

Service Category G. DEVELOPMENT PLAN CHECK

Task G.1 Full Service Plan Checking

Overview

The District provides comprehensive plan check services for a variety of land development projects (e.g., subdivisions, plot plans, use permits, etc.). Additionally, other projects that are not associated with a specific land development proposal, e.g., outside agency capital improvement/public works projects or major encroachment permits) may also be reviewed.

Typically, the following plans, calculations and documents shall be reviewed for compliance with the land-use authority's recommended Conditions of Approval and/or District engineering and maintenance standards and other applicable requirements:

- Drainage improvement plans including storm drain, detention basin, levee and channel plans;
- Hydrologic and hydraulic calculations;
- Structural calculations;
- Street improvement plans (drainage related);
- Grading plans (rough and fine);
- Water-sewer plans (conflict with drainage plans only);
- Final subdivision maps and environmental constraint sheets;
- Adequacy of right of way and/or easement requirements;
- Covenants, conditions and restrictions (CC&R's);
- Bonding estimates (drainage improvements);
- CEQA documents; regulatory/resource agency permits; MSHCP compliance documents;
- Water quality management plans (WQMP);
- Encroachment permits (EP);
- Geotechnical reports;
- Storm Water Pollution Prevention Plans (SWPPP); and
- Technical specifications (drainage improvements).

Review Process

Generally, the land-use authority's Conditions of Approval serve as the initial scope of work for review of a developer's improvement plans/project. District Plan Check staff will discuss each project in detail with the Consultant and define project specific scope of work, including any special requirements, prior to authorizing any work. Consultant shall propose a budget for each assignment prior to commencing the plan review.

Overall Procedure and Deliverables

- 1) Consultant shall write corrections directly on the submitted plans, reports and related documents and prepare a summary checklist of review comments. This will include calling out any conflicts, mistakes, inaccuracies and/or omissions shown on the plans. Provide substantive comments identifying any portion of the project that, in the opinion of Consultant, does not meet or satisfy the applicable hydrology/hydraulics, structural design, environmental/regulatory or operation and maintenance requirements.
- 2) It is critically important that the first plan review is comprehensive and that the Consultant provides as much feedback as possible to the applicant and the applicant's engineer. Specific plan-check comments shall be annotated in red on the plans, reports or related documents. In addition, a concise and descriptive plan check comment letter summarizing the most substantive comments on the plans and any additional comments not indicated on the plans shall be prepared. All correspondence shall be prepared on Consultant's letterhead stationary stamped and signed by the Consultant and countersigned by District staff prior to sending out plan check letter. A copy of the comment letter and check prints shall be neatly packaged and made ready for pickup by the applicant's engineer. Consultant shall promptly notify the applicant's engineer to pick up the redlines.
- 3) All plans and correspondence shall be neatly organized and submitted to District staff for filing.
- 4) Upon receipt of 60% plan submittal the 3rd submittal (typical), coordinate scheduling of a District "all hands" meeting to introduce and discuss the project with pertinent District staff.
- 5) Approval letters for all plans, hydrologic and hydraulic studies, environmental documents, regulatory permits, WQMP and any other reports shall be clear, concise and shall specifically identify each submitted document by date.
- 6) After the check prints have been reviewed and approved (QA/QC) by the Chief of Planning, advise applicant's engineer to proceed with the printing of the final mylar plan set.
- 7) Initial each mylar sheet of the final drawings prior to recommending for signature.
- 8) Ensure that four (4) copies of the approved final WQMP are submitted to District prior to issuance of a final approval letter.
- 9) Update case status in the District's improvement plan tracking system (DLMT).

Time

Time is of the essence. Completed plan review comments shall be returned to the applicant/engineer within three (3) weeks of authorization to proceed. Consultant must allow sufficient time to review all plan check comments with District staff prior to providing comments to the applicant/engineer.

