**CITY OF COSTA MESA**
**PROFESSIONAL SERVICES AGREEMENT**
**WITH**
**GLENN LUKOS ASSOCIATES, INC.**

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this 15th day of October, 2019 ("Effective Date"), by and between the CITY OF COSTA MESA, a municipal corporation ("City"), and GLENN LUKOS ASSOCIATES, INC., a California corporation ("Consultant").

**WITNESSETH:**

A. WHEREAS, City proposes to utilize the services of Consultant as an independent contractor to provide restoration and monitoring services at Fairview Park, 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; and

E. WHEREAS, Consultant has commenced providing the restoration services set forth herein; and

F. WHEREAS, City and Consultant intend and desire to have this Agreement be effective retroactive to the Effective Date.

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 Consultant's Proposal, attached hereto as Exhibit "A," in accordance with the U.S. Fish and Wildlife Service-approved Fairview Park Vernal Pool Restoration and Long Term Maintenance Plan for Vernal Pools 5 and 6, and the Associated Watershed Areas (the "Plan"), attached hereto as Exhibit "B," and U.S. Fish and Wildlife Service Permit No. TE87580B-0 (the "Permit"), attached hereto as Exhibit "C." Exhibits A, B and C are 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. Prevailing Wages. To the extent applicable to the services provided pursuant to this Agreement, Consultant shall comply in all respects with California Labor Code sections 1770 et seq., including but not limited to ensuring that its subcontractors pay prevailing wages and keep all records required by Labor Code section 1776. Consultant shall obtain certified copies of the payroll records required by Labor Code section 1776 and provide such copies to the City upon completion of each subcontractor's work.

1.6. Supervision by Consultant. At all times during performance of this Agreement, Consultant shall supervise the work as required by the Permit.

1.7. Inspection by City. Consultant shall at all times maintain proper facilities and provide safe access for inspection by City to all parts of the work to be performed by Consultant and its subcontractors and to all shops on or off-site where the work or portions of the work are in preparation. City shall have the right of access to the premises for inspection at all times, provided that City shall, at all times, comply with Consultant's safety requirements on the job site.

1.8. Care of the Work. Consultant warrants that it has examined the site of the work and is familiar with its topography and condition, location of property lines, easements, building lines and other physical factors and limitations affecting the performance of this Agreement. Consultant shall be responsible for the proper care and protection of all materials delivered to the site or stored off-site and for the work performed until completion and final inspection and acceptance by City. The risk, damage or destruction of materials delivered to the site or to work performed shall be borne by Consultant.

1.9. 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.

1.10. 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.

1.11. 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.

1.12. 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 A. Consultant's total compensation shall not exceed One Hundred Twenty-Six Thousand Forty-Six Dollars ($126,046.00).

2.2. Prompt Payment to Subcontractors. Consultant shall comply with all applicable prompt payment laws of the State of California. Consultant agrees to pay each subcontractor providing work under this Agreement for satisfactory performance of its contract no later than ten (10) days from the receipt of each payment the Consultant receives from City. 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 which may be incurred by reason of Consultant's failure to comply with prompt payment laws.

Consultant further agrees to release retainage payments, if any, to each subcontractor within thirty (30) days after the subcontractor's work is satisfactorily completed.

Any delay or postponement of payment from the above-referenced time frame may occur only for good cause following written approval of the City.

2.3. 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

Manager or designee, 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.

2.4. Method of Billing. Consultant may submit invoices to the City for approval on a monthly basis in accordance with the Summary of Fees by Task and Year schedule set forth in Exhibit A. 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 list of tasks, the percentage being billed to each task during the billing cycle and the total percentage of each task completed to date. 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.

2.5. 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. Unless otherwise agreed to in writing by the parties, the professional services to be performed pursuant to this Agreement shall commence within five (5) days from the Effective Date of this Agreement. 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 be effective retroactive to the Effective Date and continue for a period of six (6) years, ending on October 14, 2025, unless previously terminated as provided herein or as otherwise agreed to in writing by the 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:

(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.

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. CONSULTANT'S GUARANTEE

6.1. Guarantee. Consultant guarantees that all materials used in the work and all labor performed shall be in conformity with this Agreement including, but not limited to, the standards and specifications set forth in the Plan and the Permit. Consultant shall, at its own expense, make any and all repairs and replacements that shall become necessary as the result of any failure of the work to conform to the requirements of this Agreement until the work is approved in writing by the U.S. Fish and Wildlife Service in accordance with the requirements of the Permit.

6.2. Remedies Cumulative. The rights and remedies available to City pursuant to this section shall be cumulative with all rights and remedies available to City pursuant to statutory and common law, which rights and remedies are hereby expressly reserved, and the foregoing guarantee by Consultant shall not constitute a waiver of any rights or remedies available to City against Consultant.

## 7.0. GENERAL PROVISIONS

7.1. 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.

7.2. 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.

7.3. 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.

7.4. 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: | IF TO CITY: |
|---|---|
| Glenn Lukos Associates, Inc.<br>29 Orchard<br>Lake Forest, CA 92630<br>Tel: (949) 837-0404<br>Attn: Theinan Pfeiffer, President | City of Costa Mesa<br>77 Fair Drive<br>Costa Mesa, CA 92626<br>Tel: (714) 754-5135<br>Attn: Cynthia D'Agosta |

Courtesy copy to:

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

7.5. 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 "D" 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.

7.6. 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.

7.7. 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.

7.8. 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.

7.9. 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.

City's acceptance of the insurance policies required by this Agreement shall not constitute a waiver of any rights against Consultant which it may have by reason of the foregoing indemnification obligations. Consultant's indemnification obligations shall apply to all liabilities, expenses, claims, and damages of every kind (including but not limited to attorneys' fees) incurred or alleged to have been incurred by reason of the operations of Consultant or any subcontractor or others performing work on behalf of Consultant, whether or not such insurance policies are applicable. Consultant shall require any and all tiers of subcontractors to afford the same degree of indemnification to the City of Costa Mesa and its elected and appointed boards, officers, agents, and employees that is required of Consultant and shall incorporate identical indemnity provisions in all contracts between Consultant and all tiers of its subcontractors.

In the event that Consultant and City are sued by a third party for damages caused or allegedly caused by negligent or other wrongful conduct of Consultant or any of its subcontractors, or by a dangerous condition of City's property created by Consultant or any of its subcontractors or existing while the property was under the supervision and control of Consultant, Consultant shall not be relieved of its indemnity obligation to City by any settlement with any such third party unless that settlement includes a full release and dismissal of all claims by the third party against the City.

7.10. 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.

7.11. 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.

7.12. 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.

7.13. 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.

7.14. 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.

7.15. 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.

7.16. 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.

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

7.18. 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.

7.19. 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.

7.20. 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.

7.21. 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.

7.22. 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.

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

7.24. 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.

7.25. 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.

7.26. 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.

7.27. 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 appear 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: January 20, 2020

Thienan Pfeiffer, President & CEO
[Name and Title]

[redacted]
Social Security or Taxpayer ID Number

**CITY OF COSTA MESA**

Lori Ann Farrell Harrison
City Manager

Date: 1/31/20

ATTEST:

Brenda Green 2/5/2020
Brenda Green
City Clerk

APPROVED AS TO FORM:

Kimberly Hall Barlow
City Attorney

Date: 2/4/20

APPROVED AS TO INSURANCE:

Ruth Wang
Risk Management

Date: 1/29/2020

APPROVED AS TO CONTENT:

Cynthia D'Agosta
Project Manager

Date: 1-28-2020

DEPARTMENTAL APPROVAL:

Yvette Aguilar
Acting Parks and Community Services
Director

Date: 01/28/2020

APPROVED AS TO PURCHASING:

Kelly Telford
Finance Director

Date: 1/25/2020

# EXHIBIT A

## CONSULTANT'S PROPOSAL

GLENN LUKOS ASSOCIATES
Regulatory Services

September 3, 2019
[Revised September 13, 2019]

Cynthia D'Agosta
Fairview Park Administrator
City of Costa Mesa
77 Fair Drive
Costa Mesa, California 92628-1200

SUBJECT: Revised Scope of Services and Cost Proposal for the Restoration and Monitoring of Vernal Pools 5, 6, and 7 and associated Watershed at Fairview Park, Costa Mesa, California

Dear Ms. D'Agosta:

Glenn Lukos Associates (GLA) is pleased to submit this revised detailed scope of services outlining the proposed activities, cost, and schedule for implementation of the U.S. Fish and Wildlife Service (USFWS) approved Fairview Park Vernal Pool Restoration and Long-Term Maintenance Plan (Restoration Plan) for Vernal Pools 5 and 6, and the Associated Watershed, dated June 8, 2018. A cost and scope of services for the enhancement and protection of Vernal Pool 4c located west of Canyon Drive across from the Waldorf School of Orange County will be provided separately. Thus, this scope of services identifies activities to be conducted in accordance with the USFWS approved Restoration Plan only. This proposal has been revised to incorporate subcontractor costs associated with site preparation and earthwork (see Tasks 1 and 2 below).

