permitting and Drainage Channels/Flood Control Facilities Maintenance, City of Encinitas, California. Served as project manager and Habitat Restoration Specialist for the City of Encinitas' (City) programmatic permitting project. Dudek provided as-needed environmental services pertaining to the maintenance of drainage channels and flood control facilities throughout the City. The project incorporated all drainage facilities within the City of Encinitas, and evaluated storm water facilities maintained by the City for ongoing routine maintenance activities. The project evaluated the associated impacts from the maintenance activities to pursue programmatic permits with the resource agencies, including U.S. Army Corps of Engineers (ACOE); California Department of Fish and Game (CDFG); and Regional Water Quality Control Board (RWQCB) for impacts to waters of the U.S./State and to allow for the long-term maintenance and monitoring.

Buck Gully Water Quality Wetlands Project, City of Newport Beach, Orange County, California. Coordinated biological assessments, prepared conceptual wetland mitigation and monitoring plan, coordinated resource agency permitting, prepared final revegetation and construction documents and conducted construction monitoring for wetlands improvements in a coastal canyon in Corona Del Mar. Work included erosion control stabilization of highly eroded creek banks, modifications to a storm drain outlet facility, improvements to creek road crossing, creation of a secondary creek flood flow water quality treatment area and revegetation with native wetland and transitional upland species. Work was undertaken to implement a grant received by the State Water Quality Control Board.

Encinitas Creek Channel Improvements, City of Encinitas, San Diego County, California. Prepared a conceptual wetlands mitigation plan and revegetation construction documents for wetland mitigation for flood control drainage channel improvements in Encinitas Creek. The project involved creation of new earthen channels and islands to improve flooding problems at a key road intersection. Work included coordination of biological resource evaluations, preparation of a Mitigated Negative Declaration (MND), processing of resource agency permits and conservation easement documentation. Work involved the creation, restoration, and enhancement of over 3.5 acres of wetland habitat. Provided bidding support, construction compliance monitoring and long-term biological monitoring/reporting.

Lone Jack Road Flood Control Channel Improvements, City of Encinitas and Rick Engineering, Olivenhain, San Diego County, California. Prepared a conceptual wetlands mitigation plan and revegetation construction documents for wetland mitigation associated with flood control drainage channel improvements in a residential development. Worked with project engineers to mitigate for modifications to improve flood control conveyance through this highly confined residential development. Work included coordination of biological resources studies, preparation of the project MND, resource agency permitting, preparation of revegetation construction documents, and biological construction monitoring during initial flood control channel clearing and revegetation installation.

Petaluma River Flood Control Project, ACOE, San Francisco, City of Petaluma, Sonoma County, California. Project involved a 3,600-foot section of the Petaluma River for revegetation of flood channel slopes, utilizing emergent freshwater marsh, willow riparian, oak woodland and grassland mitigation areas. Coordinated final CADD construction documents and detailed specifications for revegetation installation. Assisted ACOE with project bidding and construction administration.

South Orange County Wastewater Authority (SOCWA), Wastewater Treatment Plant Landscape Upgrades, Aliso Viejo, California. Provided landscape architectural services for landscape improvements at the upgraded SOCWA wastewater treatment facility. Prepared landscape construction documents (i.e., planting and irrigation plans, details and specs,) for bidding and construction. Conducted field analysis, meetings with SOCWA staff to determine user needs, evaluation of existing site conditions and design of landscape improvements. Conducted soils analysis to evaluate soil fertility and agricultural suitability, and provided recommendations for soil amending to correct soil deficiencies.

Victoria Avenue Water Recharge Facility, Landscape Screening Project, Western Municipal Water District, Riverside, California. Prepared landscape planting and irrigation plans for the landscaping surrounding the facility. Landscaping was designed to provide visual enhancements and screening of the walls and fencing around the facility and to provide compatibility with the adjacent citrus groves and existing site landscaping. Work included incorporation of a hiking trail along Victoria Avenue. Landscape and irrigation upgrades were coordinated with the Dudek engineering site improvement plans.

Warm Creek Conservation Basin, Bio-swale Revegetation, County of San Bernardino Department of Public Works, California. Prepared a Habitat Mitigation and Monitoring Plan for a 2.4 acre, (3,800 linear feet), vegetated water quality bio-swale for the Warm Creek Water Conservation Basin. Prepared conceptual graphics and coordinated with County engineers and environmental planning staff for compliance with resource agency permit conditions.

West Fontana Channel Bio-swale Revegetation Project, San Bernardino County Flood Control District, Fontana, California. Prepared landscape and irrigation construction documents for the revegetation of a new bio-swale and flow conveyance channel in West Fontana. Landscaping was coordinated with the Dudek engineering improvement plans. Also provided wetland mitigation in coordination with bio-swale plantings.

Stuart Fraser, RLA

Restoration Ecologist/Landscape Architect

Stuart Fraser is a registered landscape architect and restoration ecologist with more than 15 years' experience working on a variety of public and private sector projects. He specializes in design and implementation for ecosystem restoration and native revegetation, including jurisdictional wetland and sensitive upland habitats, water quality improvements, long-term erosion control, as well as recreation and public access planning for park facilities and trails.

Mr. Fraser has designed and monitored a diversity of restoration projects for establishment and enhancement of wetlands and upland habitats. In addition to design for restoration, Mr. Fraser also has conducted recreation design planning, including evaluation of existing open space for use and developing design guidelines for non-motorized public access. He has served as project manager for the implementation of public and private sector projects, which require construction administration and monitoring for both permit and contract compliance.

Education

California University Pomona
MLA, Landscape Architecture, 2001

Humboldt State University
BS, Wildlife Management, 1991

Certifications

RLA, CA No. 5301, issued 2007

40-Hour Wetland Delineation Training, Wetland Training Institute, 2017

CRAM Trained Practitioner in Riverine, Vernal Pool, and Estuarine Wetlands, 2014

USFWS Approved Monitor for Ridgeway's Rail, 2016

FAA CFR 14 Part 107 Remote Pilot Certification (sUAS) 2016

Mr. Fraser's habitat restoration expertise includes; feasibility assessment, conceptual design, design development, and construction document generation, as well as installation and post-construction term monitoring of restoration projects, and environmental compliance for construction projects. He has specialized technical skills for the application of portable GPS, unmanned aerial systems equipment and computer-aided drafting and design software in the preparation of biological inventories, site analysis mapping, the generation of conceptual design graphics, and development of irrigation and planting construction drawings.

Project Experience

Development

Portola Center Development, SunRanch Capital Partners/USA Portola Properties, Lake Forest, California. Prepared a construction documents and conducted construction and long-term biological monitoring for wetlands and waters mitigation and revegetation within a 100 acre SCE surplus parcel adjacent to the Portola project. Site will serve as an important habitat linkage tying together the Aliso Creek open space area to the Whiting Ranch Wilderness Park open space area. Mitigation program was designed to help compensate for impacts to wetlands, as well as un-vegetated "Waters of the U.S.", regulated by the ACOE, Regional Water Quality Control Board (RWQB) and U.S. Fish and Wildlife Service (USFWS). The project will become part of the Natural Community Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve for Orange County.

Western Realco Alessandro Business Park Environmental Impact Report (EIR), City of Riverside, California. Developed preserve enhancement plan and wetland restoration plan for the proposed Alessandro Business Park project located adjacent to and within the Sycamore Canyon Business Park Specific Plan area. The project included grading, construction, and operation of a 36.62-acre business center for light industrial, warehouse distribution, and office uses. The business center would consist of four buildings totaling approximately 662,018 square feet, ranging in size from approximately 36,243 to 440,374 square feet.

Resource Management

CRAM Monitoring, Rancho Mission Viejo Land Trust, Orange County, California. Conducting periodic CRAM assessments to assess ambient riparian conditions at 16 assessment areas within a 5,000-acre preserve area in southern Orange County. This long term study is a component of the habitat reserve management plan developed for the Southern Orange County Subregion HCP.

Water/Wastewater

Buck Gully Water Quality Wetlands Project, City of Newport Beach, Orange County, California. Prepared final revegetation and construction documents for a wetlands improvement project in Buck Gully located in Corona Del Mar. Work included erosion control stabilization of highly eroded creek banks, modifications to a storm drain outlet facility to daylight storm flows, improvements to creek road crossing, creation of a secondary creek flood flow water quality treatment wetland area and revegetation of all areas with native upland and wetland species. Work was undertaken by the City of Newport Beach to implement a grant received by the State Water Quality Control Board.

Stadium Wetland Mitigation Project, City of San Diego, California. Acting as consulting habitat restoration specialist/landscape architect for this 56-acre wetland mitigation site within the San Diego River. The project provides the City with jurisdictional wetland rehabilitation and enhancement credits, as well as upland restoration credits. Project includes invasive species removal, refuse removal, temporary irrigation installation, and container plant and native seed installation. Project is ongoing.

Upper Chiquita Reservoir Emergency Storage Reservoir Project, Santa Margarita Water District, Orange County, California. Project manager responsible for environmental compliance management services, habitat restoration design, biological surveys, and overseeing the work of archaeological and paleontological monitors for the approximately 40-acre Upper Chiquita Reservoir Project. Conducted a review of the construction package, including the project plans and specifications, to incorporate environmental permit conditions into the contract documents. Managed the development of a conceptual habitat restoration plan for the reservoir site following construction. Prepared plans and specifications for the transplantation of existing native cactus prior to construction and for the revegetation of the site following construction. Construction documents included plans and specifications for soil salvage and placement, cactus salvage and placement, seed application, and erosion control.

Oso Creek Restoration and Protection Project, City of Mission Viejo, California. Conducted design work and assisted the City of Mission Viejo in managing a grant-funded project to reduce runoff in Oso Creek, improve water quality, and increase public awareness of the adverse effects of urban runoff. Tasks included conceptual design and construction documents (grading, planting and irrigation plans, specifications, and engineer's estimate) for the bioswale at the Montanoso Recreation Center, preliminary design and construction documents (demolition and planting plans, specifications, and engineer's estimate) for invasive species removal and creek restoration along Jeronimo Creek, as well as serving as the project lead for all inspection, project documentation, and reporting, as required by the project grant. Funding was provided by the American Recovery and Reinvestment Act (ARRA) under an agreement with the State Water Resources Control Board (SWRCB).

Lindsy Mobley

Habitat Restoration Specialist

Lindsy Mobley is a habitat restoration specialist with a focus on environmental management and sustainable environments. She has a wide variety of experience with botanical surveys, wildlife and resource management, California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) laws and policies, geographic information system (GIS) mapping, Life Cycle Analysis (LCA), soil sampling, wetland delineations, camera trapping, stakeholder/volunteer coordination, and landscape surveying, including the use of total station, automatic level, clinometer, and handheld Global Positioning System (GPS). Ms. Mobley focuses on leveraging her broad scientific experience for habitat restoration project planning and management.

Education

California Polytechnic State University

BS, Environmental Management and Protection, Minors in Biological Sciences and Sustainable Environments, 2017

Project Experience

Development

Laurel Creek Brodiaea, Encore Housing Opportunity Fund, Vista, California. Acting as habitat restoration monitor during the installation and long-term biological monitoring phases of this mitigation project which included salvaging thread-leaved brodiaea from the 8.43-acre project site using the "soil block method" and transplanting to an off-site preserve area.

Fanita Ranch, HomeFed Fanita Rancho LLC, Santee, California. Served as habitat restoration specialist in the production of the Cactus Wren Habitat Enhancement Strategy for the Fanita Ranch Project. Designated areas to enhance habitat for coastal cactus wren (*Campylorphynchus brunneicapillus sandiegensis*) in preparation for the proposed development project in Santee, California. The habitat enhancement approach included harvesting and planting coast prickly pear (*Opuntia littoralis*) and coastal cholla (*Cylindropuntia prolifera*) pads and segments to enlarge suitable habitat for coastal cactus wren.

Municipal

Public Utilities Department (PUD) As-Needed Environmental Services, City of San Diego, California. Served as restoration ecologist for this 56-acre wetland mitigation site within the San Diego River. Responsible for ensuring installation is completed in accordance with project plans and specifications. Aided in drone flyover to provide project imagery and data collection. The project is unique in that it provides the City with jurisdictional wetland rehabilitation and enhancement credits, as well as upland restoration credits that can be applied to City infrastructure and facility repairs to streamline the permitting process. The project includes invasive species removal, refuse removal, temporary irrigation system installation, and container plant and native seed installation.

North Eastern Sphere Annexation Area, Sargent Town Planning Inc., Rancho Cucamonga, California. Served as restoration ecologist in designating potential restoration areas within the Rancho Cucamonga North Eastern Sphere Annexation area.

Lake Calavera Boardwalk Trails Wetland Mitigation, City of Carlsbad, California. Served as restoration ecologist for the production of a Habitat Restoration and Monitoring Plan (HRMP) for the Calavera Trail Revegetation Project as mitigation for the trail realignment within the preserve. Responsible for conducting restoration monitoring for this wetland mitigation/restoration project, which was completed in accordance with the Habitat Management Plan (HMP) for the Natural Communities in the City of Carlsbad. Conducted fieldwork associated with annual monitoring and drafted annual monitoring reports. Restored habitats at the project site include southern willow scrub, freshwater marsh, and southern coast live oak riparian forest.

Resource Management

Alta La Jolla Restoration Monitoring, Habitat Restoration Sciences Inc., San Diego, California. Lead biological monitor for the Alta La Jolla Drive Drainage Repair Project, Phase 2. Prepared annual monitoring reports for submittal to the Army Corps of Engineers (ACOE), the California Department of Fish and Wildlife (CDFW), and the Regional Water Quality Control Board (RWQCB).

Newhall Ranch Surveys, Newhall Land and Farming Company, Los Angeles County, California. Worked as supporting habitat restoration specialist for the 12,000-acre Newhall Ranch development project located in northern Los Angeles County. Responsibilities include delineating San Fernando Valley spineflower (*Chorizanthe parryi* var. fernandina) soil salvage areas and preserve enhancement areas. Served as restoration monitor to oversee soil salvage activities for spineflower and slender mariposa lily (*Calochortus clavatus* var. *gracilis*).

Water/Wastewater

El Camino Real/Encinitas Creek Channel Maintenance, City of Encinitas, California. Acting as lead biological monitor for the Encinitas Creek Channel Improvement Project. Conducted long-term biological monitoring for the project, which is a multi-purpose flood control and stream restoration effort with a focus on restoring native wetland functions and services and improving flood flow conveyance. Monitoring was conducted in accordance with the Final Wetlands Restoration, Maintenance, and Monitoring Plan for the Encinitas Creek Channel Improvement project at El Camino Real and Leucadia Boulevard; Final Wetland Revegetation/Mitigation Plans/Construction Documents; and Public Improvement Plans for the Encinitas Creek Improvement Project.

Stadium Wetland Mitigation Project, City of San Diego, California. Served as habitat restoration specialist/monitor for this 56-acre wetland mitigation site within the San Diego River. Responsible for ensuring installation is completed in accordance with project plans and specifications. The project is unique in that it provides the City with jurisdictional wetland rehabilitation and enhancement credits, as well as upland restoration credits, that can be applied to City infrastructure and facility repairs to streamline the permitting process. The project includes invasive species removal, refuse removal, temporary irrigation system installation, and container plant and native seed installation.

Relevant Previous Experience

Connectivity Analysis for The Guadalupe Nipomo Dune Restoration Plan, The Land Conservancy of San Luis Obispo, California. Prepared a document on habitat connectivity between Dune Protected Areas in order to promote biodiversity within the Guadalupe Nipomo Dunes Network. Connectivity analysis was created using connectivity software (CircuitScape/Linkage Mapper), ArcGIS, extensive literature review, and expert consultation with working groups. (2016–17)

Kathleen's Canyon Overlook Conservation Park Project, The Land Conservancy of San Luis Obispo, California. Acted as project lead on planning conservation park interpretive ecological signage, GIS mapping, playground design, audio tour, oak woodland restoration, and overall project coordination. (2016–2017)

Ryan Henry

Project Manager, Biologist

Ryan Henry is a project manager and biologist with over 15 years' professional experience as an ecologist focused on the integration of scientific principles for the investigation, assessment, and restoration of terrestrial and aquatic ecosystems. Mr. Henry has extensive experience as a project manager and specializes in biological resource assessments, regulatory permitting, agency coordination, and environmental compliance. He successfully manages projects that require regulatory compliance for the development and conservation of public and private land holdings. His outstanding relationship with federal, state, and local resource agency staff is a great benefit to his clients.

Education

University of Irvine, California
BS, Applied Ecology, 1998

Certifications

Endangered Species Act Section 10(a)(1)(A) Vernal Pool Branchiopods Permit No. TE031848-2

CDFW Scientific Collecting Permit

Professional Affiliations

Society of Wetland Scientists

California Native Plant Society

The Wildlife Society

His field-related experience includes performing biological surveys of flora and fauna, including special-status species investigations, jurisdictional wetland delineations, functional assessments of aquatic resources. He has prepared technical reports describing and inventorying biological resources for a variety of habitats to support state and federal Endangered Species Acts, Clean Water Act, California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA) processing and permitting. He is skilled at using Geographic Information System (GIS) and Global Positioning System (GPS) technologies to collect, analyze, and develop custom applications.

Project Experience

Development

Merriam Specific Plan Amendment, NNP, Stonegate Merriam LLC, Unincorporated San Diego County, California. Served as task manager to evaluate and process jurisdictional water/wetlands permits for a 2,700-unit master-planned community. Tasks included conducting a formal jurisdictional delineation including the identification of potential effects to County of San Diego Resource Protection Ordinance (RPO) and CEQA significant wetlands, conduct site visits with the regulatory agencies, facilitate negotiations regarding headwater jurisdictional issues between the U.S. Army Corps of Engineers (ACOE) and Environmental Protection Agency (EPA), and identify compensatory mitigation opportunities. The study was completed in 2009.

Campus Office (Riverwalk), JH Snyder Company, Los Angeles County, California. Project manager for the analysis of biological resources on a 40-acre, mixed-use development site located in Agoura Hills. Conducted jurisdictional wetland determination, special-status species surveys including coastal California gnatcatcher (*Polioptila californica*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), and Californa red-legged frog (*Rana aurora draytonii*). Prepared a biological technical report to support CEQA processing, jurisdictional waters/wetland permits, and managed construction monitoring and compliance activities. The project was successfully completed in 2004.

Audie Murphy Ranch, Brookfield Homes, Riverside County, California. Served as project manager for the biological assessment, documentation, and regulatory permitting for the 1,113-acre residential development project located in southwest Riverside County adjacent to the cities of Lake Elsinore and Canyon Lake. Provided general biological site surveys and USFWS protocol dry season presence/absence surveys for vernal pool brachiopod cysts at the property. Coordinated with the USFWS during hydration and incubation activities on a limited number of cysts collected during dry season sampling efforts, which resulted in a successful hatching effort. Prepared a technical biological resources assessment to support CEQA processing, jurisdictional waters/wetland regulatory permitting, and managed initial construction monitoring and compliance activities. This study was successfully completed in 2002.

Resource Management

Habitat Conservation Plan Implementation, Rancho Mission Viejo Company, Orange County, California. Served as project manager for as-needed biological consulting services for habitat conservation planning and development support to Rancho Mission Viejo. Management responsibilities included preparation of biological resource analyses for necessary environmental documents including Initial Studies, Negative Declarations, Mitigated Negative Declarations, and Addendums; assistance with resource agency permits and authorizations, including Clean Water Act Section 404, Federal Endangered Species Act Section 4(d) or Section 7, and California Fish and Game Code Section 1600; preparation of biological resource impact analyses for consistency evaluations and processing amendment to the Southern Subregion Natural Community Conservation Plan/Habitat Conservation Plan; monitoring activities and analyses for special-status species surveys, oak woodland management activities, grazing management activities; and coordinating Geographic Information System support services.

Big Canyon Resource and Recreation Management Plan (RRMP), New Irvine Ranch Conservancy (IRC), Orange County, California. Served as project manager to the Irvine Ranch Conservancy during the preparation of a RRMP for the Big Canyon Reserve Park located in Newport Beach. The 80-acre natural habitat reserve is a coastal canyon originating in the Big Canyon foothills and terminating at the Newport Back Bay, and is surrounded by urban development. The long-term management plan was developed to meet the requirements of the Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan and included conducting focused special-status species surveys and vegetation community mapping, documenting baseline conditions, establishing an appropriate exotic/invasive species management and monitoring plan, and establishing management procedures for IRC.