Review of Improvement Plans

The following are key elements of the plan check process and services required:

- 1) Examine the overall concept prior to checking the details. Any fatal flaws must be identified as early as possible. Conduct a thorough investigation of the proposed facility, and its relationship to other facilities, waterbodies, adjacent projects and real property.
- 2) Review hydrology and hydraulic reports to ensure the proposed facility has adequate capacity to convey the design peak discharge (interim or ultimate condition, whichever is greater).
- 3) Determine whether the proposed improvement's drainage facilities are to be operated and maintained by the District, or whether they are facilities to be "maintained by others". If the subject improvements are:
 - a) *District Maintained Facilities*: The Improvement Plans shall be checked for meeting District's drafting, design, and operation and maintenance standards. Consultant should further check for appropriate right of way, egress and ingress routes and consult with District staff for specifics, as necessary. Plans shall be reviewed not only for constructability but also for practicality of maintenance.
 - b) *Facilities Maintained By Others*: The Improvement Plans shall be checked in accordance with the Memorandum of Understanding between the District and the Riverside County Transportation Department dated June 24, 2008 and any amendments or addendum thereto. The maintaining agency shall be consulted and kept informed of progress, constraints and unique situations.
- 4) Improvement plan reviews shall include but may not be limited to all of the following tasks:
 - a) Checking the design for conformance with:
 - 1) Approved Tentative Map, Specific Plans and Site Plans;
 - 2) Applicable conditions of approval;
 - 3) Other agencies' recommendations (i.e., Riverside County Transportation Department, Caltrans, etc.);
 - 4) District Master Drainage Plans or other proposed drainage plans;
 - 5) District Drafting Standards; and
 - 6) Standard and General Construction Notes.
 - b) Checking for good engineering practice and verifying that the proposed design will function properly with emphasis on:
 - 1) Structural integrity of facility;
 - 2) Hydraulic capacity;
 - 3) Facility alignment;
 - 4) Inlet & Outlet conditions;
 - 5) Appropriate construction notes and general notes;
 - 6) Constructability;

- 7) Access for maintenance and ease of maintenance including rehabilitation/restoration;
 - 8) All pertinent information including right of way/easement limits shown on plans
 - 9) Proximity to other utility lines; and
 - 10) Other items that may be unique to the project.
- c) Checking the associated street improvement plans, grading plans, sewer and water plans to ensure no conflict with drainage facility.

Review of Environmental Documents and Regulatory Permits

The following guidelines provide the minimum standards of practice that must be met in reviewing environmental documents submitted in conjunction with the review of improvement plans for facilities that are to be owned, operated and maintained by the District, not only for construction, but also for subsequent Operation and Maintenance. Ensure that any compensatory mitigation proposed with the project would not in any way encumber or otherwise prohibit the District from carrying out its operation and maintenance responsibilities in any manner.

- 1) *California Environmental Quality Act (CEQA)*: Ensure that the Project Description of any applicable CEQA document(s) accurately describes and specifically discusses the construction, operation and maintenance of any facilities that the District is to accept for ownership, including any offsite facilities.
- 2) *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*: Review MSHCP compliance documentation of the proposed construction of all onsite and offsite drainage facilities with Section 3.2.1. (Criteria Area and Public/Quasi Public Lands); Section 6.1.2. (Riparian/Riverine Areas and Vernal Pools); Section 6.1.3. (Narrow Endemic Plant Species); Section 6.1.4. (Urban/Wildlife Interface Guidelines); Section 6.3.2. (Additional Surveys); Section 7.5.3. (Construction Guidelines); and Appendix "C" of the MSHCP. Ensure that the MSHCP compliance documents adequately address future District maintenance activities.
- 3) *Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)*: Review CVMSHCP compliance documentation of the proposed construction of all onsite and offsite drainage facilities and ensure compliance documents adequately address future District maintenance activities, pursuant to Section 13.5 of the "Implementing Agreement" between the District and Coachella Valley Association of Governments. Requirements include: (1) Compliance with relevant processes and measures to ensure application of the Conservation Area requirements set forth in Section 4 of the CVMSHCP; (2) Compliance with the applicable Land Use Adjacency Guidelines as set forth in Section 4.5 of the CVMSHCP; (3) Compliance with the Avoidance, Minimization and Mitigation Measures in Section 4.4 of the CVMSHCP; (4) Ensure implementation consistent with the Species Conservation Goals and Objectives in Section 9 of the CVMSHCP; (5) Permanently protect and manage Mitigation Land within the reserve system legally owned and/or controlled by the entity unless conveyed to the Coachella Valley Conservation Commission; and (6) Participate in the Joint