The attached Scope of Work sets forth an approach to address USFWS's concerns for the restoration and protection of sensitive native resources in a manner that is cost-effective for the City while also ensuring biological integrity of the pools.

Mr. Tony Bomkamp will oversee the project and will work closely with GLA biologist Kevin Livergood, who will conduct necessary fairy shrimp surveys and will monitor activities occurring within areas known to support listed branchiopods. Mr. Livergood holds a valid Section 10(a)(1)(A) Recovery Permit for conducting surveys for listed branchiopods in California (TE-172368-2).

As detailed below, this scope includes the following tasks necessary to implement the restoration program set forth in the approved restoration plan prepared by GLA and includes the following components as provided in an excerpt from the approved restoration plan:

29 Orchard ▪ Lake Forest ▪ California 92630-8300
Telephone: (949) 837-0404 Facsimile: (949) 837-5834

> *This Restoration and Maintenance Plan includes: (1) restoration of the watershed for Vernal Pools 5 and 6, by restoring the elevation and contours to the conditions prior to installation of the foot path that also ensures that runoff from rainfall is directed toward Vernal Pool 5 rather than collecting on the foot path; (2) reestablishment of portions of Vernal Pool 6 affected by the installation of a foot path along the eastern and southern edges of Vernal Pool 6, which would be accomplished through the reestablishment of the original perimeter contours; (3) repair of the indentations associated with the placement and removal of telephone poles within the watershed of historical Feature 7; (4) removal of non-native weeds and establishment of native vegetation within the watersheds for Vernal Pools 5 and 6 and former Feature 7; and (5) removal of turf grass and irrigation within the watershed of Vernal Pool 5, including reestablishment of native coastal sage scrub shrubs and grasses to provide a natural vegetated buffer and remove the source of potential irrigation runoff. The details for each component of this restoration plan are set forth in detail below. In addition, a Long-Term Management Plan (LTMP) will be implemented once the performance standards for the restoration plan have been achieved. The LTMP will include the following components as describe in more detail in the final section of this plan: training of maintenance personnel, ongoing non-native vegetation control, general maintenance (e.g., trash and debris removal, repair of fencing and signage, and annual reporting.*

Implementation of the approved Restoration Plan includes the following general components:

- Site preparation including but not limited to non-native vegetation removal, initial clearing within vernal pools, and turf removal (subcontractor);
- Earthwork including but not limited to rough grade staking, cut and compaction of soils, and balancing grade (subcontractor);
- Oversight of site preparation and earthwork to 1) remediate trail along eastern edge of Pools 5 and 6, 2) recontouring of Pool 6, 3) any necessary repairs to ground contours in the watershed;
- Collection and distribution of vernal pool inoculum;
- Oversight of regular maintenance by maintenance contractor;
- Monitoring to document success for 1) hydrology, 2) listed fairy shrimp, and vernal pool vegetation;
- Annual reporting; and
- Meetings and Coordination.

**COST**

The proposed fixed fee for performance of Tasks I through 9, as presented in the attached scope of work, is $126,046. This fixed fee includes all direct costs and a 15% administrative charge to the subcontractor tasks but does not include tasks not specifically addressed in the scope of work. This proposal is valid for a period of 30 days after which time changes to the scope and/or proposed fee may be required to proceed.

**SCHEDULE**

GLA understands that it is the City's intention to begin work during late summer and early fall of 2019, including grading of Vernal Pool 6 and the foot path along with collection and distribution of vernal pool inoculum as described in the Scope of Work below. Site preparation for removal of turf north of Vernal Pool 5 as well as the start of weed control in the watershed for Vernal Pools 5, 6, and 7 could also be initiated. In order to be consistent with the approved Restoration Plan, grading and inoculum collection and distribution need to be completed by October 15. Provided written authorization to proceed is given within one week of the date of this proposal, GLA sees no constraints to achieving the initial work before October 15, 2019. Should any contracting constraints arise, the deadline stipulated in the Restoration Plan may require modification with the USFWS, which would need to be carried out under separate contract.

Should you have any questions regarding this proposal, please feel free to contact me at (949) 837-0404.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Thienan Pfeiffer
President

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TB

Enclosure

**SCOPE OF WORK**
**RESTORATION, MONITORING AND REPORTING**
**VERNAL POOL 6, AND WATERSHEDS FOR**
**VERNAL POOLS 5, 6, AND 7**
**FAIRVIEW PARK**
**COSTA MESA, CALIFORNIA**

## TASK 1. SITE PREPARATION (SUBCONTRACTOR)

Under GLA supervision, Nakae & Associates, Inc. will furnish labor, equipment, and material to carry out the following site preparation activities:

- *Non-Native Vegetation Removal* – All non-native vegetation within the restoration site will be removed and taken to an off-site legal landfill;
- *Initial Clearing Within Vernal Pools* – An initial event of non-native vegetation removal within vernal pools No. 5 & 6 will take place by weedeating. All removed vegetation by weedeating will be taken to an off-site legal landfill;
- *Spray Turf Removal Area* – Spray the area with a glyphosate based herbicide that is approved for use around water (Roundup Custom) before the grading contractor removes the turf along the north boundary of the restoration site. Spraying the turf is necessary before removal or the grass will come back indefinitely;
- *Ripping With Equipment* – After turf removal and non0native vegetation removal take place, the turf removal and CSS establishment areas will be ripped using equipment. Ripping will alleviate compaction in these areas which will help with the germination and establishment of native container plants and seed;
- *Repair Indentations* – Indentations within the watershed associated with the former Feature 7 caused by the placement of telephone poles will be repaired by filling and compacting the pole indentations with soil harvested from the on0site borrow area in order to match the surrounding topography; and
- *Straw Wattle Installation* – Photo-degradable straw wattles will be trenched in and around the vernal pools for protection against herbicides, etc.

## TASK 2. EARTHWORK/GRADING (SUBCONTRACTOR)

Under GLA supervision, Stice Company, Inc. will furnish labor, equipment, and material to carry out the following earthwork/grading activities in accordance with the Restoration Plan and revised Restoration/Planting Plan exhibit:

- *Site Clearing* – Clear and dispose of grass on north restoration area; and
- *Earthwork* – Rough grade staking, original ground processing, cut and compaction of onsite soils, provide and compact import from park borrow area next to the model plane airport, and balance grade as needed to reestablish proper drainage and elevations on the old walking trail.

## TASK 3. OVERSIGHT OF SITE PREPARATION AND EARTHWORK (COVERED ACTIVITY)

In accordance with the approved Restoration Plan, GLA Senior Biologist Tony Bomkamp will oversee the remedial grading for Vernal Pool 6 along with the repair of the footpath adjacent to Vernal Pools 5 and 6 to restore watershed functions that include positive drainage to the pools. Included in this task is coordination with the grading contractor to establish access, location of borrow material consistent with the requirements of the Restoration Plan, demarcation of the areas within Vernal Pool 6 subject to re-contouring, direction and oversight during grading and documentation of conditions following completion of earthwork. In accordance with the Restoration Plan, GLA will provided direction and oversight for necessary repairs to areas in watershed such as indentations left by telephone poles, which have been removed. Finally, this task includes coordination with the grading contractor to obtain cost estimates for the submittal to the City.