Buck Gully RRMP, IRC, Orange County, California. Served as project manager to the Irvine Ranch Conservancy during the preparation of a RRMP for the Buck Gully Reserve located in Newport Beach. The 300-acre natural habitat reserve is a coastal canyon originating in the San Juan foothills and terminating at the Pacific Ocean, and is surrounded by urban development. The long-term management plan was developed to meet the requirements of the Central-Coastal Natural Community Conservation Plan/Habitat Conservation Plan Habitat Reserve system and included conducting focused special-status species surveys and vegetation community mapping, documenting baseline conditions, establishing an appropriate exotic/invasive species management and monitoring plan, and establishing management procedures for Irvine Ranch Conservancy. The management plan was successfully completed in 2010.

Central Orange County Integrated Regional and Coastal Watershed Management Plan (IRCWMP), Orange County Resources and Development Management Department, California. The IRCWMP is a comprehensive planning document to improve and better coordinate water resource protection efforts within the Newport Bay/San Diego Creek and Newport Coast watersheds, which encompasses the cities of Newport Beach, Irvine, Tustin, Costa Mesa, Lake Forest, Santa Ana, Orange, Laguna Hills, Laguna Woods, and unincorporated Orange County. Participated in stakeholder meetings to evaluate the desired ecological state and prioritize water quality projects within the Newport Bay watershed for regional-level funding.

Central Orange County IRCWMP–Phase II, City of Newport Beach, California. Phase II of the IRCWMP involved continued development of the plan to create a roadmap for decision-making based on the hydrological and ecological system functions of the Newport Bay watershed. Assisted with project management and team communications, analysis of GIS information and map production, watershed level system integration, definition of the desired state, and concept development of study area projects.

Biological Resource Assessment, Environmental Planning, and Permit Processing, County of Orange Resources and Development Management Department, California. Conducted biological resource assessments, jurisdictional delineations, prepared CEQA documentation, developed mitigation and restoration plans, regulatory permit processing, and biological monitoring for several Orange County Flood Control projects over a 4-year period. County-maintained facilities included Upper Newport Bay, Santa Ana–Delhi Channel, Norco Channel, Poche Beach, San Juan Creek, North Doheny Creek Channel, Aliso Lagoon, and drainages within the Aliso and Woods Canyon Wilderness Park. Successfully organized, drafted, and obtained regulatory permits including emergency and regional general permits for maintenance of ocean outlets. These projects were completed in 2002 on an expedited schedule.

Water/Wastewater

Upper Chiquita Reservoir Emergency Storage Project, Santa Margarita Water District, Orange County, California. Served as project manager to the Santa Margarita Water District for the preparation of biological documentation in accordance with CEQA, consistency analysis of the proposed project with the Southern Subregion NCCP/Master Streambed Alteration Agreement/Habitat Conservation Plan (MSAA/HCP) and Special Area Management Plan (SAMP), and regulatory permitting. The project entailed the construction of a domestic water storage reservoir with a surface area of approximately 15.4 acres and a storage capacity of approximately 720 acre-feet. CEQA certification and regulatory permitting were completed in 2009, and construction was completed in 2010. Habitat restoration design services are anticipated for completion by 2014.

Tommy Molioo

Biologist

Tommy Molioo is a biologist with 11 years' experience conducting a range of technical field studies and preparing various biological resources technical reports for planning and natural resources management projects requiring California Environmental Quality Act and National Environmental Policy Act (NEPA) compliance. Mr. Molioo's experience includes conducting various technical surveys and studies including habitat assessments, biological resources impact analyses, bat surveys, year-long biodiversity studies, avian and nesting bird surveys, habitat mitigation monitoring, and local and regional habitat conservation plan compliance and strategic planning.

Mr. Molioo has prepared reports for projects requiring compliance with several habitat conservation plans, natural community conservation plans, and local coastal programs throughout Southern California. He has also prepared biological resources analyses sections for project and programmatic-level environmental impact reports (EIRs)/environmental impact statements, as well as initial studies (ISs), environmental assessments, and biological assesments to support U.S. Fish and Wildlife Service (USFWS) Section 7 permitting. Mr. Molioo has also conducted focused protocol surveys for a variety of sensitive plant and wildlife species including, but not limited to, coastal California gnatcatcher, burrowing owl, and desert tortoise.

EDUCATION

University of Denver

MS, Environmental Policy and Management

Minot State University

BA, Biology

Certifications

USFWS 10(a)(1)(A) Recovery Permit for Coastal CA Gnatcatcher No. TE06873C-0.1

CDFW Scientific Collecting Permit No. SC-10395

PROFESSIONAL AFFILIATIONS

North American Society of Bat Research

Western Bat Working Group

Western Section of the Wildlife Society

Mr. Molioo specializes in conducting acoustic monitoring surveys for bats for species identification, roost assessments, and preparing and implementing exclusion plans. He also conducts formal wetland delineations for for state and federal waters and wetlands, and regulatory permitting under local, state, and federal agency jurisdiction. Mr. Molioo has also prepared and implemented mitigation monitoring plans for restoration projects and has conducted reconnaissance-level field surveys for numerous telecommunications projects throughout Southern and Central California.

Relevant Experience

Energy and Water

Dry Lake Solar Project, Playa Solar, Clark County, Nevada. Served as field biologist. Prepared a Biological Assessment and the Biological Resources Section of an Environmental Assessment for a 1,700-acre solar power generating facility in southern Nevada. The Biological Assessment was prepared in order to address potential project impacts to federally listed species including desert tortoise, Moapa dace, and federally listed birds. The Environmental Assessment was prepared to address environmental impacts under NEPA and the analysis tiered to the Programmatic Environmental Impact Statement for the U.S. Bureau of Land Management's Solar Energy Zones.

San Juan Watershed Project, EIR, Santa Margarita Water District, Orange County, California. Served as field biologist. The Santa Margarita Water District, in conjunction with South Coast Water District, is proposing to implement the San Juan Watershed Project that would develop facilities to manage surface water resources to enhance groundwater resources of the San Juan Basin. The Project would increase the capture and storage of urban runoff and stormwater, optimize the use of recycled water for beneficial reuse, minimize the potential for undesirable impacts, and augment local water supplies to reduce the region's dependence on imported water. Tommy conducted the site reconnaissance for biological resources and prepared the Biological Resources Technical Report for the project.

Lift Station No. 2 Project, South Coast Water District, City of Laguna Beach, Orange County, California. Served as project biologist. Conducted a habitat assessment survey and prepared the Biological Resources section for the Initial Study for the Phase 1 portion of the project. The South Coast Water District currently operates Lift Station 2 which is a reinforced concrete wet well and dry well sewage lift station. The lift station is located at 31104 Country Club Drive and conveys raw sewage to the South Orange County Wastewater Authority Coastal Treatment Plant via a 20-inch diameter ductile iron force main that is over a mile in length to the east and runs generally parallel to Aliso Creek.

Annexation Project Orange County Water District, California. Served as biologist. Prepared the Biological Resources Section, which includes documenting existing conditions and impact analysis, for Orange County Water District's Annexation Project as part of a project-level and programmatic-level EIR. The project proposed to allow additional municipalities to pump additional water from Orange County Water District wells. A portion of the project involved constructing new pump stations and other portions involved no additional construction. The proposed project was evaluated for potential impacts to biological resources within the Orange County basin. Mitigation measures were prescribed in the impact analysis to minimize impacts to potential sensitive biological resources.

Bat and Sensitive Species Surveys

SR 57 NB Bat Surveys, Anaheim, Orange County, California. Served as project manager and bat biologist. Conducted pre-construction presence/absence surveys of an approximately 1-mile section of the 57 Freeway in the City of Anaheim, where the Freeway crosses over the Santa Ana River near Angels Stadium. Conducted three nights of exclusion surveys with simultaneuos active acoustic monitoring to visually and acoustically determine bat presence/absence.

Big Canyon Habitat Restoration and Water Quality Improvement Project, Newport Beach, Orange County, California. Served as bat biologist. Conducted pre-construction presence/absence surveys for Phase I of the project. Surveys consisted of a roost assessment, emergence survey at dusk, and passive acoustic monitoring at a culvert and riparian woodland area. Prepared a letter report of findings with recommended avoidance measures.

Saddle Crest Project, Orange County, California. Served as bat biologist. Conducted a pre-construction presence/absence surveys within the 62-acre development footprint for the approximately 114-acre project site. Surveys consisted of a roost assessment, emergence survey at dusk, and passive acoustic monitoring at two locations. Prepared a letter report of findings with recommended avoidance measures.

Sensitive Species Surveys, Southern California. Assisted and independently conducted habitat assessments, monitoring surveys, and focused protocol surveys for Coachella Valley milk-vetch, Arroyo toad, desert tortoise, Los Angeles pocket mouse, San Bernardino kangaroo rat, least Bell's vireo, coastal California gnatcatcher and burrowing owl, for projects in Los Angeles, Orange, Riverside, and San Bernardino Counties. The surveys involve overall species accounts, including monitoring behavior and nest locations, and also consisted of an inventory of all plant and wildlife species observed on the sites, vegetation mapping, and habitat assessment.

Development

Trabuco Canyon Oak Woodland Assessment. Orange County, California. Served as project manager and field biologist. Conducted an assessment of the oak woodland habitat on a half-acre parcel proposed for a single family residence in the Trabuco Canyon area of Orange County. The assessment included an investigation of previously removed vegetation to determine species and survey of existing vegetation on the property. A letter report of findings was prepared to refute a County Courtesy Notice.

Mitigation, Habitat Restoration, and Enhancement

Three Arch Bay Residential Development, Debris Basin Restoration, Monarch Beach, County of Orange, California. Served as field biologist. Conducted Participated in the clean-up, weed removal, slope stabilization, planting, monitoring and reporting for a 25-foot by 40-foot debris basin. The debris basin associated with the north portion of the Three Arch Bay Residential Development was widened to allow additional nuisance flows to enter the basin without overflowing or causing erosion damage. The debris basin was recontoured and revegetated to recreate a native habitat area within native coastal sage scrub and chaparral. The slope was revegetated at the request of the property owner in an effort to increase the aesthetic value of the bare slope, aid in slope stabilization and add native habitat to the area.

Jurisdictional Delineations and Regulatory Permitting

Ascension 60-Inch Storm Drain, City of Lake Forest, Orange County, California. Served as field biologist. Conducted a formal wetland delineation of potential waters of the U.S. for the Ascension Cemetery 60" Storm Drain Project which converted an existing drainage feature into an underground pipe to reduce erosion. A preliminary jurisdictional delineation report was prepared and permit applications were completed and filed with the regulatory agencies. A letter of permission application was submitted to ACOE, along with a 404(b)(1) Analysis, due to the site's location within a Special Area Management Plan area within the San Diego Creek Watershed. Also assisted the client with formulating an appropriate mitigation strategy to reduce project impacts.

Telecommunications

NEPA Compliance/Telecommunication Facilities, Southern and Central California. Conducted over 100 biological resource assessments for a variety of telecommunication providers throughout Southern and Central California in complying with NEPA for the implementation of cellular communication facilities. These projects includes the preparation of NEPA compliance documents in accordance with the Federal Communication Commission's regulations pertaining to telecommunication facilities, in particular, biological surveys, including focused sensitive species surveys, permitting, construction monitoring, and arborist surveys. The projects were also assessed for consistency with local relevant policies and habitat conservation plans.

Christopher Oesch

Habitat Restoration Specialist, Biologist

Christopher Oesch is a habitat restoration specialist and biologist with 12 years' experience working on a variety of habitat restoration and aquatic bio-assessment projects with Dudek. He is routinely involved in project management, writing and preparation of conceptual mitigation plans and annual biological monitoring reports, biological inventories, aquatic bio-assessments and other field data collection, as well as long-term biological and construction monitoring.

Upon completing his BA, Mr. Oesch worked on sustainable agriculture restoration and development projects in Guatemala and Honduras. In 2003, he completed his graduate research in hardscaped urban stream channel restoration, modeled for the hardscaped channel west of Interstate 5 on Rose Creek in San Diego, California.

Mr. Oesch's thesis work focused on urban stream channel naturalization. The study examines modification of cement channelized stream sections, commonly found in urban settings, for mitigating their negative impacts to native plant and animal populations. This is achieved by incorporating aspects of natural stream hydrology and morphology into an existing hardscaped channel. This approach is intended for linking fragmented stream habitats in existing urban channels when total removal of hardscape structures is not feasible.

Mr. Oesch is currently working on a variety of habitat restoration projects involving freshwater marsh, salt marsh, riparian, urbanized/disturbed, chaparral, stream channel, and coastal sage scrub habitats. He is also team lead for Dudek's southern California benthic macroinvertebrate (BMI) aquatic bio-assessment group.

Education

Humboldt State University
MS, Environmental Systems, 2003

Eastern Mennonite University
BA, Sustainable Agriculture Development, 1998

Certifications

Portland State University/Wetland Training Institute, Professional Certificate of Completion, Basic Wetland Delineation Training, 2005

Southern California Coastal Water Research Project, Practitioner Certification, California Rapid Assessment Method for Wetlands, 2009

Wetland Training Institute, Professional Certificate of Completion, Arid West Regional Supplement Seminar and Field Practicum, 2011

Associated General Contractors, San Diego Chapter, Professional Certificate of Training Completion, Qualified Stormwater Pollution Prevention Plan Practitioner under the California Construction General Permit Training, 2012

State Water Resources Control Board Training Academy/California Department of Fish and Wildlife, Professional Certificate of Completion, SWAMP Bio-assessment Procedures: Benthic Macroinvertebrate and Algae Sample Collection, 2012

Project Experience

Development

Tentative Parcel Map 26363 – Wetland Creation, Enhancement, and Exotic Removal, Newhall Land and Farming Company, Santa Clarita, California. Provided on-site mitigation for the Valencia Commerce Center development. Responsible for site evaluation, conceptual design, and construction documents for creation and enhancement of native riparian vegetation communities, as well as invasive species control in the approximately 50-acre reach of Castaic Creek. Conducted site reconnaissance and mapping of

existing vegetation communities and determined potential locations for vegetation community creation and restoration. Efforts also included mapping of existing invasive species, including giant reed (Arundo donax) and tamarisk (Tamarix ramosissima). A conceptual restoration plan for creation, enhancement, and exotic species control for the project area was developed that included strategic placement and layout of native vegetation community creation and enhancement plots in locations suited to the dynamic fluvial activity of Castaic Creek. The mitigation program also included quantification of existing invasive vegetation, an initial removal strategy, recommendations for long-term control, and an adaptive management strategy as a restoration contingency.

Aquatic Bio-Assessment Study – Rare Habitat Baseline Study, Newhall Land and Farming Company, Santa Clarita, California (ongoing study). Implement methods for monitoring baseline hydrologic conditions in a spring with a rare plant and rare snail. This includes sampling the benthic macroinvertebrates (BMI) and algae communities using modified Surface Water Ambient Monitoring Program (SWAMP) protocol, and coordinating laboratory analysis, and a agency reporting.

Newhall Ranch Chorizanthe Seed Collection, Newhall Ranch Company, Santa Clarita, California. Participated with a team of biologists collecting seed of the rare and endangered San Fernando Valley spineflower (*Chorizanthe parryi fernandina*). Polygons of spineflower locations were mapped using a global positioning system (GPS). Teams then returned to collect seed.

Municipal

Las Virgenes Creek Hardscape Naturalization Proposal, City of Calabasas, California. Assisted in a proposal for the naturalization of a section of concrete hardscape channel along Las Virgenes Creek (see Mr. Oesch's thesis work). Goals of the naturalization include creating sediment deposition sufficient to grow wetland plant species, adding topography to the channel bottom and sides that would encourage a more natural hydrologic regime, and achieving these goals while passing floodwater efficiently in order to not promote flooding.

Buena Vista Creek Bike Path, Vista, California. Performed ACOE jurisdictional wetland delineation, vegetation mapping, non-native vegetation GPS'ing/mapping, and preparation of a conceptual wetlands mitigation plan. This project involves the creation of a cycling and pedestrian path along portions of Buena Vista Creek in the City of Vista. Within the study area, the project will involve construction of the path, stream bank erosion protection, removal of non-native trees and vegetation, and creation and enhancement of CDFG and ACOE jurisdictional vegetation communities.

El Cuervo Norte Wetland Mitigation Project, City of San Diego, California. Performed biological monitoring for the approximately 30-acre wetland mitigation site. This project provides wetland mitigation for multiple impacts to CDFG and ACOE jurisdictional wetland resources exacted by the implementation of State Route 56. This project provides critical habitat corridor linkage and habitat extension for wetland wildlife. Duties include transect data collection, qualitative monitoring, and project management.

Tribal

Multiple Environmental and Engineering Services, Sycuan Tribe, El Cajon, California. Performed various environmental consulting services for the Sycuan Tribe related to water treatment, casino expansion, road widening, and utilities. The Sycuan reservation and land holdings are located in the Harbison Canyon area east of El Cajon and include tribal dwellings, tribal infrastructure, and a casino. Tasks have included ACOE regulatory compliance monitoring, mitigation monitoring, stormwater protection prevention plan monitoring, revegetation plan design, biological surveys, jurisdictional wetland delineations, rare plant surveys and biological constraints studies.

Water/Wastewater

Upper Chiquita Reservoir, Santa Margarita Water District, Orange County, California. Performed regulatory compliance monitoring during initial grading and construction of an emergency water storage reservoir. In addition, authored the conceptual mitigation plan to compensate temporary impacts. This project involves the excavation of an existing box canyon and construction of a dam face to create a water-storage reservoir. Tasks also include coordination with contractor, client, and project engineers.

Shelah Riggs

Senior Regulatory Specialist/Project Manager

Shelah Riggs is an accomplished project manager with 13 years' experience in preparing California Environmental Quality Act and National Environmental Policy Act (CEQA/NEPA) documents and regulatory compliance documents under the Clean Water Act (CWA), Sections 404 and 401; the federal Endangered Species Act (ESA), Sections 7 and 10; California Coastal Act; California State Porter-Cologne Act; California ESA (CESA); and California Fish and Game Code Sections 1600–1616. Ms. Riggs has conducted numerous wetlands and streambed delineations in accordance with the U.S. Army Corps of Engineers (ACOE) 1987 Wetland Delineation Manual and Arid West Region Supplement methodology throughout Southern California. She maintains an excellent rapport with resource agency staff and has successfully negotiated and assisted in implementing favorable mitigation conditions for a variety of public and private projects located within environmentally sensitive areas. Ms. Riggs has provided regulatory compliance training through the University of California, Los Angeles Extension Service, as well as client-customized training for Southern California Edison (SCE), San Diego County Water Authority (SDCWA), and the Los Angeles County Department of Public Works.

Education

California State University, Fullerton

MS, Environmental Studies, 2002

California State University, Fullerton
BA, Geography, 1998

Certifications

Wetland Training Institute

- *Certificate in Wetland Delineation, April 2003*
- *Certificate in Plant ID, June 2005*

PSMJ Resources Inc., Project Manager's Boot camp, 2002 and 2004

Professional Affiliations

Association of Environmental Professionals

Society of Wetland Scientists

California Native Plant Society

Project Experience

Education

Arroyo Flood Control and Enhancement Project, University of California, Riverside (UC Riverside), Riverside, California. Served as regulatory compliance task manager on this project, which involved construction of flood control mechanisms consisting of buried conveyances, surface channels, and detention basins to safely convey the 100-year storm flow through the UC Riverside campus. Prior to implementation of the project, a substantial portion of the campus was subject to flooding. The project included a significant riparian enhancement component that required revegetation of reconfigured drainage channels and basins with native habitat. Currently conducting the annual monitoring and reporting effort for the project, as required under condition of the 404 authorization. Ms. Riggs also acted as project manager responsible for preparing a CEQA initial study and obtaining permits under Section 404 and 401 of the Clean Water Act and Section 1602 of the California Fish and Game Code.

Resource Management

On-Call Regulatory Permitting Services, Harbors, Beaches, and Parks Regional Parks Repair Project, Orange County Public Works (OCPW), Orange County, California. This project involves flood damage repair at 46 different sites in 13 Orange County Regional Parks, which included conducting the general and focused biological surveys for all 46 sites, in support of the forthcoming CEQA document, Federal

Emergency Management Act (FEMA) compliance, and regulatory permitting effort. Served as project manager responsible for managing biological staff, designing the report format and content, and preparing the regulatory compliance sections of the report for each repair site.

On-Call Regulatory Permitting Services, Peters Canyon Regional Park Mitigation Plan, OCPW, Orange County, California. This project involved identification and mapping of areas where streambed enhancement activities could be conducted within Peters Canyon Regional Park to meet mitigation requirements under existing 404, 401, and 1602 permits for County projects. The County intends to conduct similar studies and coordination with the resource agencies to maximize mitigation opportunities throughout the regional park system. Acted as project manager, responsible for obtaining the regulatory permits required for the project, mapping the mitigation sites, preparing the Hazardous Material Management Program document, and coordinating approval of the mitigation proposal by the resource agency staff.

Via Bellota Landslide Project, City of San Clemente, Orange County, California. Served as project manager. Prepared technical studies, a CEQA initial study, and is obtaining regulatory permits for the Bellota Landslide Project. The project involves remediation of a landslide that occurred on a slope adjacent to a residential street in the City of San Clemente. Three homes were deemed uninhabitable as a result of the slide, and geotechnical monitoring indicated that 17 additional homes were in jeopardy. Remediation of the landslide involved significant grading and installation of a buttress within a natural canyon occupied by the federally endangered coastal California gnatcatcher (*Polioptila californica*). Provided coordination with ACOE and the California Department of Fish and Game (CDFG) to deem a drainage feature in the canyon non-jurisdictional, identified on- and off-site mitigation lands, prepared a habitat mitigation and monitoring plan, and is coordinating with CDFG and U.S. Fish and Wildlife Service (USFWS) to issue 4(d) authorization for take of occupied coastal sage scrub and the gnatcatcher.

San Diego Creek Operations and Maintenance Project, OCPW, Orange, California. As project manager, helped in preparing an EIR for adoption and implementation of an Operations and Maintenance Plan within the reach of San Diego Creek between Interstate 405 and Newport Back Bay. The plan is intended to restore flood control capacity to Lower San Diego Creek, which has been reduced as a result of sediment accumulation and vegetation overgrowth and represents a significant flood hazard. Key issues include potential impacts to jurisdictional waters, riparian habitat for the federally endangered least Bell's vireo (*Vireo bellii pusillus*), and water quality, hydrology, and the evaluation of alternatives to maintenance. Authorization under Section 401 and 404 of the CWA, Section 1602 of the Fish and Game Code, California Coastal Act, and ESA Section 7 is required. In addition, Ms. Riggs helped coordinate all biological resources reports and obtain regulatory permits.

Transportation

On-Call Regulatory Permitting Services, Black Star Canyon Emergency Road Repair, OCPW, Orange County, California. This project involved permanent stabilization of a road-fill failure along the north bank of Black Star Canyon Creek that was triggered by heavy firefighting equipment during fire suppression activities in a rural canyon. Black Star Canyon Road is the single access into the canyon. As project manager, Ms. Riggs was successful in conducting a wetland delineation, a biological resources survey, and obtaining permits within 6 weeks to allow the repair to be completed prior to the fire hazard season. Due to the critical nature of this project, she was able to obtain permits and approvals from the CDFG, ACOE, and Regional Water Quality Control Board (RWQCB) within 4 weeks of notice to proceed.

Water/Wastewater

Carryover Storage and San Vicente Dam Raise Project EIR/Environmental Impact Statement (EIS), San Diego County Water Authority (SDCWA), San Diego, California. As permits coordinator, provided liaison and coordination with the EIS federal lead agency, ACOE, and prepared all permit applications for the project, including the 404(b)(1) Alternatives Analysis. Responsible for assisting ACOE with preparing all NEPA notices, reviewing technical reports, and expediting approvals. Ms. Riggs was asked to fill this role based upon her excellent relationship with ACOE staff in Los Angeles and San Diego. Additionally, SCDWA requested that she present a white paper on the NEPA and 404 implications of the project at the U.S. Dam Engineers Conference in Philadelphia, Pennsylvania, on their behalf.

CEQA, Regulatory Permitting, Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Review On-Call Services, County of Riverside, California. As project manager since 2006, conducted reviews during the plan-check phase of approval for Riverside County Flood Control projects, as a subconsultant to Bureau Veritas, which included construction, modification, or other work within flood control facilities. The reviews evaluated project compliance with CEQA and ensured that each project conformed to the District's requirements for permits under Section 1602 of the Fish and Game Act, Section 404 and 401 of the CWA, and the Western Riverside MSHCP requirements. To date, has received and/or completed the following task orders:

- Task Order No. 1 – Tract 30850. Environmental review for project that involved work within the Perris Valley Channel System. This project required additional coordination to ensure that the 1602 Operation by Law letter included verbiage required by Flood Control that would allow for long-term maintenance activities within the channel.
- Task Order No.2 – Tract 30921. Environmental review for project that involved work within the Quincy Street Channel. This project required additional coordination to ensure that the focused surveys required under the MSHCP for the project were conducted.
- Task Order No. 3 – Tract 31098. Environmental review for project that involved work within the Romoland Master Drainage Plan (MDP) Line A-2. This project required additional review of the landscaping and maintenance plan for a grass-lined channel to be constructed by the applicant and dedicated to the District.
- Task Order No. 4 – Tract 31305. Environmental review for project that involved work within the Moreno Valley MDP Area. This project required additional review and coordination to ensure that the 401 Water Quality Certification and the 404 Nationwide Permits were amended by the RWQCB and ACOE, respectively, to address construction, operation, and future maintenance of the facility to be constructed.
- Task Order No. 5 – Tract 31968. Environmental review for the Springs Commercial Center. This project required documentation review to ensure that the requirements of the Coachella Valley MSHCP were met.
- Task Order No 6 – Tract 32702. Environmental review for Stormwind Ranch at Oak Valley. This project required additional review and coordination to ensure that the MSHCP requirements for focused biological surveys for Narrow Endemic Plant Species (NEPSSA 8-*Allium marvinii* and *Dudleya multicaulis*), burrowing owl (*Athene cunicularia*), and riparian birds (least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo (*Coccyzus americanus*)) were met.

Appendix B

Sample Environmental Assessments

DUDEK

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November 1, 2013 7360-07

Ms. Denise Weaver
Orange County Public Works Department
OC Public Works/Project Management
300 North Flower Street
Santa Ana, California 92703-5000

Subject: Least Bell's Vireo Habitat Mitigation Suitability Assessment for the San Diego Creek Maintenance Reach 1 Project, Orange County, California

Dear Ms. Weaver:

This letter report outlines the findings of a preliminary, reconnaissance level site assessment performed at areas specified by Orange County Public Works Department (OCPW) along Aliso Creek and at the Talbert North Nature Preserve. The goal of this assessment is to identify suitable least Bell's vireo (LBV) habitat mitigation for the San Diego Creek, Reach 1, Channel Maintenance Project (Project). Specifically, this effort attempts to identify potential mitigation opportunities for 14 acres of riparian habitat where suitable functions and services for utilization by LBV can be enhanced and/or restored and which is also located within in the Coastal Zone (CZ). The San Diego Creek Maintenance Reach 1 Project also requires an additional 28 acres of LBV quality riparian habitat which may be located outside of the CZ, for a total of 42 acres of compensatory mitigation.

On April 9, 2013, Dudek performed a preliminary site investigation at two potential mitigation sites specified by OCPW to identify opportunities and constraints. Additional sites include the Talbert Preserve and Woods Canyon. The Talbert property was assessed; a separate report documents mitigation opportunities on the Talbert preserve property. The Woods Canyon site was not assessed due to the lack of riparian hydrology and mitigation opportunities within the drainage. The two study sites included in this report are Aliso Creek and the Talbert North Nature Preserve.

1.0 ALISO CREEK STUDY AREA

The Aliso Creek study area is located within Aliso and Wood Canyons Wilderness Park. The study reach is situated between the end of the concrete channel located 700 feet south of Aliso Creek Road, extending downstream to the Aliso Creek Inn and Golf Course property, and is located entirely within the CZ. The study reach is approximately 3.95 miles long (following the active channel that averages approximately 20 feet wide) with an average creek corridor width of

50 feet (based on 10 sample locations), for a study area of approximately 24 acres. The Aliso Creek study area is shown in Figures 1 through 5.

In addition to assessing non-native vegetation removal and riparian enhancement for LBV–suitable habitat, Dudek also assessed potential uplands mitigation opportunities associated with ruderal and annual grassland vegetation communities. The uplands mitigation assessment evaluated slopes that are visible from the road along the northwest side of Aliso Creek.

The riparian mitigation opportunities assessment consisted of casual observations of existing riparian habitat structure, site hydrology and hydrogeomorphic features such as sandbars, cut bank and channel incision; site access, existing native and nonnative vegetation including suitable LBV habitat, erosion, and infrastructure such as paved and unpaved roads, grade structures, and flood control features.

The Aliso Creek channel is incised the entire length of the study area, with sections of vertical bank-cut, and areas of riprap. The incised channel is greater than 20 feet deep in many locations. Vegetation within, and up the sides of the channel is dominated by southern willow scrub with dense patches of giant reed (*Arundo donax*). Vegetation outside of incised channel is primarily upland, with patches of giant reed and mature, established riparian tree species, which likely established prior to significant stream down-cutting.

Surface flow was present within Aliso Creek at the time of the investigation, and this perennial hydrology is understood to be the result of urban runoff.

The primary non-native invasive species in the study area is giant reed. Observed giant reed patches range from mature and undisturbed, to recently cut and treated with herbicide. Active giant reed control efforts are occurring throughout the study area. However, no evidence of replanting was observed within giant reed treatment areas.

Surveys for LBV, California gnatcatcher (CAGN), arroyo toad (ARTO), and steelhead were performed in 2011 in association with the Coastal Treatment Plant Export Sludge Force Main Replacement Project Final Environmental Impact Report (FEIR; South Orange County Wastewater Authority (SOCWA), March 2013. State Clearinghouse # 2011051010). Based on the 2011 surveys, the study area upstream of the dam/river crossing supports 5 LBV pairs. Two additional pairs were detected downstream of the crossing on only the initial survey visit and were not detected thereafter. Adjacent uplands areas supported four pairs of CAGN in 2001 and two individuals. No ARTO or steelhead was detected.

According to the FEIR, the dominant native vegetation communities on this reach of Aliso Creek are Southern Willow Scrub, Southern Cottonwood-Willow Riparian Forest, and Mule Fat Scrub. A total of 116 acres of existing riparian communities were mapped.

1.1 Riparian Mitigation Opportunities

Compensatory mitigation credit for exotics removal and replacement with riparian vegetation is typically based on the actual footprint of the exotic vegetation. For giant reed, the physical footprint includes the rooted area plus the plant canopy which can be 8–10 times the rooted area due to the growth pattern of this species. Mapped giant reed occupies approximately 24 acres of Aliso Creek within the Aliso and Wood Canyons Wilderness Park. Observed giant reed densities within the mapped vegetation polygons range from 50%–80% cover. Therefore, approximately 12–19 acres of actual giant reed is present within this reach of Aliso Creek. However, only about 5-10 acres of this total area may have suitable hydrology and soils to support riparian species that constitute LBV habitat. The remaining 7-9 acres of channel bottom would be riparian, but may lack the full functionality of LBV habitat. These buffer areas may generate reduced credit based on future discussions with the resource agencies. Mitigation credits as applied to a specific project may vary depending upon resource agency evaluation of functions and services being impacted and those provided through compensatory mitigation.

The actual treatment/credit acreage should be determined through field measurements using sub-meter accuracy Global Positioning System (GPS) equipment immediately after exotic removal is complete. This methodology should be contained in all permits issued to the Project.

Removal, control, and subsequent planting with appropriate native riparian tree species would constitute mitigation in the form of enhancement or re-habilitation. Areas determined suitable for supplemental planting could be planted with willow (*Salix* sp.) and mule fat (*Baccharis salicifolia*) that create appropriate LBV habitat structure. Additional plantings of cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*) may also be considered where drier conditions preclude willow establishment. While this enhancement work would not expand actual aquatic resource acreage, it would provide increased functions and services within the riparian corridor and increase the acreage of LBV-suitable habitat.

1.1.1 Aliso Creek Upstream of the Coastal Zone

In addition to the enhancement opportunities identified in this reach, Dudek also observes that significant giant reed infestations exist in the upstream tributaries which feed into the study reach (Figure 1). Control of giant reed within these upstream reaches would reduce re-infestation of the study area by giant reed propagules washed downstream from upstream "source plants". Based

on observation of aerial imagery, control of the approximately 2.75 mile reach between the upstream end of the study area and Moulton Parkway would provide significant enhancement benefits to the study area.

Subsequent interaction with resource agencies determined that this upstream reach is a mitigation area being implemented by the Orange County Transportation Authority (OCTA).

1.2 Mitigation Constraints

Given the constrained nature of the channel topography cross section, opportunity for establishment of additional riparian acreage, i.e., expansion of the jurisdictional area, is limited throughout the study area. Specific constraints are outlined below.

1.2.1 Channel Incision

Riparian establishment (creation) opportunities appear to be limited by the deeply incised channel. In many locations, riparian vegetation is limited to the margins along the active low-flow channel, and up the lower slopes and benches of the incised channel. Within the context of the currently existing topography, areas suitable for colonization of riparian species have already recruited.

Riparian establishment opportunities would involve recontouring incised channel banks, i.e., laying back vertical cut banks to create new riparian areas. However, these opportunities for riparian establishment are constrained by adjacent buried utilities, roadways, and mapped cultural resource sites.

1.2.2 Buried Utilities and Existing Access Roads Adjacent the Creek

The paved road along the northwest side of the creek provides access to the water treatment plant located at the downstream end of the study area. On the southeast side of the creek, a dirt access road is located in the upland areas, at the top of the channel banks. The SOCWA sludge force main is generally located beneath this unpaved road. Lateral cut bank channel erosion was observed in close proximity to the road with areas of observed riprap.

These roads and utilities spatially constrain the potential for widening the incised channel, and laying back the banks to a stable slope condition. If establishment opportunities within this study area are pursued, the location of buried utilities should be investigated, and excavation footprints and soil export volumes calculated. Any establishment through excavation should not shorten the effective hydraulic length of the current stream reach by removing channel meanders through channel widening at these features. Such activity could lead to adverse effects such as renewed channel down cutting and/or lateral channel movement.

1.2.3 Cultural Resources

The Coastal Treatment Plant Export Sludge Force Main Replacement Project FEIR also identified cultural resources adjacent to the Aliso Creek channel. Such resources may constrain riparian establishment mitigation opportunities that are adjacent to upland areas with cultural resources.

1.2.4 Observed On-site Giant Reed Removal Activity

Throughout the study area, patches of giant reed have been cut and in some cases sprayed with herbicide. This work is being performed under a Proposition 50 grant, administered by OC Parks and OC Watersheds according to OC Real Estate Services in a letter dated May 23, 2013 (attached). Some treatment areas appear to be recent and some appear to have been conducted during previous years. Many treatment areas exhibited giant reed regrowth. At one site, it was observed that giant reed had been removed, followed by planting of tree cuttings, which had died.

Although the Real Estate Services letter casts doubt on the availability of additional mitigation credits in Aliso Creek, subsequent inquiries with OC Parks and OC Watersheds have confirmed that follow-up riparian vegetation establishment in areas cleared by the Prop 50 grant project may still receive mitigation credit from the resource agencies.

2.0 TALBERT NORTH NATURE PRESERVE

OCPW identified an approximately 22-acre area within the Talbert North Nature Preserve for assessment of suitability for establishment of LBV quality riparian vegetation. However, a larger 45-acre mitigation opportunity appears to be present within the County-Owned Talbert Nature Preserve North property (Figure 6). This study area is vegetated with mustard (*Brassica* spp.), non-native grasses and ruderal species, with "vegetated islands" of coastal sage scrub. Occurrences of Mexican elderberry (*Sambucus mexicana*) are scattered within the vegetation islands. The coastal sage scrub is dominated by coast goldenbush (*Isocoma menziesii*), coyote brush (*Baccharis pilularis*) and lemonadeberry (*Rhus integrifolia*). No riparian vegetation was observed within the study area. The entire study area is located outside of the CZ. The site is shown in Figures 7 through 9.

Soils within the study area appear to be sand, which is loosely consolidated in some areas. Salt residue was observed on soil surfaces near the study area, but not specifically in the study area. No apparent hydrology, including channels, drainage patterns or signs of ponding was observed within the study area.

An established riparian tree canopy is present on the east side of the study site, along the toe of slope, consisting of mature coast live oak (*Quercus agrifolia*), western sycamore and Mexican elderberry. Individual mature trees were observed, but evidence of active sapling recruitment was absent. Based on aerial imagery, it is likely this vegetation was established along the outer margins of the Santa Ana River floodplain prior to channelization. No evidence of surface hydrology was observed in association with this vegetation feature and the vegetation is assumed to be a relic of the original floodplain.

2.1 Riparian Mitigation Opportunities

2.1.1 Opportunity 1: Groundwater Driven Riparian Establishment

To reduce the depth to groundwater, the site may be excavated to an elevation appropriate for riparian species such as sycamores, willows and cottonwoods to access sufficient groundwater. This opportunity would necessitate groundwater studies to determine both the depth of grading as well as groundwater quality and salinity. Such a groundwater-dependent system in the absence of surface hydrology would have limited species diversity. In addition, transition slopes would reduce the area of riparian creation acreage. Implementation costs would likely be high due to grading activities and soil disposal costs.

2.1.2 Opportunity 2: Riparian Creation through Appropriation of Urban Runoff

An opportunity may be present to establish (create) riparian hydrology and vegetation communities that are self-sustaining and suitable for LBV habitat using the stormwater flow of the Greenville-Banning channel. This mitigation concept involves diversion of stormwater flow from the Greenville-Banning Channel into an existing 45-acre site (Figure 7). Minor grading of channels and wetland drainage patterns can be implemented to facilitate distribution of flow across the site and conduct water to the south end of the project area. Depending upon the relative elevation of the Greenville-Banning channel and the Santa Ana River channel, the storm flows can be returned to one of these waterways to convey the water to the ocean. The surface hydrology created through this diversion would promote and support riparian vegetation and LBV habitat. While it is likely that a significant amount of stormwater flow will infiltrate the sandy soil as it passes through the site, the outflow would provide a pass-through hydraulic system for larger storm events during above average rainfall seasons.

Multiple beneficial uses would derive from this mitigation approach including 1) establishment (creation) of approximately 45 acres of self-sustaining riparian and (federal and state jurisdictional) wetlands and LBV-suitable habitat; 2) biofiltration of urban runoff prior to

entering the ocean; and 3) increased groundwater recharge. The mitigation credits created by this project would meet or exceed the immediate need of the Project.

2.2 Mitigation Constraints

Constraints to implement the potential mitigation concepts to achieve the mitigation goal of LBV-suitable riparian habitat include existing and potential biological resources, potential cultural resources, surface hydrology, groundwater resources, and availability of key design features. In addition, the site is adjacent to, but outside, the CZ.

2.2.1 Existing and Potential Biological Resources

Existing native vegetation on site includes sizable patches of coastal sage scrub vegetation. Although this vegetation is marginal habitat for CAGN based on plant species composition, there remains the potential for CAGN to occur on site. Surveys conducted by Dudek at Newport Banning Ranch (NBR) identified the presence of CAGN approximately one mile to the south. In addition, many of the barren areas have the potential to support Pacific pocket mouse. Surveys on NBR were negative for this species and there is a low probability for this species to be present. However, presence cannot be ruled out until a negative protocol trapping survey is conducted.

The presence of pacific pocket mouse would be a significant and fatal flaw that would eliminate the identified potential mitigation opportunity from the Talbert North site. However, the presence of CAGN may be mitigated through restoration of high quality CSS habitat on slopes adjacent to the mitigation site, if project impacts occur and/or require mitigation.

U.S. Fish & Wildlife Service (USFWS) occurrence data (Figure 10) indicates four records for LBV occurrences within one mile of this project site. California gnatcatcher occurrences have been recorded within 3 miles of this parcel. LBV and gnatcatcher occurrences are located at Talbert Nature Preserve South and the Newport-Banning Ranch property.

2.2.2 Potential Cultural Resources

Historic Native American use of the landscape was often associated with large drainages and especially when associated with coastal estuaries. The location of the mitigation site, assumed to be within the historic Santa Ana River floodplain, and adjacency to a headlands, raises the likelihood for the presence of cultural resources. A literature search of known cultural resources should be conducted to determine presence of resources or the potential for cultural resources to be present on or adjacent to the identified mitigation opportunity.