## TASK 4. COLLECTION AND DISTRIBUTION OF INOCULUM (COVERED ACTIVITY)

In accordance with the Restoration Plan, GLA will collect donor inoculum from Vernal Pool 1 for transfer to restored portions of Vernal Pool 6. The inoculum will be collected using the two-percent collection method as described in the Restoration Plan between August 15 and September 15 with distribution to Pool 6 between September 15 and October 15. Because of the presence of the San Diego fairy shrimp within the donor vernal pool basins, inoculum collection and redistribution must be conducted by individuals holding a valid Section 10(a)(1)(A) permit for listed branchiopods with prior notification to USFWS as provided in the guidelines[1]. This task includes inoculum collection for the initial phase of restoration plus collection during two additional years to ensure that performance standards are achieved.

On behalf of the City, GLA will submit a report (including topographic maps and vernal pool locations) to the USFWS within 6 weeks of completion of reestablishment of previous contours and distribution of inoculum, describing as-built status of the restoration project. If the site recontouring and inoculation are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions (separation of recontouring and inoculum distribution would only occur if recontouring were to occur during July or early August and inoculum introduction did not occur until late September or early October). Note, based on the current schedule, GLA believes that once started, all work to be documented in the As-Built Report will be completed within a six-week window and only one report will be necessary.

## TASK 5. DIRECTION AND OVERSIGHT FOR SITE PREPARATION FOR WATERSHED PLANTINGS AND INSTALLATION OF PLANTINGS (NOT A COVERED ACTIVITY)

In accordance with the Restoration Plan, GLA will provide direction and oversight for site preparation for watershed plantings set forth in the Restoration Plan which includes native scrub and grassland vegetation. Included in this task is coordination with the maintenance contractor

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[1] U.S. Fish and Wildlife Service. Revised November 13, 2017. *Survey Guidelines for Listed Large Branchiopods.*

associated with initial weed removal and ongoing maintenance necessary to prepare the site for the native habitat plantings. Based on the density of the weeds in the watershed, it could require a number of grow and kill cycles to prepare the watershed areas for planting due to the efforts needed to remove the large mass of non-native grasses and forbs and associated seed bank.

In accordance with the Restoration Plan, this task also includes oversight of site preparation for the slope north of Vernal Pool 5 that comprises a portion of the pool's watershed. The subject slope is covered with turf which will be removed by the landscape contractor and prepared for native plantings as set forth in the Restoration Plan.

Finally, this task provides for oversight and direction for native plantings within the watershed for Vernal Pools 5, 6, and 7 including native scrub and grassland species. Included in this task will be coordination with native plant nurseries to obtain the necessary plant material to install in accordance with the Restoration Plan.

## TASK 6. DIRECTION AND OVERSIGHT OF MAINTENANCE WITHIN VERNAL POOL 6 (COVERED ACTIVITY), REMEDIATED FOOTPATH, AND WATERSHED FOR POOLS 5, 6, AND 7 (NOT A COVERED ACTIVITY)

In accordance with the Restoration Plan, GLA will oversee maintenance within Vernal Pool 6, which requires direction of the Permitted Biologist due to the potential presence of listed fairy shrimp, the remediated footpath, and maintenance for the watershed for Vernal Pools 5, 6, and 7, which is not a covered activity. This task assumes two meetings each season, the timing of which would be determined based upon rainfall timing and amounts and associated weed response. A GLA permitted biologist would be present during weeding within Vernal Pool 6 necessary to remove non-native invasive species such as hyssop loosestrife (*Lythrum hyssopifolia*), brass buttons (*Cotula coronipifolia*), rabbitsfoot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), and prickle grass (*Crypsis* spp.). Maintenance, within the watershed of the Vernal Pool 5, 6 and 7 complex will include removal of non-native annual grasses, including but not limited to: *Bromus* spp., *Avena* spp., *Hordeum* spp., and *Festuca perennis* and forbs including but not limited to: *Brassica* spp., *Raphanus sativus*, *Erodium* spp, and *Centaurea melitensis.*

Because of the potential for large rainfall years and associated long-term ponding to kill the non-native upland annual grasses and forbs, if rainfall during the season preceding weeding results in exceptional ponding, an adaptive management approach will be implemented relative to weeding in Vernal Pool 5, in coordination with USFWS.

## TASK 7. CONDUCT ANNUAL MONITORING

In accordance with the Restoration Plan, GLA will conduct annual monitoring of 1) restored Vernal Pool 6 (hydrological monitoring, fairy shrimp monitoring, and vegetation monitoring), monitoring of the remediated Foot Path, and monitoring of the restored watershed for Vernal Pools 5, 6 and 7. Monitoring will be conducted in a manner that measures progress towards the performance standards as set forth in detail in the Restoration Plan.

As described in the Restoration Plan monitoring to determine progress toward performance standards includes monitoring of hydrological conditions, monitoring of fairy shrimp and vernal pool vegetation in conjunction with the watershed vegetation. Because hydrological monitoring can only be monitored during years of sufficient rainfall, GLA assumes that there would be three years out of the five-year monitoring period when there would be sufficient water present to conduct hydrology monitoring. Similarly, fairy shrimp monitoring could only be conducted during years when was is present for sufficient duration, which is approximately 3 continuous weeks. Thus, the cost table below assumes hydrological and fairy shrimp monitoring during three out of the five seasons with only brief visits during the drier years to confirm lack of ponding. Similarly, while some vernal pool plants may germinate during drier years, more expansive germination and associated cover is only expected during the above-average rainfall years and the cost table below, assumes quantitative monitoring only during three seasons, with brief visits during the drier years to report on conditions. Should rainfall conditions warrant additional monitoring visits, GLA will contact the Client and determine the need for a change order.

## TASK 8. PREPARE ANNUAL REPORTS

In accordance with the Restoration Plan, GLA will submit an annual report to USFWS for the duration of the monitoring period. Monitoring shall be tied to the actual implementation date (e.g., the first annual report shall be delivered on July 1st of the year following the first rainy season after implementation of the restoration plan). These reports shall include the results of the hydrological, fairy shrimp, and vegetation monitoring (including watershed vegetation), and assess attainment of success criteria. As noted for monitoring of hydrology, fairy shrimp and vernal pool plants, it is expected that detailed monitoring reports will be prepared during above-average rainfall seasons with less detailed reports during dry years. The detailed reports will include the following:

- 
- A list of names, titles, and companies of all persons who prepared the content of the annual report and participated in monitoring activities for that year;
- An aerial photograph indicating location of the areas addressed in the report;
- A restoration site map or aerial photograph identifying restoration activities, photo station locations, and other information (e.g., GPS data points) as appropriate;
- Copies of representative monitoring photographs;
- Copies of completed field data sheets;
- An analysis of all monitoring data relative to success criteria for hydrology, fairy shrimp and vernal pool vegetation.

## TASK 9. MEETINGS AND COORDINATION

This task covers meetings and coordination not specifically set forth in the various tasks above and would include meetings with the City staff; meetings with USFWS, and/or meeting with members of the public and other stakeholders as directed by the City.

## COST

The table below has been developed to aid us in estimating the total cost of the proposed work and is provided for your information only. Unless otherwise arranged with the client, the cost of each task is not meant to be precise and we may find it necessary to shift costs between tasks as the work proceeds.

| TASK | TOTAL COSTS |
|---|---|
| Task 1. Site Preparation (Subcontractor) | $26,910 |
| Task 2. Earthwork/Grading (Subcontractor) | $21,966 |
| Task 3. Oversight of Site Prep and Earthwork | $5,160 |
| Task 4. Collection and Distribution of Inoculum | $5,660 |
| Task 5. Oversight of Site Prep. and Plantings | $4,830 |
| Task 6. Oversight During Maintenance | $6,150 |
| Task 7. Conduct Annual Monitoring | $18,560 |
| Task 8. Prepare and Submit Annual Reports | $30,770 |
| Task 9. Meetings and Coordination | $6,040 |
| **TOTAL** | **$126,046** |

**Summary of Fees by Task and Year***

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | **Total by Task** |
|---|---|---|---|---|---|---|---|
| Task 1 | $26,910 | | | | | | **$26,910** |
| Task 2 | $21,966 | | | | | | **$21,966** |
| Task 3 | $5,160 | | | | | | **$5,160** |
| Task 4 | $2,000 | | $1830 | | $1,830 | | **$5,660** |
| Task 5 | $2,415 | $2,415 | | | | | **$4,830** |
| Task 6 | | | $1,537.50 | $1,537.50 | $1,537.50 | $1,537.50 | **$6,150** |
| Task 7 | | $2,712 | $4,712 | $2,712 | $4,712 | $3,712 | **$18,560** |
| Task 8 | $3,000 | $7,770 | $5,000 | $5,000 | $5,000 | $5,000 | **$30,770** |
| Task 9 | $3,000 | $608 | $608 | $608 | $608 | $608 | **$6,040** |
| **Total by Year** | **$64,451** | **$13,505** | **$13,688** | **$9,858** | **$13,688** | **$10,858** | |

* The fees as summarized by year above are GLA's best estimate of how the costs will be distributed over the course of the project. As described in the detailed scope of work above, years of high rainfall and associated ponding will generate more intense monitoring efforts while drought years will result in limited monitoring. Thus, the actual fees for monitoring as summarized for Task 5 would change depending which years exhibit higher or lower rainfall and associated monitoring efforts. Similarly, weeding and associated oversight would be increased during years with more rainfall.

# EXHIBIT B

## FAIRVIEW PARK VERNAL POOL RESTORATION AND LONG TERM MAINTENANCE PLAN FOR VERNAL POOLS 5 AND 6, AND THE ASSOCIATED WATERSHED AREAS

# FAIRVIEW PARK VERNAL POOL RESTORATION
# AND
# LONG TERM MAINTENANCE PLAN FOR VERNAL POOLS 5 AND 6, AND THE ASSOCIATED WATERSHED AREAS WITHIN THE JURISDICTION OF

## THE UNITED STATES FISH AND WILDLIFE SERVICE PURSUANT TO THE ENDANGERED SPECIES ACT

**FAIRVIEW PARK**
**COSTA MESA, CALIFORNIA**

**JUNE 8, 2018**

**Prepared for:**

**City of Costa Mesa**
**Parks Department**
**77 Fair Drive**
**Costa Mesa, California 92628-1200**

**Contact: Baltazar Mejia**
**(714) 754-5291**

**Prepared by:**

**Glenn Lukos Associates, Inc.**
**29 Orchard**
**Lake Forest, California 92630**
**Contact: Tony Bomkamp/Kevin Livergood**
**(949) 837-0404**

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## I. EXECUTIVE SUMMARY

This Restoration and Maintenance Plan for Vernal Pools 5 and 6, and the associated watershed area (Complex) which is inclusive of historical Feature 7 located in Fairview Park ("Project Site") in the City of Costa Mesa ("City"), Orange County, California [Exhibit 1 – Regional Map, Exhibit 2 – Vicinity Map, Exhibit 3 – Restoration Site Plan Map, and Exhibit 4 – Site Photographs], has been developed to address potential impacts associated with installation of a decomposed granite foot path in and adjacent to vernal pools (Vernal Pools 5 and 6) occupied by the federally listed endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*). In addition, this plan addresses potential watershed impacts associated with preparation and use of the area surrounding historical Feature 7 as a parking lot and telephone poles that were placed in the vicinity of the former feature to prevent unauthorized vehicular access into the watershed surrounding Vernal Pools 5 and 6. Placement of the telephone poles created shallow indentations in the soil surface. The foot path and telephone poles have been removed. This plan addresses 1) restoration of the foot path (i.e., restoration of the area where the foot path was removed) to original elevation and topography, so as to restore the watershed for Vernal Pools 5 and 6, 2) reestablishment of the impacted portions of Vernal Pool 6 in a manner that results in restoration of the previous functions, 3) repair of indentations in the watershed associated with former Feature 7 caused by the placement of telephone poles and 4) repair of disturbance related to use of the watershed area for parking. This plan also addresses the removal of turf and irrigation along the northern edge of the watershed for Vernal Pool 5 to prevent irrigation runoff from entering Vernal Pool 5, while also providing a natural buffer. The purpose of this plan is to set forth in detail the various components of the vernal pool and watershed restoration plan, including the restoration methods, monitoring and maintenance methods, and success criteria. The plan also includes long-term maintenance activities that will be implemented within the Complex once the restoration activities are completed.

As a result of the presence of the San Diego fairy shrimp and the potential for take of listed species associated with the proposed restoration efforts, these activities are being coordinated with and are subject to approval of the U.S. Fish and Wildlife Service (USFWS), which issued a letter on July 24, 2014 requiring restoration of these areas. Completion of this plan will enhance the survival of San Diego fairy shrimp, thus contributing to the recovery of this species and as such, the actions carried out to implement this plan are anticipated to be covered under a Section 10(a)(1)(A) Recovery Permit, which allows otherwise prohibited take of the San Diego fairy shrimp to enhance the survival of the species.

## II. PROJECT DESCRIPTION

### A. Responsible Parties

Owner:

City of Costa Mesa
77 Fair Drive
Costa Mesa, California 92628-1200
Contact: Mr. Baltazar Mejia
Telephone: (714) 754-5291

Preparer of Restoration and Maintenance Plan: Glenn Lukos Associates, Inc.
29 Orchard
Lake Forest, California 92630
Contact: Tony Bomkamp
or Kevin Livergood
Phone: (949) 837-0404

## B. Location of Project

Fairview Park is situated along the bluffs overlooking the Santa Ana River in the City of Costa Mesa, Orange County, California. The park is roughly bounded by Adams Avenue to the north, Santa Ana River to the west, Victoria Street to the south, and is bisected by Placentia Avenue [Exhibits 1 and 2]. Land uses adjacent to the restoration sites include developed parkland to the north, Estancia High School with sports fields to the east, Waldorf School of Orange County and associated sports field to the south, and natural lands including a runway area used by Harbor Soaring Society for flying model planes and a previously restored vernal pool to the west [Exhibit 3]. The topography of the site is flat.

## C. Brief Summary of Project

This Restoration and Maintenance Plan includes: (1) restoration of the watershed for Vernal Pools 5 and 6, by restoring the elevation and contours to the conditions prior to installation of the foot path that also ensures that runoff from rainfall is directed toward Vernal Pool 5 rather than collecting on the foot path; (2) reestablishment of portions of Vernal Pool 6 affected by the installation of a foot path along the eastern and southern edges of Vernal Pool 6, which would be accomplished through the reestablishment of the original perimeter contours; (3) repair of the indentations associated with the placement and removal of telephone poles within the watershed of historical Feature 7; (4) removal of non-native weeds and establishment of native vegetation within the watersheds for Vernal Pools 5 and 6 and former Feature 7; and (5) removal of turf grass and irrigation within the watershed of Vernal Pool 5, including reestablishment of native coastal sage scrub shrubs and grasses to provide a natural vegetated buffer and remove the source of potential irrigation runoff. The details for each component of this restoration plan are set forth in detail below. In addition, a Long-Term Management Plan (LTMP) will be implemented once the performance standards for the restoration plan have been achieved. The LTMP will include the following components as describe in more detail in the final section of this plan: training of maintenance personnel, ongoing non-native vegetation control, general maintenance (e.g., trash and debris removal, repair of fencing and signage, and annual reporting.

# III. GOALS OF RESTORATION AND MAINTENANCE PLAN

The goal of the Restoration and Maintenance Plan is to contribute to the recovery of the San Diego fairy shrimp through specific restoration and maintenance efforts described in detail below. The restoration plan proposes to restore the limited portions of the watershed associated with Vernal Pools 5 and 6 affected by footpath installation and removal, which will ensure conservation of the San Diego fairy shrimp within these pools. The restoration plan goals will

also be accomplished by restoring the eastern boundary of Vernal Pool 6 to reestablish this component of the pool's watershed, which was affected by installation of the foot path. While former Feature 7 has not been documented to support fairy shrimp (a dry-season survey conducted in summer of 2015 was negative for cysts),[1] remediation of any potential damage to the watershed by placement of the telephone poles, and the preparation and use of this area for parking vehicles would ensure maintenance of existing habitat functions for the historically significant feature, which has in wetter-than-average years supported a small number of vernal pool plants. The goals of the Long-Term Management Plan include ongoing control on non-native invasive species within the watershed areas of Vernal Pools 5 and 6, and former Feature 7, which will be subject to restoration of native scrub and grasslands, maintenance of protective fencing, and regular removal of any trash or debris in the vernal pools or associated watersheds.