2.2.3 Lack of Surface Hydrology

Based on field observations and aerial imagery, the site does not experience any surface flow as part of a riparian system, and is hydraulically isolated from the Santa Ana River hydrology system. The majority of the target riparian tree species necessary for creating LBV habitat favor establishment along the margins of riverine systems. Surface hydrology is generally required to create self-sustaining riparian vegetation communities that are suitable as LBV habitat. High quality LBV habitat has been shown to have a specific vegetation structure where dense riparian vegetation is present within 2 meters above ground surface. In addition, surface hydrology is typically needed for successful seedling recruitment that supports self-sustaining riparian habitat. Groundwater driven wetland systems are known to occur and support riparian vegetation. However, these systems tend to be more static and prone to variable groundwater resources that can retreat during dry periods, exactly when riparian vegetation needs water to persist. Therefore, groundwater systems are generally less vibrant and resilient, and more subject to perturbations than are surface water driven systems.

The hydrology of the Greenville-Banning Channel should be studied to determine water availability for the identified mitigation site and the viability of the proposed mitigation approach. In addition, the Orange County Flood Control District should be contacted to determine openness to alteration of the flood control system and modifications to existing flood control infrastructure.

2.2.4 Depth to Groundwater

While no groundwater studies were conducted as part of this investigation, based on vegetation presence and dominance within the study area, it appears that groundwater is currently deeper than is ideal for establishment of riparian and wetland species. The species with the least tolerance to drought observed within the study area is Mexican elderberry, which can tolerate greater depth to groundwater than sycamore, cottonwood, willows and mulefat. However, it is possible that groundwater is present due to the proximity to the Santa Ana River channel. Riparian vegetation establishment may be limited by sandy soils that percolate quickly and therefore do not provide a sufficiently moist seed bed for native riparian species to recruit.

Groundwater resources must be determined through the installation of one or more groundwater monitoring wells to record the groundwater level, preferably for 6–12 months. The mitigation option described in 2.1.2 would require reliable groundwater to be present within 4 feet of ground surface throughout most of the year and present at ground surface for 2–4 months in winter and spring months to provide the necessary water resources that support self-sustaining

riparian vegetation. In the absence of surface hydrology, any riparian vegetation established on site without creating surface hydrology must be groundwater-supported.

2.2.5 Availability of Key Project Features

The mitigation concept described in 2.1.3 involving the diversion of stormwater flow from the Greenville-Banning channel requires investigation of the relationship and relative elevation of key project features including the mitigation site, the Greenville-Banning channel structure, and the Santa Ana River levee and channel bottom. In addition, research on the monthly flow data for Greenville-Banning channel and the water source and volume used by the Fairview Park mitigation project are important items that could affect the mitigation design. These research issues can validate the mitigation approach, identify further design challenges such as the need to pump water, or identify a fatal flaw that would eliminate the identified mitigation concept.

3.0 OTHER RIPARIAN MITIGATION OPPORTUNITIES

Two other assessment efforts were conducted in addition to the assessment of Aliso Creek and Talbert Preserve North. Real Estate Services conducted an independent survey of available mitigation lands within the coastal zone. The results of this survey are documented in a letter dated May 23, 2013 (attached). Areas investigated by Real Estate Services include Middle and Lower Aliso Creek, Bolsa Chica wetlands, Newport Back Bay, Banning Ranch, and Chrystal Cove Park. Of these areas, it was determined the mitigation opportunities exist only in Lower Aliso Creek. There is future potential for mitigation credits at Newport-Banning Ranch but these opportunities will not be known until a development plan is established for this privately held property.

A separate effort to assess mitigation opportunities at Talbert Nature Preserve South was conducted by Dudek in 2013 and documented in a letter dated April 4, 2013 (attached). The survey assessed areas of Talbert South that have not been previously mitigated. The survey concluded that approximately 15 acres of southern willow scrub and/or mule fat scrub enhancement and approximately 22 acres of riparian vegetation re-establishment opportunities are present at Talbert South. A map of these mitigation opportunity areas is included in the letter report. Most enhancement and re-establishment opportunities involve pampas grass removal and replacement. Re-establishment areas also include modifications to a stormwater drainage channel to create appropriate hydrology to support riparian vegetation communities.

U.S. Fish & Wildlife Service (USFWS) occurrence data (Figure 10) indicates four records for LBV at Talbert Nature Preserve South. California gnatcatcher occurrences have been recorded immediately south of the site on the Newport-Banning Ranch property. LBV and gnatcatcher

occurrences are located at Talbert Nature Preserve South and the Newport Banning Ranch parcel.

4.0 RESOURCE AGENCY FEEDBACK

Information regarding three potential mitigation areas including Aliso Creek, Talbert Preserve South and Talbert Preserve North was presented at a regularly scheduled multi-agency coordination meeting with OCPW staff and representatives of the U.S. Army Corps of Engineers (USACE), California Department of Fish & Wildlife (CDFW), Orange County Regional Water Quality Control Board (RWQCB), and U.S. Fish & Wildlife Service (USFWS). The resource agencies in attendance are collectively referred to here as the Agencies. Representatives from the California Coastal Commission and San Diego RWQCB were unable to attend. The purpose of the presentation was to seek information about the potential mitigation sites known by the Agencies and to request feedback on the perceived value of each site, and determine the preferences and/or desired priorities of the Agencies. This section provides a summary of Agency comments for each site.

4.1 Aliso Creek

The Agencies response was generally positive for mitigation in Aliso Creek. USFWS indicated that a previous attempt to establish a wetlands mitigation bank or In Lieu Fee program to address giant reed in Aliso Creek had failed to attract funding and the effort is now defunct. It was disclosed that the upstream reach (outside of the Coastal Zone (CZ)) of Aliso Creek identified in this mitigation study is being mitigated by the Orange County Transportation Authority. The Agencies agreed that with the upstream population of giant reed being treated, the area within the CZ would be the logical next step to enhance and restore Aliso Creek.

4.2 Talbert Nature Preserve North

The Agencies expressed interest in this potential mitigation site. Some suggested that this should receive higher priority than the other mitigation projects presented. One attendee questioned if the elevation of the Greenville-Banning channel would allow for water to flow into the proposed site or if it would have to be pumped. It was noted that the mitigation site north of the potential project area also draws water from the Greenville-Banning Channel. The availability of sufficient water volume and seasonal availability was questioned. USFWS agreed that Pacific pocket mouse and gnatcatcher surveys would be necessary to eliminate these concerns USFWS offered to research the potential for Pacific pocket mouse critical habitat in this area. The value of the project for groundwater recharge and water quality treatment was noted as a beneficial use of the project.

4.3 Talbert Nature Preserve South

Agency interest in potential mitigation at Talbert Preserve was directed mainly at the identified potential tidal salt marsh mitigation in the southwest corner of the preserve. The Agencies indicated that tidal salt marsh creation presents a rare and significant mitigation opportunity. However, salt marsh mitigation would not provide appropriate compensatory mitigation for LBV. The idea of mutual benefits for LBV deriving from saltmarsh mitigation in association with riparian vegetation was not accepted by USFWS. There was recognition expressed by USFWS that LBV depend on riparian vegetation for forage, cover and reproduction and that any adjacency benefits were minor. Therefore, salt marsh could not be viewed as mitigation for LBV habitat impacts.

The resource agencies did not specifically comment on riparian mitigation in other areas of the preserve that involves exotics removal and potential rehabilitation through use of the existing stormwater channel. However, there seemed to be a general consensus of the value to improve riparian habitat within Talbert Nature Preserve South.

5.0 COST PROJECTIONS

Implementation costs can only be estimated on an order of magnitude basis at this stage of the assessment process. Table 1 summarizes the anticipated range of implementation costs that could be expected for each identified riparian mitigation opportunity. These costs should only be used as a relative comparison between mitigation opportunities and not as absolute estimates for each individual mitigation project. Factors generally considered in these range estimates include the scope of activities such as the amount of grading, accessibility of irrigation water, site accessibility for mechanized equipment and maintenance.

Table 1. Estimated Implementation Costs

MITIGATION OPPORTUNITIES	MITIGATION CREDIT	POTENTIAL ACREAGE	PER ACRE COST RANGE	ESTIMATED IMPLEMENTATION COST RANGE
Aliso Creek	Rehabilitation	12-19	$50K-$80K	$600,000-$1,520,000
Talbert North Alternative #1	Establishment (Creation)	50*	$100K-$120K	$4,500,000- $7,200,000
Talbert North Alternative #2	Establishment (Creation)	50*	$45K-$60K	$2,250,000-$3,375,000
Talbert South (riparian only)	Re-Establishment	22**	$35K-$60K	$770,000-$1,320,000

* Includes 5 acres of coastal sage scrub mitigation for anticipated onsite impacts.

** Acreage may be less due to existing riparian habitat embedded within dense pampas grass-dominated areas.

6.0 RECOMMENDED MITIGATION OPPORTUNITIES

As stated previously, the goal of this assessment is to identify suitable least Bell's vireo (LBV) habitat mitigation for the San Diego Creek, Reach 1, Channel Maintenance Project (Project). The Project is estimated to have 14 acres of riparian habitat impacts when implemented with anticipated associated impacts to LBV. Mitigation of riparian habitat through establishment, re-establishment (i.e., Restoration) is needed within in the Coastal Zone (CZ). An additional 28 acres of LBV quality riparian habitat may be located outside of the CZ for a total of 42 acres of compensatory mitigation.

Several potential mitigation sites have been reviewed in this report and attached reports. Mitigation recommendations are based on feasibility of construction and appropriate hydrology, and anticipated success at establishing self-sustaining habitat that is in dynamic equilibrium with the surface and sub-surface hydrology. Recommended mitigation projects are listed below in order of precedence.

6.1 Talbert South

This mitigation presents the best opportunity for riparian vegetation mitigation within the CZ. Although hydrology is somewhat limited, the lack of scour (as contrasted with Aliso Creek), presence of fertile soils, access to irrigation water, and ease of construction and maintenance access makes this a highly feasible riparian mitigation project within in the Coastal Zone. In addition, we believe the mitigation would qualify as Re-Establishment mitigation. On a unit/cost basis, this project is the most economical mitigation project of the four assessed sites.

6.2 Aliso Creek

Aliso Creek is recommended as a second tier mitigation project in the CZ. The project presents challenges to site access that will increase the overall implementation cost. The hydrology of Aliso Creek and geomorphology of the incised channel present challenges from high velocity flow that can scour establishing riparian vegetation. Such highly dynamic riverine systems are subject to setbacks during peak flood events that can damage irrigation systems and planted areas. Although the project is feasible, implementation will involve greater risk of success and commensurate risk of higher cost of implementation. In addition, the resource agencies may only recognize the project as enhancement mitigation which may not be considered as appropriate mitigation

6.3 Talbert North Alternative #2

Outside the CZ, this project site presents the best opportunity for riparian wetlands establishment. The use of flow from the Banning-Greenville to create suitable riparian hydrology eliminates grading costs that are associated with Alternative #1. This situation provides for an economical project that would establish (create) new federal jurisdictional area, the most valuable form of mitigation. Significant additional studies are needed to validate this mitigation concept including availability of stormwater flows from the Banning-Greenville channel, depth to groundwater, potential presence of sensitive and listed species, and relationships with flood control infrastructure.

6.4 Talbert North Alternative #1

Alternative #1 for Talbert North carries the greatest expense to create a groundwater driven riparian wetlands system. The higher cost associated with grading is based on a 3-foot excavation depth and could be greater if groundwater is deeper than expected at this mitigation site. In addition, the location for soil disposal is unknown and greater distance from the mitigation site could substantially increase the implementation cost. Riparian vegetation that is solely dependent upon groundwater resources is subject to greater stress in times of prolonged drought and may not prove to be self-sustaining in the long run. Unsustainable mitigation sites require higher long term management costs than do self-sustaining mitigation sites. Additional information regarding depth to groundwater and acceptable soil disposal site(s) would greatly inform evaluation of this alternative.

For any questions or concerns, please contact me at 760.479.4253 or via email at msweesy@dudek.com.

Sincerely,

Michael Sweesy, Dudek
Principal/Habitat Restoration Specialist

Att: Figures 1 through 10
Real Estate Services Letter date May 23, 2013
Dudek Assessment Letter dated April 4, 2013

CC: Nardy Kahn, OCPW
Rory Paster, OCPW
Chris Oesch, Dudek

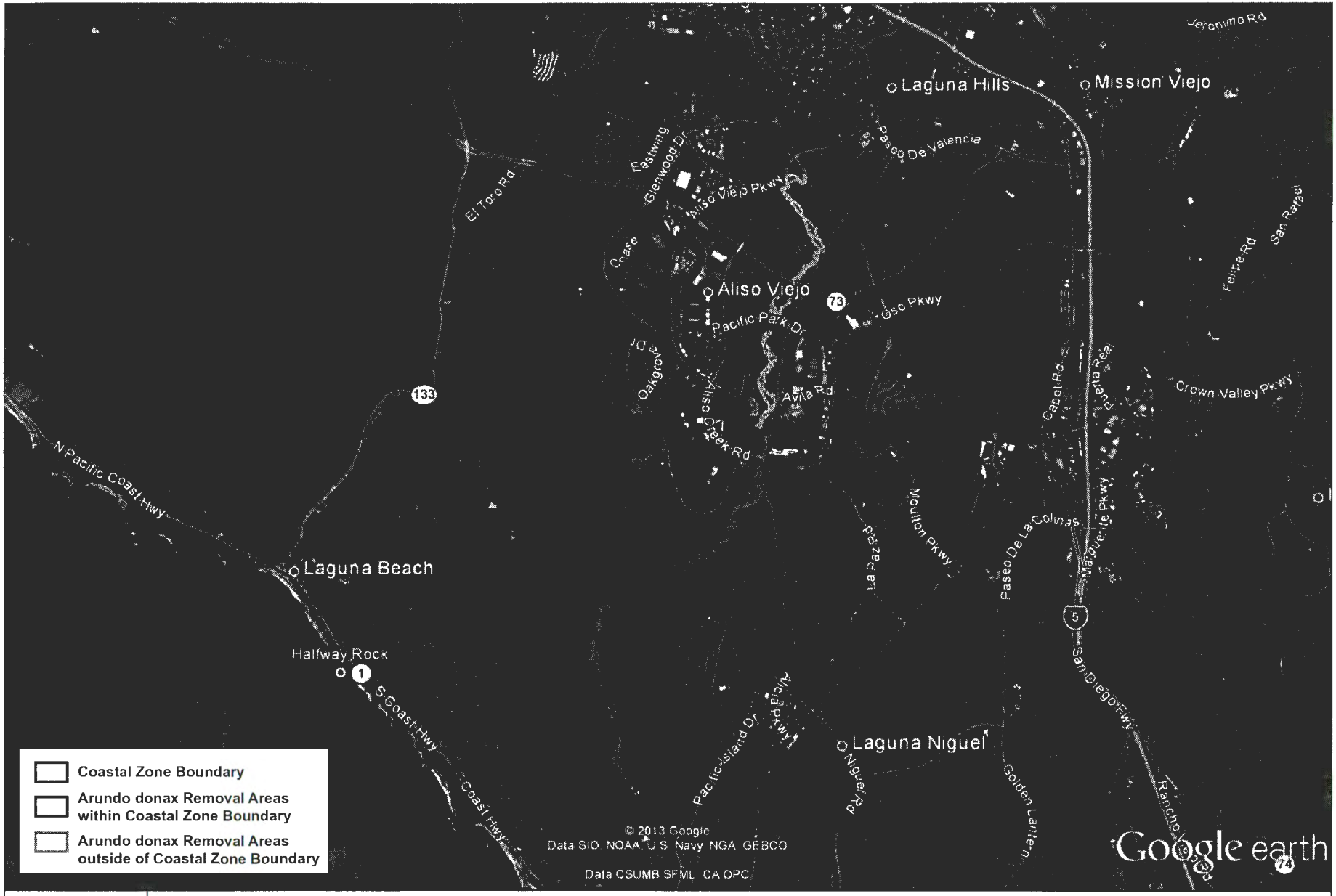

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FIGURE 1

Aliso Creek Watershed

Mitigation Suitability Assessment for the San Diego Creek Maintenance Reach 1

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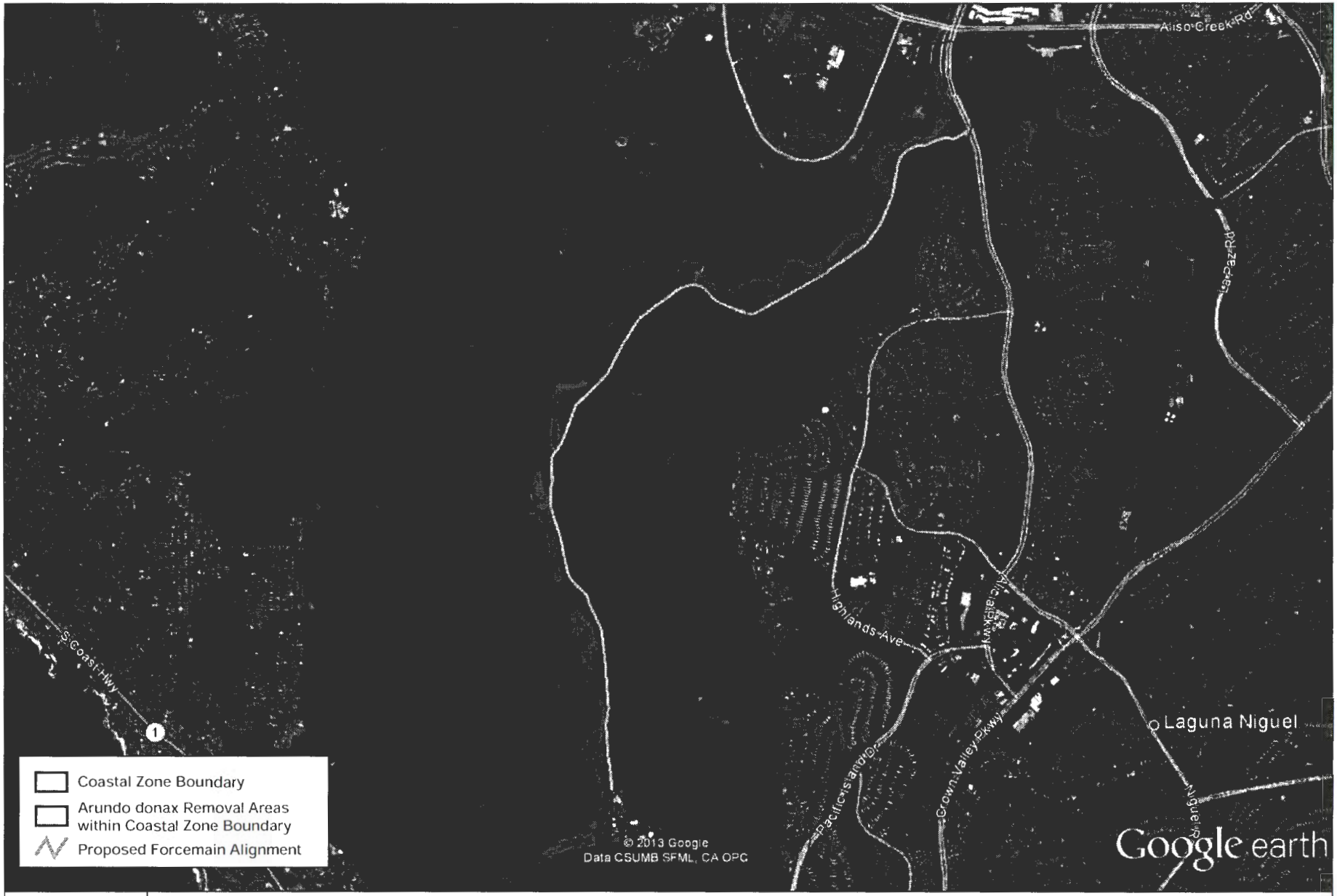