## IV. IMPLEMENTATION PLAN FOR RESTORATION ACTIVITIES

### A. Responsible Parties

| | |
|---|---|
| Owner: | City of Costa Mesa<br>77 Fair Drive<br>Costa Mesa, California 92628-1200<br>Contact: Mr. Baltazar Mejia<br>Telephone: (714) 754-5291 |
| Preparer of Plan: | Glenn Lukos Associates, Inc.<br>29 Orchard<br>Lake Forest, California 92630<br>Contact: Tony Bomkamp[2] or Kevin Livergood<br>Phone: (949) 837-0404 |

### B. Implementation Schedule

A qualified habitat restoration specialist or biologist with a minimum of 5 years of experience in vernal pool restoration in southern California hereinafter referred to as the Project Biologist, will supervise the implementation, maintenance, and five-year monitoring of the restoration activities. Activities with the potential for take of the San Diego fairy shrimp (such as wet- or dry-season surveys and collection of inoculum) will be conducted by Biologists and/or Restoration Specialists (Project Biologist) approved by USFWS and listed on a Section 10(a)(1)(A) Recovery Permit issued to the City specifically for restoration, biological surveys, and long-term maintenance. Implementation of the restoration activities shall occur, to the maximum extent practicable, as soon as possible after plan approval and issuance of a Section 10(a)(1)(A) Recovery Permit to the City, dependent on weather conditions. As the site will need

[1] Glenn Lukos Associates. July 20, 2015. Letter Report to Stacey Love: Submittal Requirements for 2015 Dry Season Survey for Listed Branchiopods Conducted for the Fairview Park Project – Feature 7, Located in the City of Costa Mesa, County of Orange, California. It should be noted that the dry-season survey was conducted after the area was disturbed repeatedly for preparation and use as a parking lot.

[2] Tony Bomkamp has over 22 years of experience restoring vernal pools in southern California.

to be dry to collect inoculum, work may begin after a period of approximately 4 - 6 weeks with no rain events, or after the rainy season, which typically ends in mid-April. The site will be maintained and monitored for a minimum of five years or until specific success criteria are met. Long-term maintenance will continue, once success criteria are met, as described in Section VIII below.

## C. Implementation of Restoration Plan

As noted, this plan addresses restoration activities that will contribute to the recovery of the San Diego fairy shrimp, but which also exhibit potential for take of the species. Any activities with potential for take of the San Diego fairy shrimp (Covered Activity) will be performed by qualified individuals, approved by USFWS, and listed in the Section 10(a)(1)(A) Permit issued to the City ("Permit Holder") specifically for the restoration, biological surveys, and long-term maintenance activities described in the Plan. Other activities that exhibit no potential for take will not require coverage under the Recovery Permit, but will contribute to the recovery of the San Diego fairy shrimp through habitat and watershed enhancements. Activities that would be covered under the Recovery Permit are limited to 1) restoration of the watershed area impacted by the foot path adjacent to Vernal Pool 5 and 2) reestablishment of the impacted portions of Vernal Pool 6 to restore previous functions, which includes the introduction of inoculum to the reestablished pool area. Repair of the shallow indentations created by the telephone poles in the vicinity of former Feature 7 and re-vegetation of the surrounding watershed area with coastal sage scrub and native grasses do not exhibit potential for take of the San Diego fairy shrimp.

### 1. Reestablishment of Impacted portions of Vernal Pool 6 (Covered Activity)

As depicted on Exhibit 3, a portion of Vernal Pool 6 was affected by installation and removal of the decomposed granite foot path. The watershed of Vernal Pool 6 was also affected by the removal of the foot path, which left the ground surface a few inches lower than the adjacent pool basin. Restoration of the impacted watershed area of Vernal Pool 6 is addressed below.

a. *Reestablishment of Vernal Pool 6 Contours* - Reestablishment of the impacted portions of Vernal Pool 6 will be directed by the Section 10(a)(1)(A) Permit Holder under the guidance of the Project Biologist. Reestablishment of original contours will be conducted by a grading contractor experienced in the restoration of vernal pool basins. The equipment to be used for reestablishment of the impacted portions of Vernal Pool 6 will be determined by the grading contractor; although it is expected to be a small dozer or bobcat due to the limited area to be restored. An engineered grading plan will not be developed; rather, recontouring will be field-directed and micro elevations and micro grading will be determined and directed by the Project Biologist with final contours established in the field in a manner that is consistent with the original elevation. All soil placement will be directly monitored by the Project Biologist to ensure that no damage to functioning and intact vernal pool habitat occurs. Prior to commencing work, the target basin perimeter will be marked on the ground and the portion of the basin to be avoided will be marked as noted. A transit or laser auto-level will be used to record elevations at various locations both inside and outside of the target basin. Recontouring will be performed until target elevations are achieved. Upon completion of mechanical and hand contouring (using rakes and shovels as needed), final

elevations for the reestablished contours of Vernal Pool 6 will be recorded to 0.05 feet.

b. *Inoculum Collection and Redistribution* - Collection of inoculum for the San Diego fairy shrimp (and vernal pool plants) from Vernal Pool 1 would be conducted to replace the pool substrate that was removed from Vernal Pool 6. Given the adjacency of the reestablishment area with the existing pool, the area would also be rapidly colonized by both the San Diego fairy shrimp and vernal pool plants. Because of the presence of the San Diego fairy shrimp within the donor vernal pool basins, inoculum collection and redistribution must be conducted by individuals holding a valid Section 10(a)(1)(A) permit for listed branchiopods with prior notification to USFWS as provided in the guidelines[3].

Inoculum containing San Diego fairy shrimp cysts and vernal pool plants will be collected using the two-percent collection methodology described by Bauder (cited in Michael Brandman Associates and KEA Environmental 1995)[4]. Use of this method ensures that no more than two-percent of the existing propagules are removed from the donor areas. Vernal Pool 1 will provide donor inoculum.[5] Inoculum collection will be performed in the fall season when the site is dry and before the rainy season which typically begins in mid-October and lasts through mid-April. Inoculum collection will occur once the contours of Vernal Pool 6 and the adjacent watershed area are reestablished. Collection of inoculum will be performed using a one-meter quadrat, which is placed in one corner of the donor area. Two one-decimeter quadrats are randomly placed within the one-meter quadrat and the top one centimeter of soil and vegetative material are collected from the area circumscribed by each one-decimeter quadrat, which is then placed in cardboard boxes for transport. The one-meter quadrat is moved to the adjacent one-meter plot and the process is repeated until each one-meter plot from the donor vernal pool is completed.

No formal planting plan or plant palette has been developed. Rather, material salvaged from the donor vernal pool will provide all of the necessary propagules and cysts for the portion of Vernal Pool 6 to be reestablished. Introduction of the collected seed and organic matter (containing cysts) from the donor vernal pools will be accomplished by hand-broadcasting over the surface of the reestablished pool area followed by light raking. All hand-broadcasting will occur between September 15 and October 15, immediately following collection of inoculum.

## 2. Restoration of Watershed Area Damaged by the Foot Path near Vernal Pools 5 and 6 (Covered Activity)

Restoration of the watershed area damaged by the foot path will be conducted simultaneously with reestablishment of Vernal Pool 6 (see Task 1a above). Removal of the decomposed granite foot path created a "lip" outside of the eastern boundary of Vernal Pools 5 and 6 (note: the basin for Vernal Pool 5 was not affected by the foot path construction or associated removal). The "lip" is generally shallow, averaging about 3 inches and reaches 10 inches in one area, causing

[3] U.S. Fish and Wildlife Service. Revised November 13 2017. *Survey Guidelines for Listed Large Branchiopods.*

[4] Michael Brandman Associates and KEA Environmental. 1995. Kearny Villa Road Vernal Pool Restoration: First Progress Report.