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APRIL 2013

FIGURE 2

Aliso Creek Within Coastal Zone

Mitigation Suitability Assessment for the San Diego Creek Maintenance Reach 1

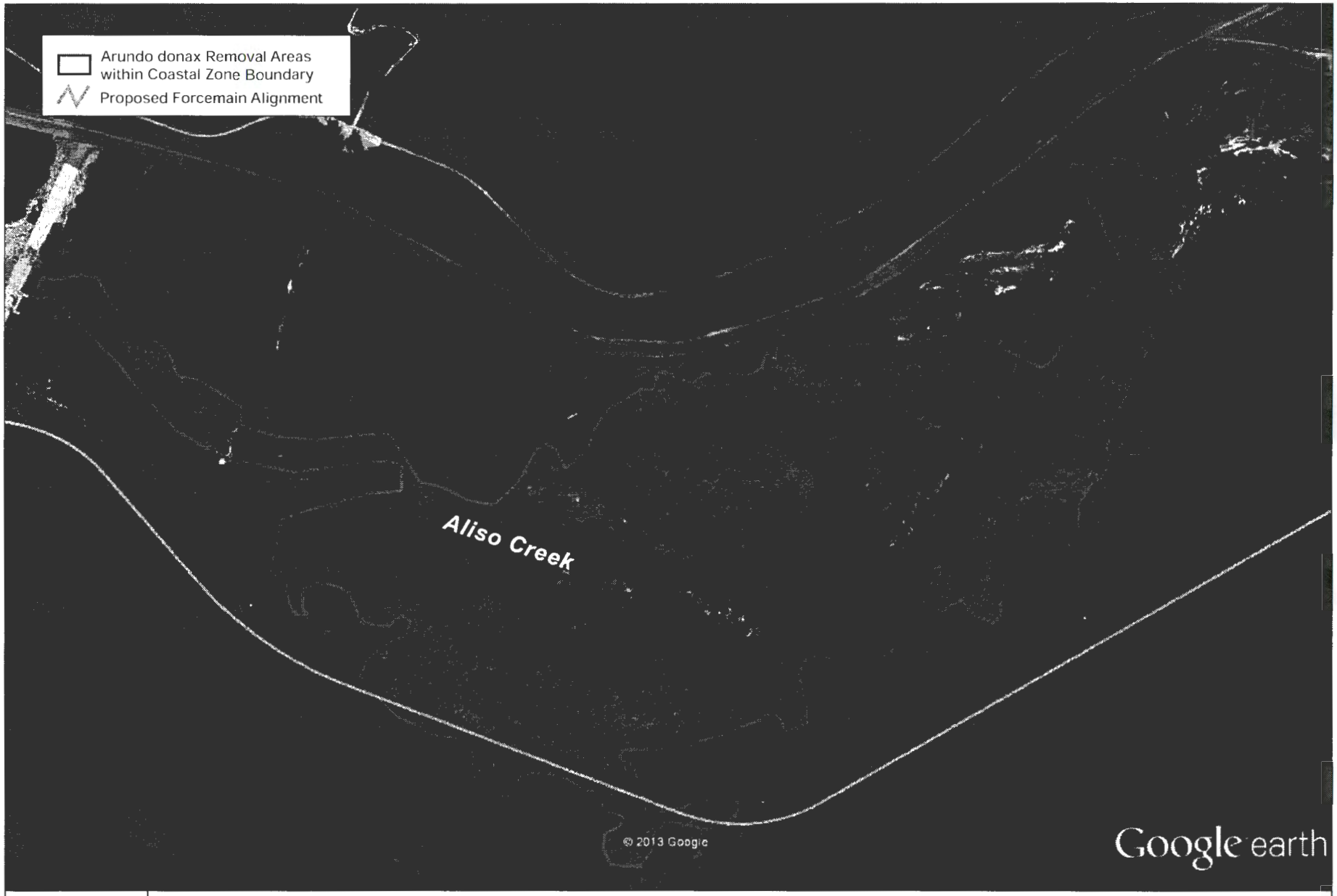

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FIGURE 3

Example Arundo donax Treatment Area

Mitigation Suitability Assessment for the San Diego Creek Maintenance Reach 1

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FIGURE 4

Aliso Creek Arundo donax Treatment Areas

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FIGURE 5

Aliso Creek Arundo donax Treatment Areas

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FIGURE 6
Talbert Preserve

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FIGURE 7

Talbert Preserve North Opportunities

Mitigation Suitability Assessment for the San Diego Creek Maintenance Reach 1

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FIGURE 8

Talbert Preserve North Existing Conditions

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FIGURE 9

Talbert Preserve North Existing Conditions

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SOURCE: Bing

Orange County Public Works

FIGURE 10

USFWS Occurrences

OC PublicWorks
Integrity, Accountability, Service, Trust

Ignacio G. Ochoa, P.E., Interim Director
300 N. Flower Street
Santa Ana, CA 92703

P.O. Box 4048
Santa Ana, CA 92702-4048

Telephone: (714) 667-8800
Fax: (714) 967-0896

Memorandum

DATE: May 23, 2013

TO: Nardy Khan, Engineering Supervisor, OC Engineering

FROM: David Cops, Real Estate Services
(714) 667-9687

SUBJECT: San Diego Creek Mitigation Property

The Orange County Flood Control District (District) is required to mitigate for the expected loss of least Bell's vireo (LBV) habitat associated with District's proposed maintenance of a portion of the San Diego Creek Channel. As this portion of the channel is located within the Coastal Development Zone, the replacement habitat is also required to be within this zone. Real Estate Services was asked to locate approximately 14 contiguous acres of land within the Coastal Development Zone of Orange County and suitable for habitat restoration and preservation for LBV mitigation to mitigate the project's impact. Accordingly, this search was limited to unimproved, riparian properties within a short distance of the California coast (See Coastal Zone Map on last page).

Aside from the challenge of searching within a limited geographical area, this site search follows the OCTA Measure M mitigation programs which absorbed much of the available mitigation property in Orange County. The Measure M program solicited restoration proposals from the public and of the 100 plus proposals, ranked 29 of them as good to high quality sites. This search included a review of the proposals not accepted by OCTA and found one potential LBV site at the Salt Creek Corridor in the City of Laguna Niguel; however, it is outside the Coastal Zone. (OCTA STAFF REPORT)

My search consisted of queries to online property databases, specifically the Multiple Listing Service and CoStar, Internet searches, and phone calls and emails to public and private agencies managing properties within the Coastal Zone with riparian features. The names and agencies contacted are listed at the end of this report. In addition, I had the opportunity to speak with a real estate broker specializing in mitigation land sales. The broker's fee is $100 per hour and she would be willing to enter into a "not to exceed" contract with the District to locate a suitable property. Her contact information is also listed at the end of this report.

Just one area met all of the criteria needed for this mitigation project: Lower Aliso Creek. Portions of middle and upper Aliso Creek also appear to have potential availability and suitability for LBV but are located outside of the Coastal Zone. They are included in this report as the information may be useful for mitigation required for work in the upper section of Basin 1 and Basins 2 and 3 of the San Diego Creek.

Lower Aliso Creek

These 500+ acres of land through which this segment of Aliso Creek runs are owned by the County of Orange and are located within the Coastal Development Zone. OC Parks and OC Watersheds are already involved in an Arundo and non-native plant removal project along the Creek that is funded by

Centennial Park Lake Rehabilitation
Project Manual

Prepared for:

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Brittany Bair, EIT

MAY 2017

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APPENDICES

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FIGURES

TABLES

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1 PURPOSE OF MANUAL

The primary purpose of this manual is to document the Centennial Park Lake rehabilitation program and provide useful information and guidelines for the successful operation and maintenance of the lake system(s) after the lake rehabilitation recommendations are implemented.

The first step in successful lake operation is to establish reasonable and achievable goals. These goals must take into consideration the intended uses of the lake, the complex aquatic life in the lake system, lake management technology and economic feasibility. The use of Centennial Park lake has been established since its construction in 1978. The primary lake uses are aesthetic and non-body contact recreation. The goals of the proposed lake rehabilitation program are to restore and enhance the lake uses including: fishing, birding, hobby boating, photography, educational programs, wildlife viewing, landscape viewing, etc. The decisions pertaining to use and goals are recorded in this manual as a base for future decisions necessary in the operational program. General and specific physical and biological information are also presented to explain how the goals can be achieved.

Specifically, this manual is designed to furnish the following information for the city staff responsible for lake management.

1. Background information on the system.
2. Operational objectives for the intended uses.
3. Limnological and biological information on the lake.
4. Physical aspects of the lake system.
5. Operational procedures for routine maintenance, "troubleshooting" and expeditious handling of common problems.

Insofar as possible, the information is presented in lay terminology. Where non-lay terminology is impossible or difficult, a list of definitions is provided.

The persons responsible for this lake may wish to make changes in the use pattern or lake operation. It is hoped that the information contained in this manual will enable the management group to make well-founded decisions on desired changes. This manual should remain flexible so that it can be revised to reflect any changes in uses and environmental conditions as time goes by.

2 EXECUTIVE SUMMARY

Dudek was hired by the City of Santa Ana to develop a comprehensive rehabilitation plan for Centennial Park Lake and the park area surrounding the lake. The goal of the rehabilitation project was to identify problems, needs, and deficiencies with the lake, lake equipment, the lake park area, park visitors, and lake maintenance and develop a remediation plan to address each identified deficiency. Our approach to developing a rehabilitation plan for the lake was to focus on the key parameters expressed by City staff as well as additional identified deficiencies and

present rehabilitation and remediation options for each parameter and deficiency. In order to identify and measure lake deficiencies Dudek obtained water quality samples from the lake and had them tested for indicator constituents. Dudek obtained lake soil liner samples and had them tested for clay content and soil grain size distribution. Dudek staff visited the site on ten separate occasions to observe park user behaviors, lake maintenance, and maintenance personnel tasks. Dudek observed park users and how they interacted with the lake and how they use the lake. Dudek interviewed park maintenance staff to discuss their observations and to gain their insight on lake deficiencies and needs from a maintenance perspective. The identified lake deficiencies can be summarized into the following lake management categories:

1. Personnel and Public Safety
2. Lake Circulation
3. Lake Aeration
4. Wildlife/Fishery
5. Seepage Losses
6. Lake Maintenance
7. Public awareness
8. Park facility issues
9. Waterfowl management

In an effort to develop a comprehensive lake remediation plan, Dudek provided extensive research and data collection of the existing facilities and conditions of Centennial Park and Centennial Park Lake to develop a baseline of various parameters for comparison. The data collection efforts included lake water quality sampling, lake soil liner sampling, lake park user behavior observations, lake maintenance personnel interviews, lake/park tree surveys, lake/park waterfowl surveys, and lake equipment visual inspections. In addition Dudek prepared a lake water use analysis to determine the condition of the lake liner system.

Through a series of meetings and discussions Dudek and City of Santa Ana staff, together, developed a detailed list of the desired features and design elements to be included in the Centennial Lake rehabilitation plan. The rehabilitation plan is specifically focused on addressing and mitigating each of the identified deficiencies of Centennial Lake and providing additional enhancements to create a lake ecosystem that is self-correcting and results in decreased long term maintenance needs. The lake rehabilitation plan is provided on Exhibits 1, 2, and 3. The lake rehabilitation plan is comprehensive and includes numerous redundancies to addresses each area of good lake ecosystem design practices; (aeration, circulation, water use, fishery enhancements, wildlife habitat enhancements, waterfowl control measures, vector control measures, biological systems, aquatic vegetation, aesthetic enhancements, lake uses, nearby park landscape, lake user activities and behaviors, lake maintenance needs and maintenance activities, and community support and involvement). The lake rehabilitation plan uses mechanical systems, biological systems, and passive controls in an attempt to mimic the hydrologic and biological processes of a

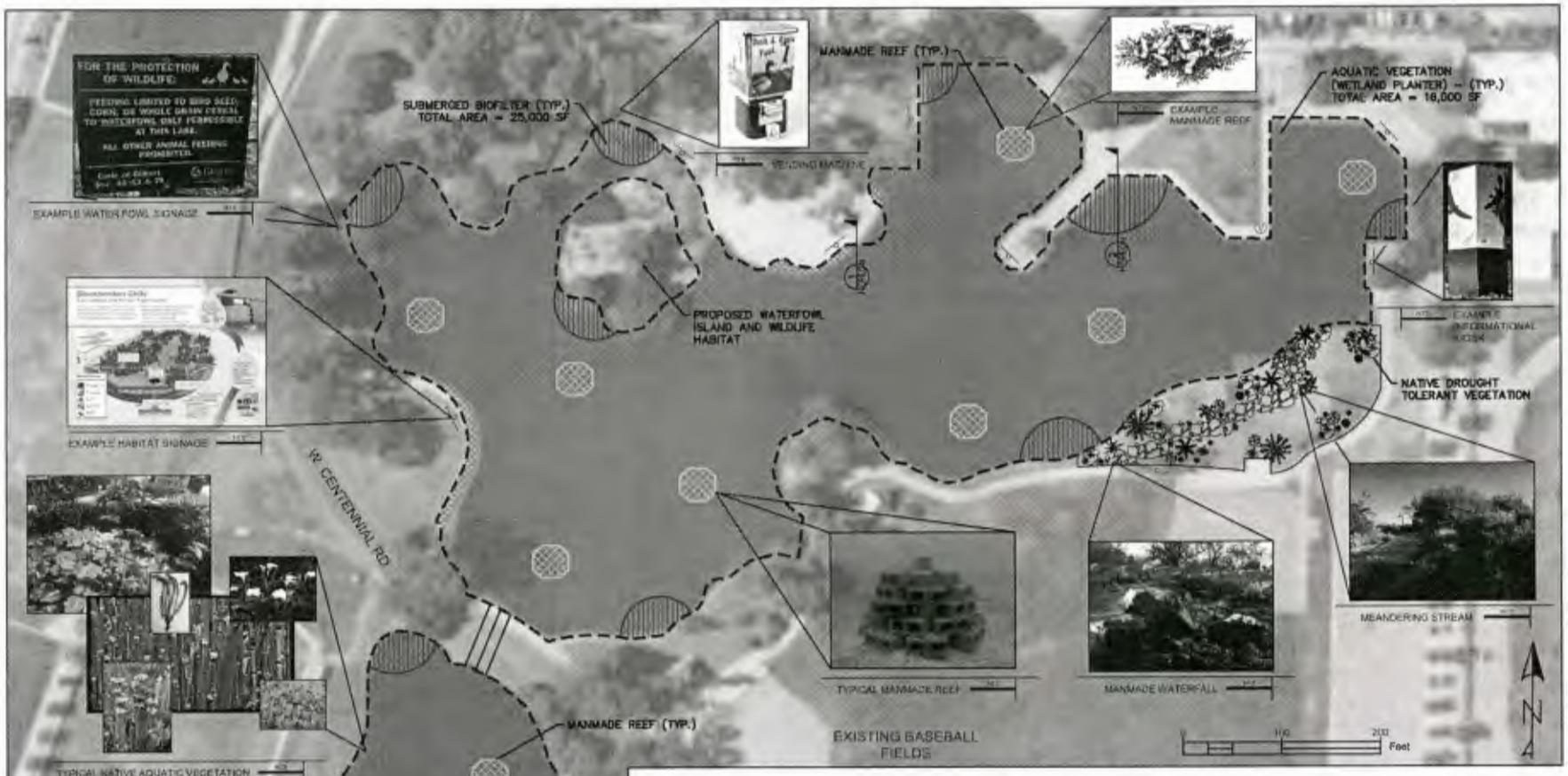
natural lake. This goal is achieved if the rehabilitated Centennial Lake can self-adjust to changes in the environment and self-maintain desirable water quality under most conditions.

Two of the major elements of the lake rehabilitation plan are waterfowl population control and lake/park user behavior adjustment. At the time of this study, the resident lake waterfowl population was in excess of 300 birds. That is far too many waterfowl on a 9.5 acre lake. On a per unit body weight basis, waterfowl create more waste than cattle. The nutrient loading on the lake (N-nitrogen, P-phosphorus, K-potassium) is far in excess of what the lake ecosystem can incorporate and overwhelms the lake. The result is pea green lake water from the abundant growth of microscopic algae. The waterfowl population has grown beyond that which the lake can support with food and habitat. Under normal circumstances the excess waterfowl would leave and find other more suitable habitat. However, at Centennial Park the waterfowl population is supported by the local community and park users feeding waterfowl bread and other human foods. Lake user observation research revealed high frequency and large volume feeding of resident waterfowl. In addition, unnatural behaviors of waterfowl were observed. The resident waterfowl will approach or come near lake users expecting to receive food. If the practice of feeding waterfowl, can be eliminated, or at least controlled the population of resident waterfowl would naturally reduce to that which the lake ecosystem can support. We recommend the use of education programs and volunteer docents to curb and control waterfowl feeding.

One of the most important elements, if not the most important element of this lake rehabilitation plan is the lake maintenance plan. It is imperative that the City of Santa Ana make a long term investment in the maintenance of the rehabilitated Centennial Lake by training the lake maintenance personnel and/or hiring a Lake Manager to embrace and carry out the goals of the maintenance portion of rehabilitation plan. Reconstruction of the lake facility is only one part of the lake rehabilitation. If the lake is maintained like a swimming pool, using chemical inputs to control the appearance of the lake water, the lake rehabilitation plan will fail and the lake will return to the condition it is in today. The Lake Manager and maintenance staff must commit to ending the use of common lake "water quality" chemicals such as copper sulfate, *Aquashade*, *Aqua-tron* and other herbicides, dyes, fertilizers, acids, and bases to control the lake water appearance. Instead of using chemicals that destroy the lake ecosystem, the Lake Manager and maintenance staff must learn to rely upon the various lake biological systems included in the lake design and learn to manipulate the mechanical and biological systems (if necessary) to obtain the desired lake water quality.

Successful implementation of this lake rehabilitation plan should result in significantly reduced lake maintenance needs. The primary lake maintenance activity should be removal of trash and debris from the lake macro-trash removal system (skimmers). With the understanding that there is and must be allowance for minor temporary seasonal variation in the lake water appearance, the Lake Manager and staff can allow the lake to self-adjust and return to equilibrium without chemical manipulation.

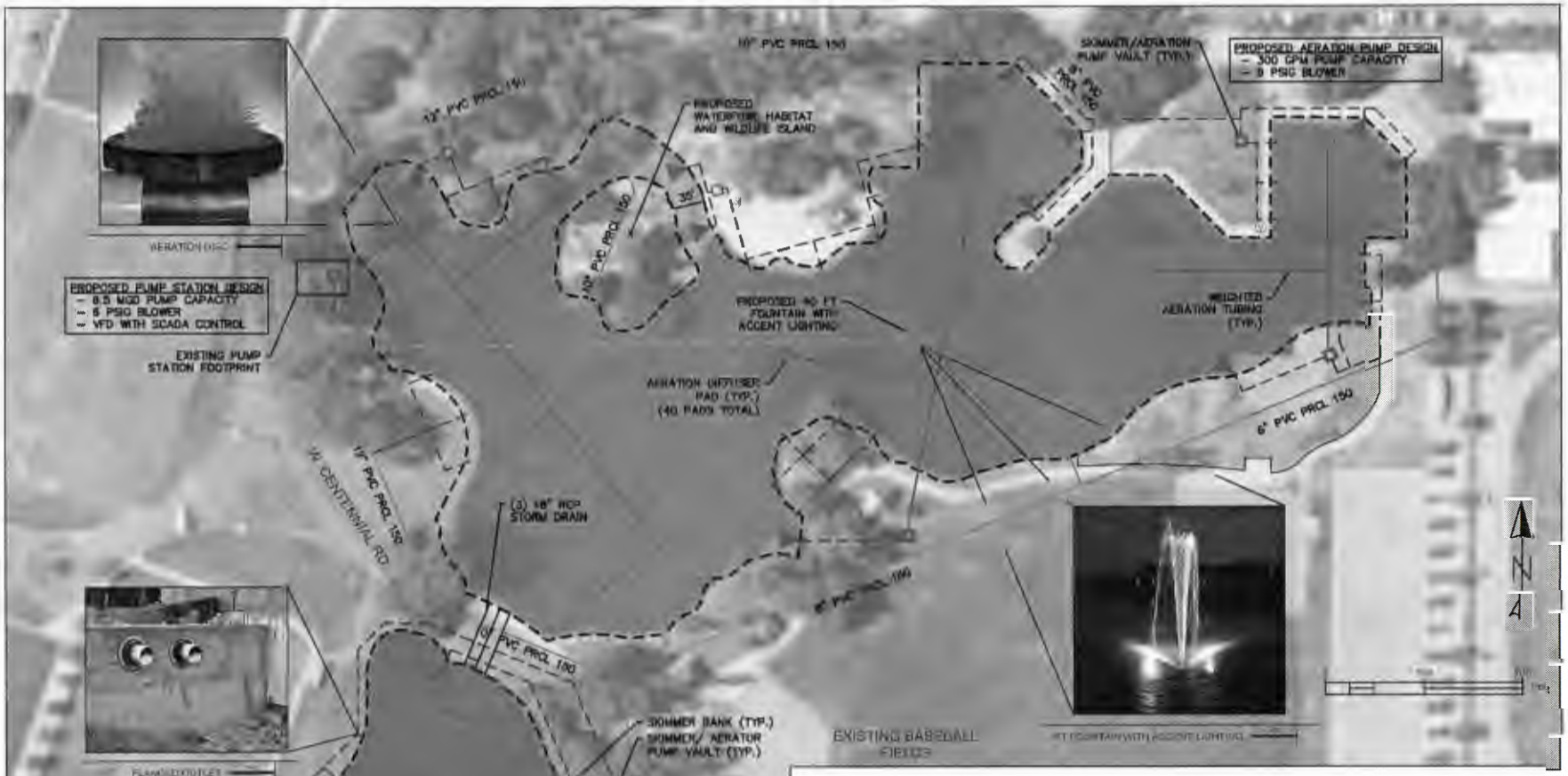
A construction cost estimate was prepared for the proposed lake rehabilitation plan. The total construction cost including a 30% contingency factor is shown in Figure-1.