[5] Vernal Pool 1 was selected because it contains San Diego fairy shrimp cysts and exhibits the highest concentration of sensitive plant species including *Navarretia prostrata*, *Myosurus minimis* ssp. *apus*, and *Microseris douglasii* var. *platycarpha*, as well as supporting low densities of non-native species such as *Rumex crispus* and *Lythrum hyssopifolia*.

rainfall that falls on the former path to pond rather than contributing to the hydrological input for Vernal Pools 5 and 6. The ground surface elevations will be restored to ensure positive drainage to the pools as set forth below:

a. Soils will be imported from other portions of the park that consist of the suitable clays, with the primary site located at the end of Pacific Avenue (extended) near the southwest corner of the park. The soils will be moved from the donor sites to the foot path either by dump truck or by front-end loader. If a dump truck is used and soil is stockpiled, it will be stockpiled on the turf, on top of canvas or plastic covers to ensure that turf is not inadvertently introduced to the restored foot path area.
b. The clay will be deposited on the foot path areas starting at the southern extent of the foot path, adjacent to Vernal Pool 6, a portion of which extended into the area now occupied by the foot path, and will be spread either by dozer or loader such that positive drainage will occur from the eastern edge of the foot path to Vernal Pool 5. The work will begin adjacent to Vernal Pool 6 and work toward the north past Vernal Pool 5 to where the foot path began. To ensure that there will be minimal soil settlement, the soils will be compacted to approximately 90 percent and will be surveyed to 0.05 inch to ensure that the final elevations of the restored path drain towards Vernal Pools 5 and 6.
c. An as-built plan with final topographic measurements on the former foot path and in the vernal pools, showing positive drainage to the pools will be prepared and submitted to the USFWS following completion of the restoration of the foot path to pre-existing grades.
d. The limits of Vernal Pools 5 and 6 will be demarcated using pin flags to ensure that no work encroaches into the pools and that no fill is placed in the pools. To maximize potential success, all work will be directed and supervised by the Project Biologist and any work with the potential for take will also be supervised by the Section 10(a)(1)(A) Permit Holder.
e. The restored foot path will be re-vegetated with native upland species as set forth in Table 1 of Section C.5. below.
f. Prior to the initiation of work, the Project Biologist and Section 10(a)(1)(A) Permit Holder will hold a pre-construction meeting on the site with the contractor, including equipment operators, to describe the sensitive nature of the vernal pools and associated biota. The meeting will focus on ingress and egress and avoidance of the existing Vernal Pool 5 and the extant portion of Vernal Pool 6.

### 3. Removal of Turf Grass and Irrigation along Northern Edge of Vernal Pool 5 (Not a Covered Activity)

An approximately 0.37-acre area of turf grass along the northern edge of Vernal Pool 5 will be removed using mechanized equipment and hand tools as determined appropriate by the City. Following removal of the turf, the area will be treated, through installation of black tarp, to kill the remaining roots of the turf in a manner that has no potential for effects on Vernal Pool 5. If it is necessary to use chemicals, only chemicals approved for use around wetlands will be used and straw wattle will be placed at the lower edge of the restoration area to limit the potential for chemicals from reaching Vernal Pool 5. Following removal and necessary treatment, the area will be revegetated with native upland species per Table 1 in Section C.5. below. The irrigation that currently exists will remain in place to establish the newly planted upland vegetation.

During establishment, the water shall be carefully controlled to prevent excess water from entering Vernal Pool 5. The irrigation will be turned off after vegetation establishment, which is anticipated to occur approximately 2-3 years after planting. In order to ensure that leakage from the irrigation system does no reach Vernal Pool 5, the irrigation system will be inspected at least twice annually for leaks and any leaks detected will be fixed immediately.

### 4. Repair Damage from the Telephone Poles near Former Feature 7 (Not a Covered Activity)

Shallow indentations in the ground surface were created where telephone poles were placed to restrict vehicle access to Vernal Pools 5 and 6. The poles were placed in the vicinity of a former feature located within the watershed of Vernal Pools 5 and 6. Due to the sensitivity of pools 5 and 6, the watershed (inclusive of Feature 7) will be re-vegetated with native plant species and topographic irregularities resulting from the placement of the telephone poles will be removed. These areas will be repaired by hand-filling the pole indentations with soil harvested from the borrow area identified for restoration of the foot path at Vernal Pool 6. Hand tools would be used to fill and compact the soil such that the grade on either side of the indentations would match the surrounding topography.

While former Feature 7 does not currently exhibit characteristics of a vernal pool, this plan acknowledges that prior to disturbance in the area, Feature 7 and the surrounding watershed may have supported deeper ponding suitable for vernal pool branchiopods and during wetter-than-average years supported a low density of vernal pool plants. Therefore, the area should be preserved for its long-term contribution to the Vernal Pool 5 and 6 watershed and the potential recovery of Feature 7.

### 5. Upland Planting Plan along Northern Edge of Vernal Pool 5 (Not a Covered Activity)

Following removal of turf grass and site preparation along the northern edge of Vernal Pool 5, the area will be planted with native coastal sage scrub using a combination of seed and container stock. The container stock and seed mix is provided in Table 1 below.

**Table 1: Coastal Sage Scrub Plant Palette**

| Botanical Name | Common Name | |
|---|---|---|
| | **Container Stock** | Plants/Acre |
| *Eriogonum fasciculatum* | California buckwheat (CSS) | 200 |
| *Artemisia californica* | California sagebrush (CSS) | 200 |
| *Isocoma menziesii* | Coast goldenbush (CSS and Grassland) | 100 |
| *Stipa lepida* | Foothill needlegrass (CSS and Grassland) | 100 |
| *Stipa pulchra* | Purple needlegrass (CSS and Grassland) | 100 |
| *Melica imperfecta* | Coast range melic (CSS and Grassland) | 50 |
| *Galium angustifolium* | Narrow-leaved bedstraw (CSS) | 50 |

| Seed | | Lbs/Acre |
|---|---|---|
| *Encelia californica* | California bush sunflower (CSS and Grassland) | 6.0 |
| *Deinandra fasciculata* | Fascicled tarweed (Grassland) | 1.0 |
| *Lupinus bicolor* | Miniature lupine (CSS and Grassland) | 2.0 |
| *Lasthenia californica* | California goldfields (Grassland) | 2.0 |

### 6. Install Protective Fencing and Signs Around Vernal Pool Complex (Not a Covered Activity)

Protective fencing will be installed along the perimeter of the Vernal Pool 5 and 6 Complex, which is inclusive of historical Feature 7 and the associated watershed [Exhibit 3]. Installation of the fencing will be monitored by a qualified biologist to ensure that no incursions occur into vernal pools. Signage prohibiting entry and educating the public of the sensitive habitat will be placed along the fencing at regular intervals as depicted on Exhibit 3.

### 7. Upland Planting Plan within the Vernal Pool Complex

Disturbance associated with a) installation of the foot path, b) preparation and use of the area in and surrounding historical Feature 7 as a parking area, and c) pedestrian access to the watershed area due to a lack of protective fencing has degraded habitat for San Diego fairy shrimp by increasing the extent and diversity of non-native vegetation within the Vernal Pool Complex. To restore habitat conditions for San Diego fairy shrimp, non-native vegetation will be replaced with coastal sage scrub and native grasslands within the boundary of the proposed fencing (Exhibit 3). Non-native vegetation will be hand pulled from the watershed and replaced with native vegetation per Table 1 above. Larger woody shrubs (e.g., California sagebrush, California buckwheat and coast goldenbush) will be primarily concentrated along the periphery of the fenced area and will further discourage encroachment into the watershed area. Vernal pool-associated flora will be reestablished along the boundary of Vernal Pools 5 and 6 using inoculum collected from Vernal Pool 1, as described in Task 1b above.

## D. As-Built Conditions

The City will submit a report (including topographic maps and vernal pool locations) to the USFWS within 6 weeks of completion of reestablishment of previous contours and distribution of inoculum, describing as-built status of the restoration project. If the site recontouring and inoculation are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions (separation of recontouring and inoculum distribution would only occur if recontouring were to occur during July or early August and inoculum introduction did not occur until late September or early October).

# V. MAINTENANCE ACTIVITIES DURING THE MONITORING PERIOD

## A. Maintenance Activities

Maintenance activities will ensure the success of the proposed restoration. Successful

reestablishment of native vegetation and hydrological conditions typically associated with vernal pools will limit establishment of most weedy non-native species. Because collection of inoculum will specifically avoid areas in the existing vernal pools which contain these plants, it is not expected that weedy species will be introduced to Vernal Pools 5 and 6, or the surrounding watershed inclusive of former Feature 7. Trash and other types of unwanted debris will be removed on a regular basis from all areas of the Project Site when the ground is dry. In addition, signage and fencing will be repaired as needed. Should weedy aquatic species become established in numbers or extent that removal is required, there would be potential for take of San Diego fairy shrimp cysts through trampling or dislocation. In order to minimize the potential for take, all weeding activities within Vernal Pools 5 and 6 will be conducted under the supervision of a qualified biologist named on the project Section 10(a)(1)(A) permit.