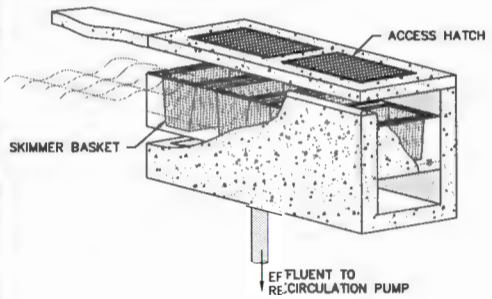


DUDEK

CENTENNIAL PARK REHABILITATION

01



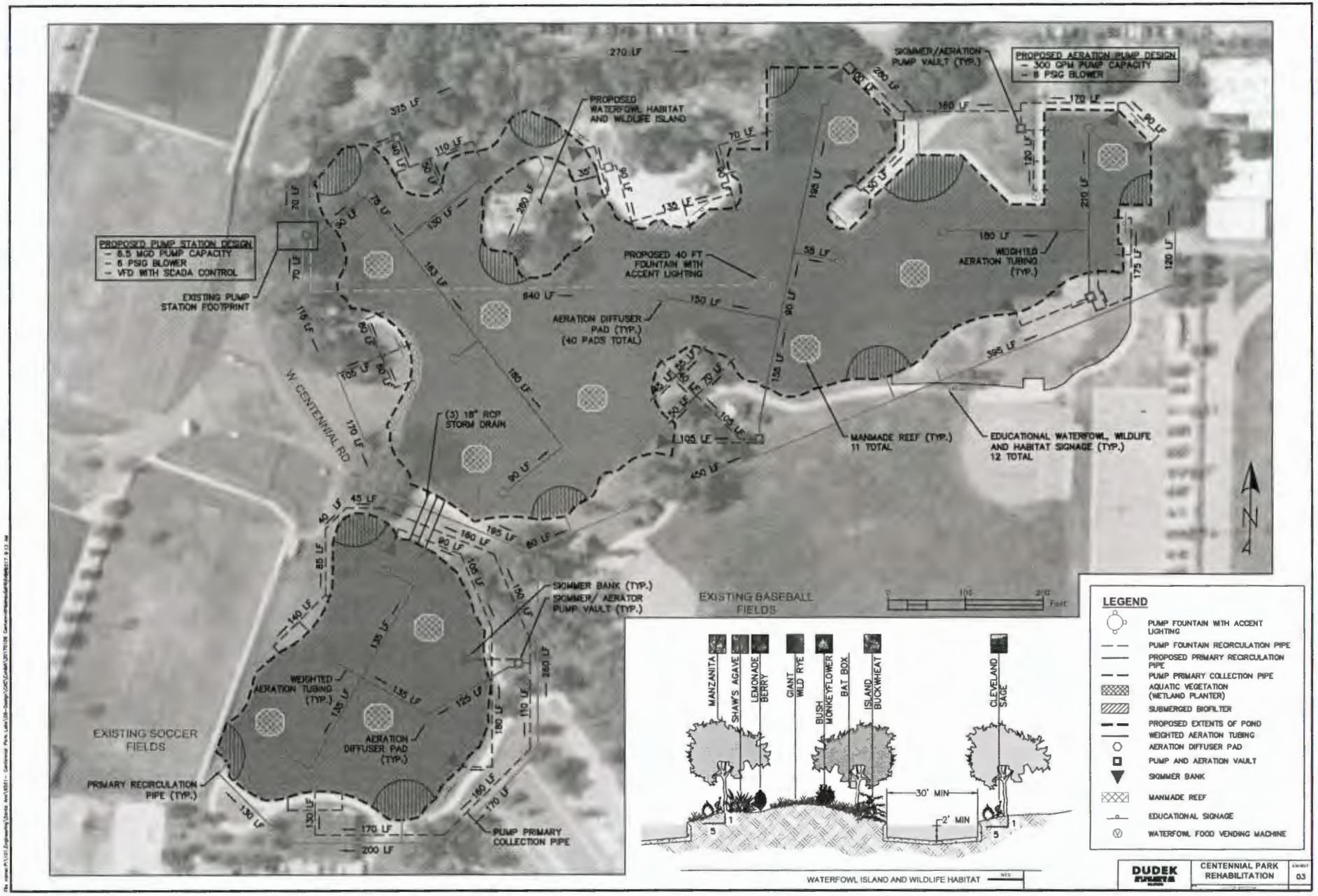


SKIMMER BANK NTS

LEGEND

- PUMP FOUNTAIN WITH ACCENT LIGHTING
- PUMP FOUNTAIN RECIRCULATION PIPE
- PROPOSED PRIMARY RECIRCULATION PIPE
- PUMP PRIMARY COLLECTION PIPE
- AQUATIC VEGETATION (WETLAND PLANTER)
- SUBMERGED BIOFILTER
- PROPOSED EXTENTS OF POND
- WEIGHTED AERATION TUBING
- AERATION DIFFUSER PAD
- PUMP AND AERATION VAULT
- SKIMMER BANK

DUDEK | CENTENNIAL PARK REHABILITATION | SHEET 1/2


PROPOSED PUMP STATION DESIGN
- 6.5 MGD PUMP CAPACITY
- 6 PSIG BLOWER
- VFD WITH SCADA CONTROL
EXISTING PUMP STATION FOOTPRINT
PROPOSED AERATION PUMP DESIGN
- 300 GPM PUMP CAPACITY
- 8 PSIG BLOWER
SKIMMER/AERATION PUMP VAULT (TYP.)
PROPOSED WATERFOWL HABITAT AND WILDLIFE ISLAND
PROPOSED 40 FT FOUNTAIN WITH ACCENT LIGHTING
WEIGHTED AERATION TUBING (TYP.)
AERATION DIFFUSER PAD (TYP.) (40 PADS TOTAL)
W CENTENNIAL RD
(3) 18" RCP STORM DRAIN
MANMADE REEF (TYP.) 11 TOTAL
EDUCATIONAL WATERFOWL, WILDLIFE AND HABITAT SIGNAGE (TYP.) 12 TOTAL
SKIMMER BANK (TYP.)
SKIMMER/ AERATOR PUMP VAULT (TYP.)
EXISTING BASEBALL FIELDS
EXISTING SOCCER FIELDS
WEIGHTED AERATION TUBING (TYP.)
AERATION DIFFUSER PAD (TYP.)
PRIMARY RECIRCULATION PIPE (TYP.)
PUMP PRIMARY COLLECTION PIPE
MANZANITA
SHAW'S AGAVE
LEMONADE BERRY
GIANT WILD RYE
BUSH MONKEYFLOWER
BAT BOX
ISLAND BUCKWHEAT
CLEVELAND SAGE
30' MIN
2' MIN
WATERFOWL ISLAND AND WILDLIFE HABITAT
NTS
LEGEND
PUMP FOUNTAIN WITH ACCENT LIGHTING
PUMP FOUNTAIN RECIRCULATION PIPE
PROPOSED PRIMARY RECIRCULATION PIPE
PUMP PRIMARY COLLECTION PIPE
AQUATIC VEGETATION (WETLAND PLANTER)
SUBMERGED BIOFILTER
PROPOSED EXTENTS OF POND
WEIGHTED AERATION TUBING
AERATION DIFFUSER PAD
PUMP AND AERATION VAULT
SKIMMER BANK
MANMADE REEF
EDUCATIONAL SIGNAGE
WATERFOWL FOOD VENDING MACHINE
DUDEK
CENTENNIAL PARK REHABILITATION
0.3

DUDEK

Centennial Park Lake Circulation and Aeration Study

City of Santa Ana

Vicinity Map

Figure 1

Orange County Public Works – Compensatory Wetlands Mitigation Strategy

Prepared for:

Orange County Public Works
300 North Flower Street
Santa Ana, California 92708-4048
Contact: Vincent Gin and Tom Wright

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Mike Sweesy and Vipul Joshi

APRIL 2015

Printed on 30% post-consumer recycled material.

TABLE OF CONTENTS

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Section **Page No.**

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Page No.

ATTACHMENTS

FIGURES

TABLES

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ACRONYMS

ACOE	U.S. Army Corps of Engineers
APN	Assessor's Parcel Number
APRM	Advance Permittee-Responsible Mitigation
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
IERCD	Inland Empire Resource Conservation District
ILF	in-lieu fee
MFR	Memo for the Record
OC	Orange County
RCRCD	Riverside-Corona Resource Conservation District
RWQCB	Regional Water Quality Control Board
SAMP	Special Area Management Plan
SCWRP	South Coast Wetland Recovery Project
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

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EXECUTIVE SUMMARY

This Compensatory Mitigation Strategy Report provides an overview of the current regulatory environment in which Orange County (OC) Public Works must mitigate unavoidable impacts to regulated wetland resources within Orange County that result from implementation of capital improvement projects and operations and maintenance projects. A successful mitigation strategy combines the regulatory permit process with regulations that define appropriate compensatory mitigation. This report focuses on federal regulations related to Section 404 of the Clean Water Act, as amended, and U.S. Army Corps of Engineers (ACOE) policies on compensatory mitigation as embodied in the 2008 Compensatory Mitigation Rule (ACOE and USEPA 2008). State agencies such as the California Department of Fish and Wildlife, Regional Water Quality Board, and California Coastal Commission have regulatory authority and policies that are similar to ACOE policies, but differ on important aspects of compensatory mitigation; these are not considered in this document.

Compensatory mitigation under ACOE policies is achieved through four recognized mitigation vehicles: mitigation banks, in-lieu fee (ILF) programs, advance permittee-responsible mitigation, and permittee-responsible mitigation. The benefits and constraints of each mitigation program are evaluated in the context of OC Public Works. In general, advance mitigation offers the greatest benefit to OC Public Works because mitigation provided in advance of impacts reduces the mitigation ratio that is levied when mitigation is implemented concurrent with project impacts. Advance mitigation reduces the mitigation acreage required, and can streamline permit processing, leading to faster permitting of capital improvement projects and operations and maintenance projects. On the permitting side, negotiation of a programmatic permit that incorporates an advance mitigation approach can accelerate implementation of operations and maintenance activities and emergency projects. Only mitigation banks, ILF programs, and advance permittee-responsible mitigation offer the benefits of advanced mitigation.

Site-specific reviews of mitigation sites located on Orange County lands was performed for this assessment. The mitigation sites reviewed were two known mitigation sites at Talbert Nature Preserve North and Green River Golf Course. Mitigation opportunities were also assessed on lands in the Prado Basin that are owned by OC Flood Control District and are situated in the proposed inundation area of the proposed Prado Dam reconstruction project. This field review resulted in identification of four addition mitigation sites with potential ACOE mitigation opportunities: the Miller-Hyponex, Gutierrez, Jongsma-Mendiondo, and Vander Wiede-Vander Laan parcels. Each of these potential mitigation sites offer opportunities for mitigation as recognized by the Compensatory Mitigation Rule for establishment, restoration, and/or enhancement. A summary of mitigation potential on these sites is summarized in Table ES-1.

This report also provides a review of potential partners that would strengthen the ability of OC Public Works to implement a mitigation strategy. These partners include private mitigation bankers and non-profit organizations with ILF programs. Credit purchases from these partners could satisfy OC Public Works mitigation needs through credit purchases. In essence, OC Public Works could mitigate on a project-by-project basis, similar to permittee-responsible mitigation, but also receive the benefits of a mitigation bank or an ILF program through a lower mitigation ratio and streamlined permitting. Purchases could be implemented on a "just-in-time" basis with project-specific funding, consistent with current capital improvement projects and operations and maintenance project permitting and implementation. Credit purchases also relieve OC Public Works of the ongoing mitigation responsibility for project mitigation because the obligation to mitigate transfers to the mitigation banker or ILF sponsor upon completion of the credit purchase. This aspect of the Compensatory Mitigation Rule relieves OC Public Works of a long-term commitment to a mitigation site that is implemented by OC Public Works on Orange County–owned land. A summary of these mitigation opportunities is summarized in Table ES-1.

OC Public Works can pursue relationships with private mitigation bankers and ILF program sponsors to create mitigation banks on Orange County–owned lands. Such private-public partnerships can relieve OC Public Works of the complexity of designing, implementing, managing, operating, and funding a mitigation project of any significant size. This approach allows OC Public Works to focus on the core mandate of maintaining and upgrading public infrastructure while relying on the private sector and/or non-profit entity to address the complex regulations and process of implementing mitigation projects on behalf of OC Public Works as the central repository of compensatory mitigation for Orange County.

Section 6, below, outlines the steps needed to determine the preferred mitigation option(s). Dudek's assessment, given the current level of information available, is that Talbert North and at least one of the Santa Ana River restoration projects (either Green Valley Golf Course or one of the Prado Basin projects) will be necessary to meet the mitigation needs of OC Public Works. Talbert North would provide coastal wetland resources that will likely be required for OC Public Works projects within the coastal zone, and a Santa Ana River restoration project can likely provide mitigation for other OC Public Works projects. Since there will likely be OC Public Works project in southern Orange County, outside of the Santa Ana River watershed, there will likely need to be at least one additional mitigation project in one of the southern watersheds (e.g., San Diego Creek, San Juan/San Mateo Creek, or Aliso Creek watershed).

Table ES-1
Summary of Compensatory Mitigation Options

Mitigation Opportunity	Riparian Establishment	Enhancement	Transitional Ecotone/Buffer	Uplands/ Buffer	Land Ownership	Notes/Comments
Talbert North	43 acres	---	---	19.33 acres	OC Parks	• Adjacent to coastal zone • Potential biology and cultural constraints • Modification of existing flood control channel required
Green River Golf Course	7 acres	33 acres	---	---	County of Orange; State of California	• Modification of existing golf course use areas • Generate 513,000 cubic yards of export
Prado Basin – Miller-Hyponex	20 acres	---	6 to 7 acres	---	OC Flood; ACOE	
Prado Basin – Guiterrez	2.3 acres	---	1.6 acres	6.5 acres	OC Flood	
Prado Basin – Jongsma-Mendiondo	18.8 acres	---	26.6 acres	97 acres	OC Flood; ACOE	
Prado Basin – Vander Weide-Vander Laan	4 acres	---	0.7 acre	0.9 acre	OC Flood; ACOE	
IERCD ILF	TBD	TBD	TBD	TBD	IERCD	Pending approval
RCRCD ILF	65 acres	4 acres	---	---	RCRCD	• Subject to agency approval in 2015/2016 • CDFW not a signatory
Soquel Mitigation Bank	4 acres – perennial combo 8 acres – intermittent combo 18 acres – ephemeral combo				Private	

IERCD = Inland Empire Resource Conservation District; ILF = in-lieu fee program; RCRCD = Riverside-Corona Resource Conservation District; TBD = to be determined; OC = Orange County; OC Flood = Orange County Flood Control District; ACOE – U.S. Army Corps of Engineers; CDFW = California Department of Fish and Wildlife