It is important to note that the vernal pools at Fairview Park generally only fill with water during above-average rainfall years and that when filling occurs, the period of inundation is sufficient to kill most upland non-native grasses and forbs, which invade the pools during low rainfall years or periods of drought. During high rainfall years, the pools experience a "reset" as non-native upland species are eliminated and native vernal pool and other wetland species are dominant. As such, "weeding" within Vernal Pool Basin 6, will focus on invasive aquatic plants such as hyssop loosestrife (*Lythrum hyssopifolia*), brass buttons (*Cotula coronipifolia*), rabbitsfoot grass (*Polypogon monspeliensis*), curly dock (*Rumex crispus*), and prickle grass (*Crypsis* spp.). Maintenance, within the watershed of the Vernal Pool 5 and 6 complex will include removal of non-native annual grasses, including but not limited to: *Bromus* spp., *Avena* spp., *Hordeum* spp., and *Festuca perennis* and forbs including but not limited to: *Brassica* spp., *Raphanus sativus*, *Erodium* spp, and *Centaurea melitensis*.

Because of the potential for large rainfall years and associated long-term ponding to kill the non-native upland annual grasses and forbs, if rainfall during the season preceding weeding results in exceptional ponding, an adaptive management approach will be implemented relative to weeding in Vernal Pool 5, in coordination with USFWS.

Maintenance in the watershed areas will also include replacement of native scrub and grassland container plants that do not survive following installation to ensure that the performance standards set forth below are achieved within the five-year establishment period.

## B. Responsible Parties

The City of Costa Mesa will be responsible for financing and ensuring that maintenance activities are funded and implemented.

City of Costa Mesa
77 Fair Drive
Costa Mesa, California 92628-1200
Contact: Mr. Baltazar Mejia
Telephone: (714) 754-5291

## C. Maintenance Schedule

The restoration maintenance program will begin during implementation of the restoration activities and continue for five years, or until final success criteria are met. Maintenance activities will include trash and debris removal within the fenced area on a regular basis when the ground is dry and repair of signage and fencing and will occur on a quarterly basis during the monitoring period. Weeding of non-native upland and invasive aquatic plant species located in the vernal pool basins will be performed by hand only. Mechanized equipment such as weed-whips can be used in areas of watershed restoration for Vernal Pools 5 and 6 but cannot work within 25 feet of the outer extent of the pools as identified by pin flags denoting the limits of ponding.

# VI. MONITORING ACTIVITIESFOR THE RESTORATION PLAN

## A. Final Success Criteria

### 1. Target Fauna – San Diego Fairy Shrimp

Restoration of Vernal Pool 6 and restoration of the watershed associated with the Vernal Pool Complex will contribute to the recovery of the federally-listed San Diego fairy shrimp. In addition, it is assumed that with the installation of fencing, potential future impacts from vehicles will be eliminated, potential threats of degradation from other types of incursion will be minimized, and the functions associated with the existing vernal pools will be maintained.

Success Criteria 1: Criteria for target fauna will be met if gravid females of the San Diego fairy shrimp are present in the reestablished portion of Vernal Pool 6 during any two of the five monitoring seasons that exhibit ponding for a minimum duration necessary to support gravid females. If sufficient ponding does not occur during the five year period, then monitoring will be extended until sufficient rainfall occurs to induce sufficient ponding necessary for support of gravid females. If gravid female San Diego fairy shrimp are detected during two out of five years, then the success criteria are met. If gravid female San Diego fairy shrimp are not detected, the City will consult with USFWS to determine appropriate remedial measures.

### 2. Target Hydrological Regime

Hydrological contribution to the vernal pools will continue to originate as direct precipitation into the pools as well as drainage from the watersheds, which will be reestablished to baseline conditions as a result of re-contouring the foot path to ensure positive drainage towards Vernal Pools 5 and 6. In addition, removal of the irrigated turf and dense non-native weeds throughout the watershed will increase the hydrologic input to the Vernal Pool Complex. Any potential minor effects to the watershed associated with former Feature 7 resulting from the telephone pole indentations will also be remedied, reestablishing the baseline condition for the watershed. With implementation of the remedial measures in the watersheds of the Vernal Pool Complex, baseline conditions would be restored. Monitoring conducted during the 2016-2017 rainfall season demonstrated that ponding in Vernal Pools 5 and 6 is of sufficient depth, duration and quality to support San Diego fairy shrimp. Recontouring of Vernal Pool 6 and the former foot

path will ensure that hydrological conditions observed at Vernal Pools 5 and 6 are maintained or improved.

Success Criteria 2: The area where the foot path was removed and restored will exhibit positive drainage toward Vernal Pools 5 and 6, and will exhibit only de minimis ponding following rainfall events in areas where the foot path was removed adjacent to Vernal Pool 6. This is defined as ponding that is no more than a maximum of 0.25 inch deep, and cumulatively covers no greater than three square feet. Should ponding in the area where the foot path was removed and restored be observed more than 24 hours following a rainfall event and the ponding is not contiguous with the basin area of Vernal Pool 5 or 6, then remedial measures including minor re-contouring and the addition of soil[6], as needed, will be implemented until this success criterion is achieved.

Success Criteria 3: Ponding of sufficient depth, duration, and quality during consecutive days for Vernal Pools 5 and 6 to support gravid female San Diego fairy shrimp during at least two seasons during the five-year monitoring period. If gravid female San Diego fairy shrimp are not detected, the City will evaluate the hydrological data and consult with USFWS to determine appropriate remedial measures.

### 3. Target Vegetation

Restoration of native vegetation throughout the watershed of Vernal Pools 5 and 6, and former Feature 7 will contribute to maintaining the target hydrological regime by limiting the space available for non-native vegetation once it is removed. The species diversity and cover of native vegetation restored north of Vernal Pool 5 (Exhibit 3, "Turf Removal and CSS Planting") and throughout the watershed of Vernal Pools 5 and 6 will be monitored annually for five years or until success criteria are met.

Success Criteria 4: Native species cover within native grassland and coastal sage scrub will be at least 75-percent. Species diversity within the established native grassland and coastal sage scrub, based on the species included in the Plan (i.e., 11 species), will include 90-percent of the species planted (at least 1-percent relative cover of each species) at the completion of the restoration. Container plant survival should be at least 80-percent of the initial planting for the first five years, with all dead container stock replaced at the first and second anniversary of plant installation. Non-native species cover will be no greater than 5-percent and 10-percent of the basins and watersheds respectively (0-percent cover for weed species categorized as High or Moderate in the California Invasive Plant Council (Cal-IPC) Invasive Plant Inventory).

Historically, Vernal Pool 6 supported five native vernal pool or wetland plant species plus two non-native species that often occur in vernal pools or other seasonal wetlands. Native species included creeping spikerush (*Eleocharis palustris*), purslane speedwell (*Veronica peregrine* ssp. *xalapensis*), smooth spike primrose (*Epilobium pygmaeum*), alkali weed (*Cressa truxillensis*), and woolly marbles (*Psilocarphus brevissimus*). Non-natives included hyssop loosestrife (*Lythrum hyssopifolia*) and curly dock (*Rumex crispus*). It is expected that the seed bank for these species remains extant and viable within the portions of Vernal Pool 6 that was not disturbed. Nevertheless,

[6] Soil will be added as described in Section IV(C) (Implementation Plan), task 2

inoculum from Vernal Pool 1 will be incorporated into the reestablished areas as well as into the undisturbed portions of Vernal Pool 6 (Task 1b above).

Vernal Pool 1 includes a high diversity of vernal pool plants as well as vernal pool associated species. As such, the inoculum from Vernal Pool 1 will include a much higher level of diversity than has previously occurred in Vernal Pool 6.

Success Criteria 5: Vernal Pool 6 will support at least five native vernal pool or vernal pool-associated plant species with each species contributing at least two-percent of the relative cover.

## B. Monitoring Methods

### 1. Fairy Shrimp Monitoring

Wet season surveys for San Diego fairy shrimp will be conducted by individuals holding a valid Section 10(a)(1)(A) permit for listed branchiopods in Restored Basins 5 and 6 for a minimum of 5 years in accordance with the accepted protocol for listed vernal pool branchiopods (*Survey Guidelines for Listed Large Branchiopods*)[7] and until conditions allow for two complete wet season surveys. If ponding depth, duration, and quality are appropriate, but San Diego fairy shrimp are not detected in pools 5 or 6, the basin(s) will be inoculated with cysts collected from Vernal Pool 1 or Vernal Pool 4, as proposed in the current Plan. The presence of San Diego fairy shrimp was confirmed in both Vernal Pools 1 and 4 during 2016-2017 wet season surveys. Both Vernal Pools (1 and 4) were free of versatile fairy shrimp (*Branchinecta lindahli*), making the pools ideal candidates for source inoculate. Monitoring of Vernal Pools 5 and 6 will continue until at least two complete wet season surveys are conducted and result in positive detection of hatched San Diego fairy shrimp that reach a level of maturity sufficient for positive identification.

### 2. Hydrological Monitoring

Hydrological monitoring will be conducted in areas where the foot path was removed, near Vernal Pools 5 and 6, and in the watershed contributing to the Vernal Pool Complex. Hydrological monitoring will also include observations of ponding at historical Feature 7 to determine if ponding suitable for branchiopods and vernal pool vegetation occurs.

During the first rainy season following restoration of the area where the foot path was removed, hydrological monitoring will be conducted following storm events to determine if ponding is occurring in the area where the foot path was removed. If ponding is contiguous with Vernal Pool 5 or 6, then site visits will continue as needed to determine if a separate pond remains on the foot path as the water dissipates. Three years of hydrological monitoring will be performed between year one and year five to verify that positive drainage occurs following storm events.

Monitoring protocols will also include 1) review of water depth, ponding duration, temperature, and electroconductivity. In order to measure the depth of ponding in the reestablished portion of Vernal Pools 5 and 6, a pvc pipe (or similar device) with clearly identifiable centimeter markings

[7] U.S. Fish and Wildlife Service. Revised November 13, 2017. *Survey Guidelines for Listed Large Branchiopods.*

will be placed in the deepest area of each existing pool. During each monitoring visit following the onset of ponding, the pool depths at each location will be recorded to the nearest centimeter. In addition, during each visit the aereal extent of ponding will be recorded with a tape measure to the nearest decimeter along the long and short axes of the vernal pool. In addition, the limits of ponding will be mapped using GPS, taking care not to leave foot-prints in the saturated ground immediately adajcent to the vernal pools. Water quality (temperature and electroconductivity) will also be recorded during each visit for each pool that exhibits ponding. Site photographs will also be taken during each monitoring visit.

An individual holding a valid Section 10(a)(1)(A) permit for listed branchiopods with appropriate credentials and experience or person named on the City's Section 10(a)(1)(A) permit for this project can perform hydrological monitoring. Specifically, the hydrological monitor must have a minimum of five years experience in vernal pool creation and/or restoration including quantitative hydrological sampling.

## 3. Vegetation Monitoring

### Coastal Sage Scrub and Native Grasslands

Vegetation monitoring of the species diversity and cover of native vegetation restored north of Vernal Pool 5 and throughout the Complex will be measured annually for five years.

#### *Monitoring Methods*

The restoration site will be monitored for five years following the completion of plant installation unless final success criteria are achieved. The monitoring activities will consist of the measurement of performance indicators and assessment of these indicators relative to established performance criteria. The Project Biologist along with other qualified habitat restoration specialists or biologists shall perform monitoring. Continuity within the personnel and methodology of monitoring shall be maintained insofar as possible to ensure comparable assessments.

#### Qualitative Monitoring

The Project Biologist or those under supervision by the Project Biologist shall conduct qualitative monitoring surveys on a monthly basis for the first 12 months and quarterly thereafter for the remainder of the monitoring period. Qualitative surveys consisting of a general site walkover and habitat characterization shall be completed during each monitoring visit. General observations such as fitness and health of planted species, pest problems, weed establishment, mortality, and drought stress shall be noted during each site walkover. Records shall be kept of mortality and other problems such as insect damage and weed infestation. The Project Biologist shall determine remedial measures necessary to facilitate compliance with performance standards. All remedial measures undertaken shall be referenced in the annual monitoring reports.

### Quantitative Monitoring

For the duration of the five-year monitoring period establishment of the coastal sage scrub and native grassland will be measured through a series of qualitative and quantitative measurements assessing native species cover, percent of planted species represented in the site, and non-native species cover. All of these, except for non-native species cover, should increase with time. If survival and cover requirements are not met, the City is responsible for replacement plantings to achieve these requirements. Replacement plants shall be monitored according to the same survival and growth requirements as initial plantings for the duration of the restoration activities.

Quantitative monitoring will assess the attainment of annual and final success criteria and identify the need to implement contingency measures in the event of failure. Monitoring methods include an annual census of dead and/or declining plant stock, visual estimates of cover, and field sampling techniques that are based in accordance with the methodology developed by the California Native Plant Society (CNPS)[8]. Please refer to *A Manual of California Vegetation* for further details on this sampling method.

### Sampling Techniques for Vegetation Cover and Diversity

Percent canopy cover of the native grassland and coastal sage scrub plantings will be measured by using the point-intercept sampling method centered in a 2-meter by 50-meter plot. Two transects will be located within the coastal sage scrub on the slope, two transects will be located in the coastal sage scrub planted along the perimeter of the Complex and three transects will be located within the native grassland areas within the interior of the Complex. At each 0.5-meter interval along each transect (beginning at the 50-cm mark and ending at 50-meter), a point is projected vertically into the vegetation. Each plant species intercepted by a point is recorded, providing a tally of hits for each species in the herbaceous, shrub, and tree canopies, making it possible to record more than 100 hits in any 50-meter transect. Percent cover for each species, according to vegetation layer (herb, shrub, and tree) can be calculated from these data. A list of all additional species within the 250 square-meter belt is subsequently made. The starting point for each transect will be randomly located, using a random numbers table for the first sampling event and permanently marked to facilitate their use in subsequent years.

### Photo-Documentation

Permanent stations for photo-documentation will be established during the first annual quantitative monitoring event. Photos shall be taken during each monitoring period from the same vantage point and in the same direction each year, and shall reflect material discussed in the annual monitoring report.

### Monitoring Schedule

It is anticipated that all restoration site vegetation will be installed at the same time each year and that annual monitoring will occur in one collective monitoring event per year. Quantitative

[8] Sawyer, John O. and Todd Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society.

monitoring will be conducted during the month of June during the first year and every year thereafter until all five-year success criteria have been met.

**Monitoring Reports**

Annual monitoring reports will include the following:

- Data addressing survival and/or replacement of container stock, percent cover of native and non-native species, and diversity of volunteer species within the restoration site;
- Cover and diversity data and associated analysis relative to the Performance Standards;
- Regional and vicinity maps indicating the location of the restoration site;
- A site plan identifying the target habitat and restoration, quadrat or transect locations, fixed photo-point locations and appropriate compass directions in which photographs are taken, photo-point geographic coordinates (latitude and longitude), and other information as needed;
- A list of names, titles, and companies of all persons involved in conducting monitoring event(s) and preparing the annual report; and
- An analysis of all qualitative and quantitative monitoring data that includes a summary of field data sheets.

**Vernal Pool Plant Species**

For Vernal Pool 6, vegetative cover will be determined by conducting vegetative sampling along established transects within the restored pool. Sampling will be conducted up to three times each season: during the aquatic phase immediately adjacent to ponded areas, immediately upon drying of the basin, and approximately one month following drying of the restored Vernal Pool 6. Two 15-meter transects will be placed randomly (using a random numbers table or similar device) on the north-south axis of the pool and one transect on the east-west axis. Beginning at one meter and continuing at each half-meter through 15 meters, a two-decimeter quadrat will be placed adjacent to the transect tape, alternative sides with each subsequent sample. Percent cover of all species combined, percent cover of non-native species (also combined) along with all species identified within the quadrat will be recorded.

As previously noted, Vernal Pool 5 will be subject to enhancement through introduction of inoculum along the outer margins of the pool. Monitoring of Vernal Pool 5 will consist of four 20-meter transects, that will be established on each side of the pool to capture the diversity and cover of the enhanced pool margins.

**Photo-Documentation**

Permanent stations for photo-documentation will be established during the first annual monitoring event. Photos shall be taken during each of the three monitoring periods from the same vantage point and in the same direction each monitoring year and shall reflect material discussed in the annual monitoring report.