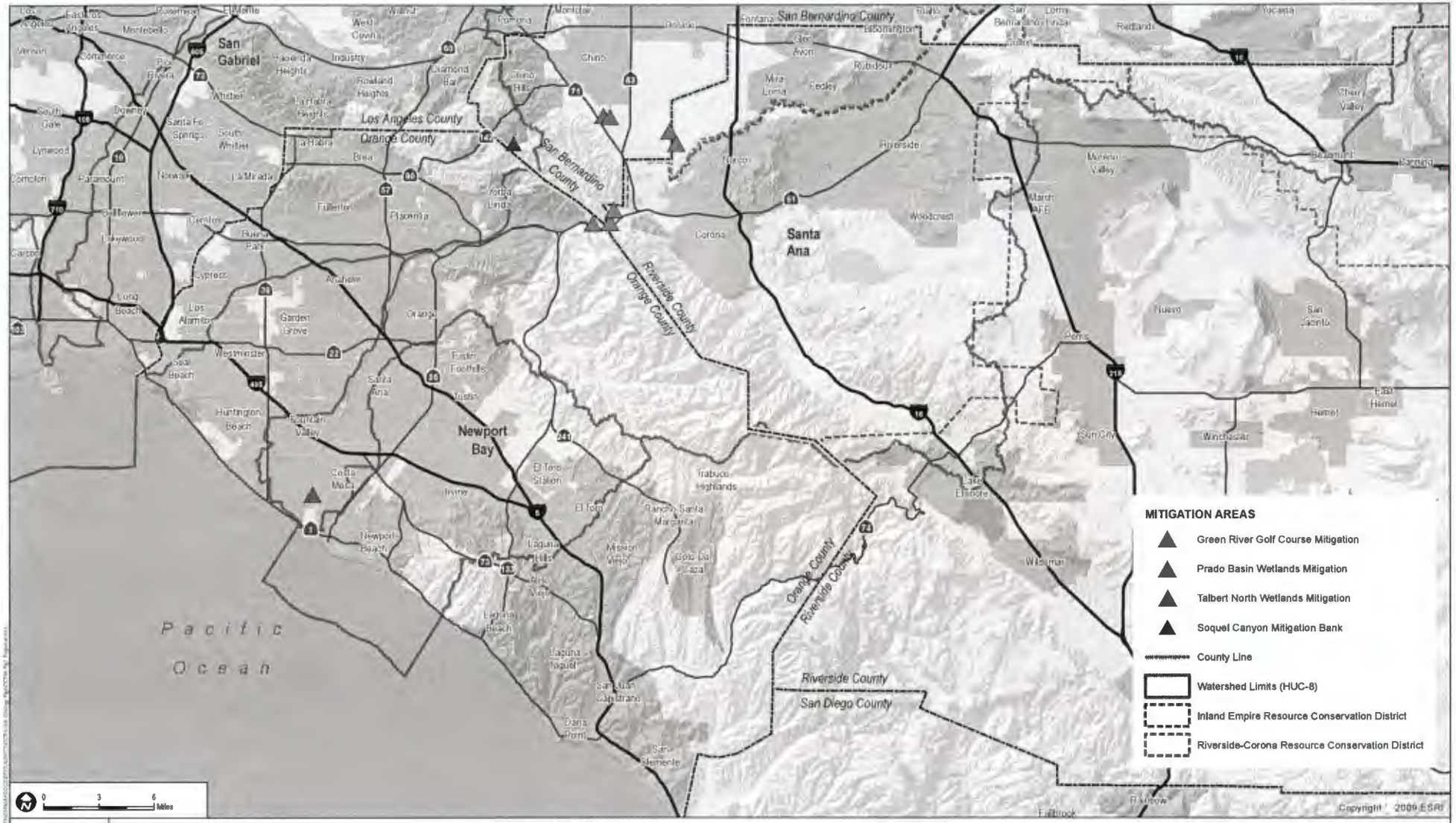

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FIGURE 1

Regional Map

OC Public Works Compensatory Wetlands Mitigation Strategy

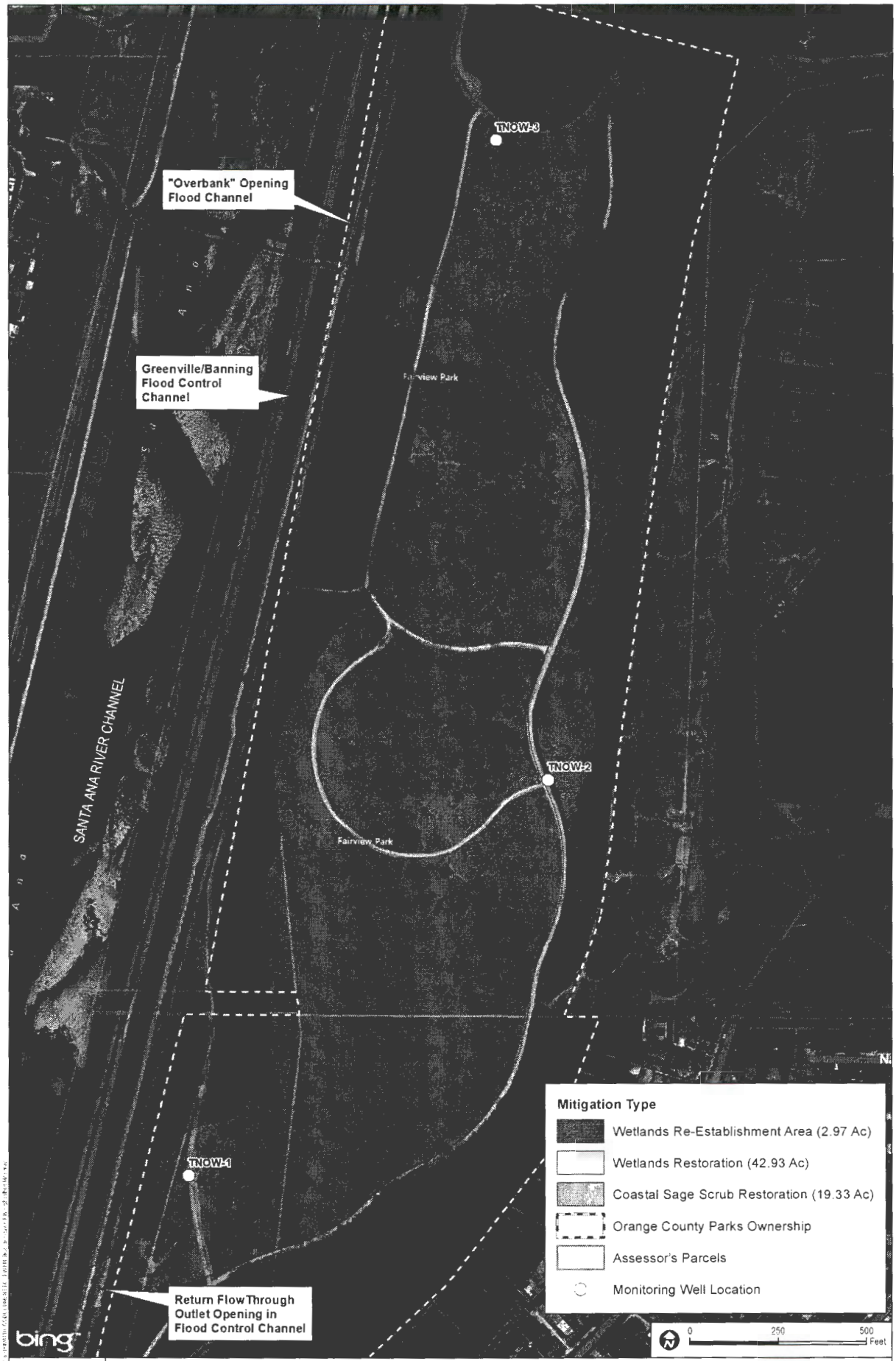

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FIGURE 2

Talbert North Wetlands Mitigation Concept

OC Public Works Compensatory Wetlands Mitigation Strategy

Required Forms

APPENDIX B
FORMS

Vendor Application Form
Ex Parte Communications Certification
Disclosure of Government Positions
Disqualification Questionnaire
Company Profile & References

VENDOR APPLICATION FORM
FOR
RFP NO. 19-01
COMPREHENSIVE PERFORMANCE EVALUATION OF THE FAIRVIEW PARK WETLANDS AND RIPARIAN HABITAT PROJECT

TYPE OF APPLICANT: [X] NEW [ ] CURRENT VENDOR __

Legal Contractual Name of Corporation: Dudek

Contact Person for Agreement: Jonis Smith

Corporate Mailing Address: 605 Third Street

City, State and Zip Code: Encinitas, California 92024

E-Mail Address: jsmith@dudek.com

Phone: 800.450.1818 Fax: 760.632.0164

Contact Person for Proposals: Katie Newton

Title: Accounting Financial Analyst E-Mail Address:

knewton@dudek.com Business Telephone: 760.479.4137

Business Fax: 760.632.0164 Is your business: (check one)

[ ] NON PROFIT CORPORATION [X] FOR PROFIT CORPORATION

Is your business: (check one)

[X] CORPORATION [ ] LIMITED LIABILITY PARTNERSHIP

[ ] INDIVIDUAL [ ] SOLE PROPRIETORSHIP

[ ] PARTNERSHIP [ ] UNINCORPORATED ASSOCIATION

Names & Titles of Corporate Board Members
(Also list Names & Titles of persons with written authorization/resolution to sign contracts)

Names	Title	Phone
Frank Dudek	CEO	800.450.1818
Joe Monaco	President	800.450.1818
Peter Quinlan	Vice President Hydrology	800.450.1818
Bob Ohlund	Vice President Engineering	800.450.1818
Mark Girard	President, Habitat Restoration Sciences	760.479.4210
Tom Larkin	Outside Director	800.450.1818
Gerry Salontai	Outside Director	800.450.1818

Federal Tax Identification Number: 95-3873865

City of Costa Mesa Business License Number: _____

(If none, you must obtain a Costa Mesa Business License upon award of contract.)

City of Costa Mesa Business License Expiration Date: _____

EX PARTE COMMUNICATIONS CERTIFICATION

Please indicate by signing below one of the following two statements. **Only sign one statement.**

I certify that Proposer and Proposer's representatives have not had any communication with a City Councilmember concerning **RFP No. 19-01 COMPREHENSIVE PERFORMANCE EVALUATION OF THE FAIRVIEW PARK WETLANDS AND RIPARIAN HABITAT PROJECT** at any time after **August 1, 2018.**

Frank J Dudek
Signature

Date: August 21, 2018

Frank Dudek, CEO
Print

OR

I certify that Proposer or Proposer's representatives have communicated after **August 1, 2018** with a City Councilmember concerning **RFP No. 19-01 COMPREHENSIVE PERFORMANCE EVALUATION OF THE FAIRVIEW PARK WETLANDS AND RIPARIAN HABITAT PROJECT**. A copy of all such communications is attached to this form for public distribution.

Signature

Date:

Print

DISQUALIFICATION QUESTIONNAIRE

The Contractor shall complete the following questionnaire:

Has the Contractor, any officer of the Contractor, or any employee of the Contractor who has proprietary interest in the Contractor, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or safety regulation?

Yes ____ **No** X

If the answer is yes, explain the circumstances in the following space.

DISCLOSURE OF GOVERNMENT POSITIONS

Each Proposer shall disclose below whether any owner or employee of Contractor currently hold positions as elected or appointed officials, directors, officers, or employees of a governmental entity or held such positions in the past twelve months. List below or state "None."

None.

COMPANY PROFILE & REFERENCES

Company Profile

Company Legal Name: Dudek

Company Legal Status (corporation, partnership, sole proprietor etc.): California Corporation, C1210012

Active licenses issued by the California State Contractor's License Board: _____

Business Address: 605 Third Street, Encinitas, California 92024

Website Address: www.dudek.com

Telephone Number: 800.450.1818 Facsimile Number: 760.632.0164
Email Address: hello@dudek.com

Length of time the firm has been in business: 38 years Length of time at current location: _____
Is your firm a sole proprietorship doing business under a different name: _____ Yes __X__ No
If yes, please indicate sole proprietor's name and the name you are doing business under:

_____

Is your firm incorporated: __X__ Yes _____ No If yes, State of Incorporation: California
Federal Taxpayer ID Number:
95-3873865

Regular business hours: 9am - 5pm
Regular holidays and hours when business is closed:
US Federal Holidays

Contact person in reference to this solicitation: Jonis Smith

Telephone Number: 800.450.1818 Facsimile Number: 760.632.0164

Email Address: jsmith@dudek.com

Contact person for accounts payable: Katie Newton

Telephone Number: 800.450.1818 Facsimile Number: 760.632.0164

Email Address: knewton@dudek.com

Name of Project Manager: Jonis Smith

Telephone Number: 800.450.1818 Facsimile Number: 760.632.0164

Email Address: jsmith@dudek.com

COMPANY PROFILE & REFERENCES
(Continued)

Submit the company names, addresses, telephone numbers, email, contact names, and brief contract descriptions of at least five clients, preferably other municipalities for whom comparable projects have been completed or submit letters from your references which include the requested information.

Company Name: City of Carlsbad Telephone Number: 760.434.2978

Contact Name: Liz Ketabian Contract Amount: $31,500

Email: liz.ketabian@carlsbadca.gov

Address: 799 Pine Avenue., Suite 200, Carlsbad, California 92010

Brief Contract Description: Environmental Support Services for the Lake Calavera Boardwalk Trails Project.

Company Name: City of Cerritos Telephone Number: 532.916.1224

Contact Name: Todd Kuh Contract Amount: $ 120,000

Address: 18125 Bloomfield Avenue, Cerritos, California 90703

Email: tkuh@cerritos.us

Brief Contract Description: Redesign of 30,000 SF lake and improve appearance, operational controls and add water features.

Company Name: Riverside County Regional Parks and Open Spaces District Telephone Number: 951.955.4308

Contact Name: Marc Brewer Contract Amount: $400,000

Email: mbrewer@rivcoparks.org

Address: 4600 Crestmore Road, Riverside, California 92509

Brief Contract Description: Project Management and Lead Design services for expansion and improvement of Rancho Jurupa Regional Park.

Company Name: City of La Quinta Telephone Number: 760.777.7045

Contact Name: Bryan McKinney Contract Amount: $49,595

Address: 78-495 Calle Tampico, La Quinta, California 92253

Email: bmckinney@la-quinta.org

Brief Contract Description: Civil Engineering services for the preparation of construction plans and specifications for Pioneer Park Parking Lot and Dog Park improvements.

Company Name: Riverside County Regional Parks and Open Spaces District Telephone Number: 951.955.4310

Contact Name: Claire Clark Contract Amount: $133,870

Email:

Address: 4600 Crestmore Road, Riverside, California 92509

Brief Contract Description: Dudek and RGA collaborated on design services for a 20-acre portion of Mayflower Park, including extension of water and sewer services along the Colorado River Road.

800.450.1818 | DUDEK.COM | HELLO@DUDEK.COM

SOUTHERN CALIFORNIA
Encinitas (Main)
La Quinta
Pasadena
Riverside
San Juan Capistrano

CENTRAL COAST
Santa Barbara
Santa Cruz

NORTHERN CALIFORNIA
Auburn
Oakland
Sacramento

HAWAI'I
Kailua

OREGON
Portland

HABITAT RESTORATION SCIENCES
A Dudek Subsidiary

EXHIBIT C

FEE SCHEDULE

27372 CALLE ARROYO
SAN JUAN CAPISTRANO, CALIFORNIA 92675
T 949.450.2525 F 949.450.2626

August 23, 2018

Stephanie Urueta
City of Costa Mesa
City Hall
Office of the City Clerk
77 Fair Drive
Costa Mesa, California 92628-1200

Subject: RFP No. 19-01 Comprehensive Performance Evaluation of the Fairview Park Wetlands and Riparian Habitat Project

Dear Ms. Urueta,

Dudek is pleased to present our cost proposal to provide a Comprehensive Performance Evaluation of the Wetlands and Riparian Habitat within Fairview Park. Per the RFP requirements, the detailed cost proposal and schedule of charges is included under separate cover in a sealed envelope. The estimated total is $77,875.

We are excited to provide our cost proposal for your review and are happy to answer any questions.

Sincerely,

Frank Dudek
CEO

Jonis Smith
Project Manager

Frank Dudek is authorized to sign on behalf of Dudek.

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Cost Proposal

		Labor Hours and Rates																		
Project Team Role:		Senior Project Manager	Project Manager	Sr. Engineer	Proj Engineer	CADD	Principal Restoration Specialist	Environ. Planner V	Environ. Planner VI	Environ. Planner VI	Environ. Planner V	Environ. Planner III	Environ. Analyst I	Env. Plan. Assistant II	GIS Specialist IV	Clerical Admin	Total Hours	Dudek Labor Fee	Other Direct Costs (ODC's)	Total Fee
Team Member:		Evans	Smith	Muli	O'Brien / Cato	Tran	Minchin	Fraser	Riggs	Henry	Molilo	Oesch	Janice	Mobely	Terry					
Billable Rate :		$215	$225	$210	$155	$145	$240	$175	$195	$195	$175	$155	$95	$85	$155	$95				
Tasks																				
1	Research and Data Review	1	4		8	16	2	4	2	2	2	2		2	1		46	$7,620	$100	$7,720
2	Water Circulation Eval		12	4	16												32	$6,020		$6,020
3	Water Budget		8	2	18												28	$5,010		$5,010
4	Engineering Memo	2	12	1	32	24									4	8	83	$13,160		$13,160
5	Attend Community Meetings (five @ 3 hrs/ea.)		15				4			4							23	$5,115	$200	$5,315
6	Attend City Meetings (five mtgs. @ 2 hrs/ea.)	4	10				4										18	$4,070	$200	$4,270
7	Bio & Restor. Field Eval. and Data Collection						2	8		6	6	8	6	8			44	$6,590	$300	$6,890
8	Bio & Restoration Data Analysis	1					1			1	4	4	12		2		25	$3,420		$3,420
9	Water Quality Sampling Analysis	2										12					14	$2,290	$500	
10	Soil Sampling and Analysis						1	2											$300	
10	Vector Control Analysis & Evaluation	1					2	2				2		4						
9	Habitat Restoration and Mitigation Evaluation						1	4						4	2		11	$1,590		$1,590
10	Permitting Regulatory Agency Evaluation						1		32								33	$6,480		$ 6,480
11	Bio. & Rest. Portion of Asseessment Report						2	4	2	2	4	2	8	6	6	4	40	$5,550		$5,550
	Subtotal	*11*	*61*	*7*	*74*	*40*	*20*	*24*	*36*	*15*	*16*	*30*	*26*	*24*	*15*	*12*	*397*	*$66,915*	*$1,600*	*$68,515*

Cost Proposal

	Labor Hours and Rates																		
Project Team Role:	Senior Project Manager	Project Manager	Sr. Engineer	Proj Engineer	CADD	Principal Restoration Specialist	Environ. Planner V	Environ. Planner VI	Environ. Planner VI	Environ. Planner V	Environ. Planner III	Environ. Analyst I	Env. Plan. Assistant II	GIS Specialist IV	Clerical Admin	Total Hours	Dudek Labor Fee	Other Direct Costs (ODC's)	Total Fee
Team Member:	Evans	Smith	Mull	O'Brien / Cato	Tran	Minchin	Fraser	Riggs	Henry	Molilo	Oesch	Janice	Mobely	Terry					
Billable Rate :	$215	$225	$210	$155	$145	$240	$175	$195	$195	$175	$155	$95	$85	$155	$95				
Tasks																			
Project Management																			
QA/QC	3					2			2							7	$1,515		$ 1,515
Project Management	6	24				4			1							35	$7,845		$7,845
Subtotal Project Mgmt	*9*	*24*				6			*3*							*42*	$9,360	$ -	$ 9,360
Total Non-Optional Hours and Fee	**20**	**85**	**7**	**74**	**40**	**26**	**24**	**36**	**18**	**16**	**30**	**26**	**24**	**15**	**12**	**439**	**$76,275**	**$1,600.00**	**$77,875**
Percent of Hours:	**4.6%**	**19.4%**	**1.6%**	**16.9%**	**9.1%**	**5.9%**	**5.5%**	**8.2%**	**4.1%**	**3.6%**	**6.8%**	**5.9%**	**5.5%**	**3.4%**	**2.7%**	**100.0%**			

Forensic Engineering – Court appearances, depositions, and interrogatories as expert witness will be billed at 2.00 times normal rates.

Emergency and Holidays – Minimum charge of two hours will be billed at 1.75 times the normal rate.

Material and Outside Services – Subcontractors, rental of special equipment, special reproductions and blueprinting, outside data processing and computer services, etc., are charged at 1.15 times the direct cost.

Travel Expenses – Mileage at current IRS allowable rates. Per diem where overnight stay is involved is charged at cost

Invoices, Late Charges – All fees will be billed to Client monthly and shall be due and payable upon receipt. Invoices are delinquent if not paid within 30 days from the date of the invoice. Client agrees to pay a monthly late charge equal to 1% per month of the outstanding balance until paid in full.

Annual Increases – Unless identified otherwise, these standard rates will increase 3% annually.

EXHIBIT D

CERTIFICATES OF INSURANCE

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/5/2018

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 this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hall & Company A/E Insurance Services 19660 10th Ave NE Poulsbo WA 98370	CONTACT NAME: Allison Barga Licesnse #0K93926 PHONE (A/C, No, Ext): 360-626-2007 FAX (A/C, No): 360-626-2007 E-MAIL ADDRESS: abarga@hallandcompany.com
INSURED Dudek 605 3rd Street Encinitas CA 92024	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Zurich American Insurance Company — 16535 INSURER B : Steadfast Insurance Company — 26387 INSURER C : INSURER D : INSURER E : INSURER F :

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COVERAGES **CERTIFICATE NUMBER:** 1923983032 **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS-MADE [X] OCCUR X OCP/XCU/BFPD X Cross Liability GEN'L AGGREGATE LIMIT APPLIES PER: [ ] POLICY [X] PRO-JECT [ ] LOC [ ] OTHER:			GLO014631102	8/28/2018	8/28/2019	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG $	$ 1,000,000 $ 100,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY [X] NON-OWNED AUTOS ONLY			BAP014632902	8/28/2018	8/28/2019	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) $	$ 1,000,000 $ $ $ $
A	X UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE [ ] DED [X] RETENTION $ 0			AUC014640702	8/28/2018	8/28/2019	EACH OCCURRENCE AGGREGATE $	$ 1,000,000 $ 1,000,000 $
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y / N [N] If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WC014633002	8/28/2018	8/28/2019	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
B	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)

The City of Costa Mesa and its officers, agents, employees, and volunteers are 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 Commercial General Liability 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.

CERTIFICATE HOLDER

City of Costa Mesa
77 Fair Dr
Costa Mesa CA 92626

CANCELLATION

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

AUTHORIZED REPRESENTATIVE

Ashley R Hall

Waiver Of Subrogation (Blanket) Endorsement

Policy No.	Eff. Date of Pol	Exp. Date of Pol.	Eff. Date of End.	Producer	Add'l. Prem	Return Prem.
GLO014631102	08/28/2018	08/28/2019	08/28/2018	N/A	$ N/A	$ N/A

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us Condition**:

If you are required by a written contract or agreement, which is executed before a loss, to waive your rights of recovery from others, we agree to waive our rights of recovery. This waiver of rights shall not be construed to be a waiver with respect to any other operations in which the insured has no contractual interest.

Coverage Extension Endorsement

ZURICH

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
BAP014632902	08/28/2018	08/28/2019	08/28/2018	N/A	N/A	N/A

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the:

Business Auto Coverage Form
Motor Carrier Coverage Form

A. Amended Who Is An Insured

1. The following is added to the **Who Is An Insured** Provision in **Section II – Covered Autos Liability Coverage**:

   The following are also "insureds":

   a. Any "employee" of yours is an "insured" while using a covered "auto" you don't own, hire or borrow for acts performed within the scope of employment by you. Any "employee" of yours is also an "insured" while operating an "auto" hired or rented under a contract or agreement in an "employee's" name, with your permission, while performing duties related to the conduct of your business.

   b. Anyone volunteering services to you is an "insured" while using a covered "auto" you don't own, hire or borrow to transport your clients or other persons in activities necessary to your business.

   c. Anyone else who furnishes an "auto" referenced in Paragraphs **A.1.a.** and **A.1.b.** in this endorsement.

   d. Where and to the extent permitted by law, any person(s) or organization(s) where required by written contract or written agreement with you executed prior to any "accident", including those person(s) or organization(s) directing your work pursuant to such written contract or written agreement with you, provided the "accident" arises out of operations governed by such contract or agreement and only up to the limits required in the written contract or written agreement, or the Limits of Insurance shown in the Declarations, whichever is less.

2. The following is added to the **Other Insurance** Condition in the Business Auto Coverage Form and the **Other Insurance – Primary and Excess Insurance Provisions Condition** in the Motor Carrier Coverage Form:

   Coverage for any person(s) or organization(s), where required by written contract or written agreement with you executed prior to any "accident", will apply on a primary and non-contributory basis and any insurance maintained by the additional "insured" will apply on an excess basis. However, in no event will this coverage extend beyond the terms and conditions of the Coverage Form.

B. Amendment – Supplementary Payments

Paragraphs **a.(2)** and **a.(4)** of the **Coverage Extensions** Provision in **Section II – Covered Autos Liability Coverage** are replaced by the following:

(2) Up to $5,000 for the cost of bail bonds (including bonds for related traffic law violations) required because of an "accident" we cover. We do not have to furnish these bonds.

(4) All reasonable expenses incurred by the "insured" at our request, including actual loss of earnings up to $500 a day because of time off from work.

C. **Fellow Employee Coverage**

The **Fellow Employee** Exclusion contained in **Section II – Covered Autos Liability Coverage** does not apply.

D. **Driver Safety Program Liability and Physical Damage Coverage**

1. The following is added to the **Racing** Exclusion in **Section II – Covered Autos Liability Coverage**:

   This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

2. The following is added to Paragraph **2.** in the **Exclusions** of **Section III – Physical Damage Coverage** of the Business Auto Coverage Form and Paragraph **2.b.** in the **Exclusions** of **Section IV – Physical Damage Coverage** of the Motor Carrier Coverage Form:

   This exclusion does not apply to covered "autos" participating in a driver safety program event, such as, but not limited to, auto or truck rodeos and other auto or truck agility demonstrations.

E. **Lease or Loan Gap Coverage**

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Lease Or Loan Gap Coverage

In the event of a total "loss" to a covered "auto", we will pay any unpaid amount due on the lease or loan for a covered "auto", less:

a. Any amount paid under the **Physical Damage Coverage** Section of the Coverage Form; and

b. Any:

   (1) Overdue lease or loan payments at the time of the "loss";

   (2) Financial penalties imposed under a lease for excessive use, abnormal wear and tear or high mileage;

   (3) Security deposits not returned by the lessor;

   (4) Costs for extended warranties, credit life insurance, health, accident or disability insurance purchased with the loan or lease; and

   (5) Carry-over balances from previous leases or loans.

F. **Towing and Labor**

Paragraph **A.2.** of the **Physical Damage Coverage** Section is replaced by the following:

We will pay up to $75 for towing and labor costs incurred each time a covered "auto" of the private passenger type is disabled. However, the labor must be performed at the place of disablement.

G. **Extended Glass Coverage**

The following is added to Paragraph **A.3.a.** of the **Physical Damage Coverage** Section:

If glass must be replaced, the deductible shown in the Declarations will apply. However, if glass can be repaired and is actually repaired rather than replaced, the deductible will be waived. You have the option of having the glass repaired rather than replaced.

H. **Hired Auto Physical Damage – Increased Loss of Use Expenses**

The **Coverage Extension** for **Loss Of Use Expenses** in the **Physical Damage Coverage** Section is replaced by the following:

Loss Of Use Expenses

For Hired Auto Physical Damage, we will pay expenses for which an "insured" becomes legally responsible to pay for loss of use of a vehicle rented or hired without a driver under a written rental contract or written rental agreement. We will pay for loss of use expenses if caused by:

(1) Other than collision only if the Declarations indicate that Comprehensive Coverage is provided for any covered "auto";

(2) Specified Causes Of Loss only if the Declarations indicate that Specified Causes Of Loss Coverage is provided for any covered "auto"; or

(3) Collision only if the Declarations indicate that Collision Coverage is provided for any covered "auto".

However, the most we will pay for any expenses for loss of use is $100 per day, to a maximum of $3000.

I. **Personal Effects Coverage**

The following is added to the **Coverage** Provision of the **Physical Damage Coverage** Section:

Personal Effects Coverage

a. We will pay up to $750 for "loss" to personal effects which are:

(1) Personal property owned by an "insured"; and

(2) In or on a covered "auto".

b. Subject to Paragraph **a.** above, the amount to be paid for "loss" to personal effects will be based on the lesser of:

(1) The reasonable cost to replace; or

(2) The actual cash value.

c. The coverage provided in Paragraphs **a.** and **b.** above, only applies in the event of a total theft of a covered "auto". No deductible applies to this coverage. However, we will not pay for "loss" to personal effects of any of the following:

(1) Accounts, bills, currency, deeds, evidence of debt, money, notes, securities, or commercial paper or other documents of value.

(2) Bullion, gold, silver, platinum, or other precious alloys or metals; furs or fur garments; jewelry, watches, precious or semi-precious stones.

(3) Paintings, statuary and other works of art.

(4) Contraband or property in the course of illegal transportation or trade.

(5) Tapes, records, discs or other similar devices used with audio, visual or data electronic equipment.

Any coverage provided by this Provision is excess over any other insurance coverage available for the same "loss".

J. **Tapes, Records and Discs Coverage**

1. The Exclusion in Paragraph **B.4.a.** of **Section** III – **Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.2.c.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply.

2. The following is added to Paragraph **1.a. Comprehensive Coverage** under the **Coverage** Provision of the **Physical Damage Coverage** Section:

We will pay for "loss" to tapes, records, discs or other similar devices used with audio, visual or data electronic equipment. We will pay only if the tapes, records, discs or other similar audio, visual or data electronic devices:

(a) Are the property of an "insured"; and

(b) Are in a covered "auto" at the time of "loss".

The most we will pay for such "loss" to tapes, records, discs or other similar devices is $500. The **Physical Damage Coverage Deductible** Provision does not apply to such "loss".

K. Airbag Coverage

The Exclusion in Paragraph **B.3.a.** of **Section III – Physical Damage Coverage** in the Business Auto Coverage Form and the Exclusion in Paragraph **B.4.a.** of **Section IV – Physical Damage Coverage** in the Motor Carrier Coverage Form does not apply to the accidental discharge of an airbag.

L. Two or More Deductibles

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

If an accident is covered both by this policy or Coverage Form and by another policy or Coverage Form issued to you by us, the following applies for each covered "auto" on a per vehicle basis:

1. If the deductible on this policy or Coverage Form is the smaller (or smallest) deductible, it will be waived; or
2. If the deductible on this policy or Coverage Form is not the smaller (or smallest) deductible, it will be reduced by the amount of the smaller (or smallest) deductible.

M. Physical Damage – Comprehensive Coverage – Deductible

The following is added to the **Deductible** Provision of the **Physical Damage Coverage** Section:

Regardless of the number of covered "autos" damaged or stolen, the maximum deductible that will be applied to Comprehensive Coverage for all "loss" from any one cause is $5,000 or the deductible shown in the Declarations, whichever is greater.

N. Temporary Substitute Autos – Physical Damage

1. The following is added to **Section I – Covered Autos**:

   Temporary Substitute Autos – Physical Damage

   If Physical Damage Coverage is provided by this Coverage Form on your owned covered "autos", the following types of vehicles are also covered "autos" for Physical Damage Coverage:

   Any "auto" you do not own when used with the permission of its owner as a temporary substitute for a covered "auto" you do own but is out of service because of its:

   1. Breakdown;
   2. Repair;
   3. Servicing;
   4. "Loss"; or
   5. Destruction.

2. The following is added to the Paragraph **A. Coverage** Provision of the **Physical Damage Coverage** Section:

   Temporary Substitute Autos – Physical Damage

   We will pay the owner for "loss" to the temporary substitute "auto" unless the "loss" results from fraudulent acts or omissions on your part. If we make any payment to the owner, we will obtain the owner's rights against any other party.

   The deductible for the temporary substitute "auto" will be the same as the deductible for the covered "auto" it replaces.

O. Amended Duties In The Event Of Accident, Claim, Suit Or Loss

Paragraph **a.** of the **Duties In The Event Of Accident, Claim, Suit Or Loss** Condition is replaced by the following:

a. In the event of "accident", claim, "suit" or "loss", you must give us or our authorized representative prompt notice of the "accident", claim, "suit" or "loss". However, these duties only apply when the "accident", claim, "suit" or "loss" is known to you (if you are an individual), a partner (if you are a partnership), a member (if you are a limited liability company) or an executive officer or insurance manager (if you are a corporation). The failure of any

agent, servant or employee of the "insured" to notify us of any "accident", claim, "suit" or "loss" shall not invalidate the insurance afforded by this policy.

Include, as soon as practicable:

(1) How, when and where the "accident" or "loss" occurred and if a claim is made or "suit" is brought, written notice of the claim or "suit" including, but not limited to, the date and details of such claim or "suit";

(2) The "insured's" name and address; and

(3) To the extent possible, the names and addresses of any injured persons and witnesses.

If you report an "accident", claim, "suit" or "loss" to another insurer when you should have reported to us, your failure to report to us will not be seen as a violation of these amended duties provided you give us notice as soon as practicable after the fact of the delay becomes known to you.

P. Waiver of Transfer Of Rights Of Recovery Against Others To Us

The following is added to the **Transfer Of Rights Of Recovery Against Others To Us** Condition:

This Condition does not apply to the extent required of you by a written contract, executed prior to any "accident" or "loss", provided that the "accident" or "loss" arises out of operations contemplated by such contract. This waiver only applies to the person or organization designated in the contract.

Q. Employee Hired Autos – Physical Damage

Paragraph **b.** of the **Other Insurance** Condition in the Business Auto Coverage Form and Paragraph **f.** of the **Other Insurance – Primary and Excess Insurance Provisions** Condition in the Motor Carrier Coverage Form are replaced by the following:

For Hired Auto Physical Damage Coverage, the following are deemed to be covered "autos" you own:

(1) Any covered "auto" you lease, hire, rent or borrow; and

(2) Any covered "auto" hired or rented under a written contract or written agreement entered into by an "employee" or elected or appointed official with your permission while being operated within the course and scope of that "employee's" employment by you or that elected or appointed official's duties as respect their obligations to you.

However, any "auto" that is leased, hired, rented or borrowed with a driver is not a covered "auto".

R. Unintentional Failure to Disclose Hazards

The following is added to the **Concealment, Misrepresentation Or Fraud** Condition:

However, we will not deny coverage under this Coverage Form if you unintentionally:

(1) Fail to disclose any hazards existing at the inception date of this Coverage Form; or

(2) Make an error, omission, improper description of "autos" or other misstatement of information.

You must notify us as soon as possible after the discovery of any hazards or any other information that was not provided to us prior to the acceptance of this policy.

S. Hired Auto – World Wide Coverage

Paragraph **7a.(5)** of the **Policy Period, Coverage Territory** Condition is replaced by the following:

(5) Anywhere in the world if a covered "auto" is leased, hired, rented or borrowed for a period of 60 days or less,

T. Bodily Injury Redefined

The definition of "bodily injury" in the **Definitions** Section is replaced by the following:

"Bodily injury" means bodily injury, sickness or disease, sustained by a person including death or mental anguish, resulting from any of these at any time. Mental anguish means any type of mental or emotional illness or disease.

U. Expected Or Intended Injury

The **Expected Or Intended Injury** Exclusion in Paragraph **B. Exclusions** under **Section II – Covered Auto Liability Coverage** is replaced by the following:

Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the "insured". This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

V. Physical Damage – Additional Temporary Transportation Expense Coverage

Paragraph **A.4.a.** of **Section III – Physical Damage Coverage** is replaced by the following:

4. Coverage Extensions

a. Transportation Expenses

We will pay up to $50 per day to a maximum of $1,000 for temporary transportation expense incurred by you because of the total theft of a covered "auto" of the private passenger type. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage. We will pay for temporary transportation expenses incurred during the period beginning 48 hours after the theft and ending, regardless of the policy's expiration, when the covered "auto" is returned to use or we pay for its "loss".

W. Replacement of a Private Passenger Auto with a Hybrid or Alternative Fuel Source Auto

The following is added to Paragraph **A. Coverage** of the **Physical Damage Coverage** Section:

In the event of a total "loss" to a covered "auto" of the private passenger type that is replaced with a hybrid "auto" or "auto" powered by an alternative fuel source of the private passenger type, we will pay an additional 10% of the cost of the replacement "auto", excluding tax, title, license, other fees and any aftermarket vehicle upgrades, up to a maximum of $2500. The covered "auto" must be replaced by a hybrid "auto" or an "auto" powered by an alternative fuel source within 60 calendar days of the payment of the "loss" and evidenced by a bill of sale or new vehicle lease agreement.

To qualify as a hybrid "auto", the "auto" must be powered by a conventional gasoline engine and another source of propulsion power. The other source of propulsion power must be electric, hydrogen, propane, solar or natural gas, either compressed or liquefied. To qualify as an "auto" powered by an alternative fuel source, the "auto" must be powered by a source of propulsion power other than a conventional gasoline engine. An "auto" solely propelled by biofuel, gasoline or diesel fuel or any blend thereof is not an "auto" powered by an alternative fuel source.

X. Return of Stolen Automobile

The following is added to the **Coverage Extension** Provision of the **Physical Damage Coverage** Section:

If a covered "auto" is stolen and recovered, we will pay the cost of transport to return the "auto" to you. We will pay only for those covered "autos" for which you carry either Comprehensive or Specified Causes of Loss Coverage.

All other terms, conditions, provisions and exclusions of this policy remain the same.

Additional Insured – Automatic – Owners, Lessees Or Contractors

ZURICH

Policy No.	Eff. Date of Pol.	Exp. Date of Pol.	Eff. Date of End.	Producer No.	Add'l. Prem	Return Prem.
GLO014631102	08/28/2018	08/28/2019	08/28/2018	64955000	------	------

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

Named Insured:

Address (including ZIP Code):

This endorsement modifies insurance provided under the:

Commercial General Liability Coverage Part

A. Section **II – Who Is An Insured** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract or written agreement. Such person or organization is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf,

in the performance of your ongoing operations or "your work" as included in the "products-completed operations hazard", which is the subject of the written contract or written agreement.

However, the insurance afforded to such additional insured:

1. Only applies to the extent permitted by law; and
2. Will not be broader than that which you are required by the written contract or written agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusion applies:

This insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or failure to render, any professional architectural, engineering or surveying services including:

a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional architectural, engineering or surveying services.

C. The following is added to Paragraph **2.** Duties In The Event Of Occurrence, Offense, Claim Or Suit of Section **IV – Commercial General Liability Conditions**:

The additional insured must see to it that:

1. We are notified as soon as practicable of an "occurrence" or offense that may result in a claim;
2. We receive written notice of a claim or "suit" as soon as practicable; and
3. A request for defense and indemnity of the claim or "suit" will promptly be brought against any policy issued by another insurer under which the additional insured may be an insured in any capacity. This provision does not apply to insurance on which the additional insured is a Named Insured if the written contract or written agreement requires that this coverage be primary and non-contributory.

D. For the purposes of the coverage provided by this endorsement:

1. The following is added to the Other Insurance Condition of Section **IV – Commercial General Liability Conditions**:

Primary and Noncontributory insurance

This insurance is primary to and will not seek contribution from any other insurance available to an additional insured provided that:

a. The additional insured is a Named Insured under such other insurance; and

b. You are required by written contract or written agreement that this insurance be primary and not seek contribution from any other insurance available to the additional insured.

2. The following paragraph is added to Paragraph **4.b.** of the Other Insurance Condition of Section **IV – Commercial General Liability Conditions**:

This insurance is excess over:

Any of the other insurance, whether primary, excess, contingent or on any other basis, available to an additional insured, in which the additional insured on our policy is also covered as an additional insured on another policy providing coverage for the same "occurrence", offense, claim or "suit". This provision does not apply to any policy in which the additional insured is a Named Insured on such other policy and where our policy is required by a written contract or written agreement to provide coverage to the additional insured on a primary and non-contributory basis.

E. This endorsement does not apply to an additional insured which has been added to this policy by an endorsement showing the additional insured in a Schedule of additional insureds, and which endorsement applies specifically to that identified additional insured.

F. With respect to the insurance afforded to the additional insureds under this endorsement, the following is added to Section **III – Limits Of Insurance**:

The most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the written contract or written agreement referenced in Paragraph **A.** of this endorsement; or
2. Available under the applicable Limits of Insurance shown in the Declarations,

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

All other terms and conditions of this policy remain unchanged.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT—CALIFORNIA

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

You must maintain payroll records accurately segregating the remuneration of your employees while engaged in the work described in the Schedule.

The additional premium for this endorsement shall be 0 % of the California workers' compensation premium otherwise due on such remuneration.

Schedule

Person or Organization	Job Description
ALL PERSONS AND/OR ORGANIZATIONS THAT ARE REQUIRED BY WRITTEN CONTRACT OR AGREEMENT WITH THE INSURED, EXECUTED PRIOR TO THE ACCIDENT OR LOSS, THAT WAIVER OF SUBROGATION BE PROVIDED UNDER THIS POLICY FOR WORK PERFORMED BY YOU FOR THAT PERSON AND/OR ORGANIZATION	

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

EXHIBIT E

CITY COUNCIL POLICY 100-5

CITY OF COSTA MESA, CALIFORNIA

COUNCIL POLICY

SUBJECT	POLICY NUMBER	EFFECTIVE DATE	PAGE
DRUG-FREE WORKPLACE	100-5	8-8-89	1 of 3

BACKGROUND

Under the Federal Drug-Free Workplace Act of 1988, passed as part of omnibus drug legislation enacted November 18, 1988, contractors and grantees of Federal funds must certify that they will provide drug-free workplaces. At the present time, the City of Costa Mesa, as a sub-grantee of Federal funds under a variety of programs, is required to abide by this Act. The City Council has expressed its support of the national effort to eradicate drug abuse through the creation of a Substance Abuse Committee, institution of a City-wide D.A.R.E. program in all local schools and other activities in support of a drug-free community. This policy is intended to extend that effort to contractors and grantees of the City of Costa Mesa in the elimination of dangerous drugs in the workplace.

PURPOSE

It is the purpose of this Policy to:

1. Clearly state the City of Costa Mesa's commitment to a drug-free society.

2. Set forth guidelines to ensure that public, private, and nonprofit organizations receiving funds from the City of Costa Mesa share the commitment to a drug-free workplace.

POLICY

The City Manager, under direction by the City Council, shall take the necessary steps to see that the following provisions are included in all contracts and agreements entered into by the City of Costa Mesa involving the disbursement of funds.

1. Contractor or Sub-grantee hereby certifies that it will provide a drug-free workplace by:

   A. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in Contractor's and/or sub-grantee's workplace, specifically the job site or location included in this contract, and specifying the actions that will be taken against the employees for violation of such prohibition;

   B. Establishing a Drug-Free Awareness Program to inform employees about:

1. The dangers of drug abuse in the workplace;

2. Contractor's and/or sub-grantee's policy of maintaining a drug-free workplace;

3. Any available drug counseling, rehabilitation and employee assistance programs; and

4. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

C. Making it a requirement that each employee to be engaged in the performance of the contract be given a copy of the statement required by subparagraph A;

D. Notifying the employee in the statement required by subparagraph 1 A that, as a condition of employment under the contract, the employee will:

1. Abide by the terms of the statement; and

2. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction;

E. Notifying the City of Costa Mesa within ten (10) days after receiving notice under subparagraph 1 D 2 from an employee or otherwise receiving the actual notice of such conviction;

F. Taking one of the following actions within thirty (30) days of receiving notice under subparagraph 1 D 2 with respect to an employee who is so convicted:

1. Taking appropriate personnel action against such an employee, up to and including termination; or

2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health agency, law enforcement, or other appropriate agency;

G. Making a good faith effort to maintain a drug-free workplace through implementation of subparagraphs 1 A through 1 F, inclusive.

2. Contractor and/or sub-grantee shall be deemed to be in violation of this Policy if the City of Costa Mesa determines that:

   a. Contractor and/or sub-grantee has made a false certification under paragraph 1 above;

   b. Contractor and/or sub-grantee has violated the certification by failing to carry out the requirements of subparagraphs 1 A through 1 G above;

   c. Such number of employees of Contractor and/or sub-grantee have been convicted of violations of criminal drug statutes for violations occurring in the workplace as to indicate that the contractor and/or sub-grantee has failed to make a good faith effort to provide a drug-free workplace.

3. Should any contractor and/or sub-grantee be deemed to be in violation of this Policy pursuant to the provisions of 2 A, B, and C, a suspension, termination or debarment proceeding subject to applicable Federal, State, and local laws shall be conducted. Upon issuance of any final decision under this section requiring debarment of a contractor and/or sub-grantee, the contractor and/or sub-grantee shall be ineligible for award of any contract, agreement or grant from the City of Costa Mesa for a period specified in the decision, not to exceed five (5) years. Upon issuance of any final decision recommending against debarment of the contractor and/or sub-grantee, the contractor and/or sub-grantee shall be eligible for compensation as provided by law.