Project Review Process for its projects within the Conservation Areas as described in Section 6.6.1.1 of the Plan, if applicable.

- 4) *Regulatory Permits*: Review draft regulatory permits authorizing the construction, operation and future maintenance of the proposed flood control facilities, including U.S. Army Corps of Engineers Section 404 permits, Regional Water Quality Control Board Section 401 Water Quality Certifications, California Department of Fish and Game Section 1602 Streambed Alteration Agreements and Regional Water Quality Control Board Porter-Cologne program Waste Discharge Requirements. Ensure that the draft regulatory permits include/address all necessary future District maintenance activities.

Review of Water Quality Management Plans

Consultant shall review the final project-specific WQMP and shall use the checklist for corresponding to appropriate municipal stormwater (MS4) permit. The checklist can be found in Appendix F of the *Drainage Area Management Plan (DAMP)* for Santa Ana Region and Santa Margarita Region, and Appendix I of the *Storm Water Management Plan (SWMP)* for Colorado River Region (White Water). The permits/WQMP checklists are updated regularly, therefore it is the Consultant's responsibility to ensure that all WQMPs are reviewed pursuant to applicable permits.

Review of Encroachment Permits

Consultant shall review the encroachment permit in accordance with scope of work defined by the Operations and Maintenance Division including but not limited to the requirements covered above.

ATTACHMENT "C"

TASK ORDER APPROVAL FORM

CONSULTANT: _____

PROJECT NAME: _____

The Scope of Services for this Task Order, a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference, shall constitute an approved Task Order pursuant to the Agreement between DISTRICT and CONSULTANT dated @ ("AGREEMENT"). CONSULTANT agrees to perform the services described in Exhibit "A" for a fee amount of @ unless otherwise modified by DISTRICT'S Project Manager in a subsequent Task Order Approval. All charges shall be consistent with the Compensation/Fee Rate Schedule which is attached as Exhibit "B" and incorporated herein by this reference.

Performance of the services shall be subject to the terms and conditions contained in the AGREEMENT.

Dated this _____ day of _____
(To be filled in by General Manager-Chief Engineer)

**RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**

By: _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

[FIRM NAME]

By: _____
[NAME]
[Title]

CONSULTING SERVICES AGREEMENT
FY 2015-16 to FY 2017-18

The RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and WATEARTH, INC., hereinafter called "CONSULTANT", hereby agree as follows:

1. SERVICE CATEGORY

Upon DISTRICT'S request, CONSULTANT shall provide on-call services to DISTRICT for Service Category F, as further described in "Service Categories & Tasks", attached hereto as Attachment "A", in accordance with applicable federal, state, and local laws and regulations.

2. SCOPE OF SERVICES

As requested by DISTRICT, CONSULTANT shall provide those services as described in the "Scope of Services", attached hereto as Attachment "B", on an "on-call" basis. During the term of this Agreement, DISTRICT may request CONSULTANT to submit one or more proposals within any of the Service Categories for which the CONSULTANT is selected pursuant to Attachment "A". In the event DISTRICT finds CONSULTANT'S proposal acceptable, DISTRICT may issue one or more Task Orders, the form of which shall generally conform with the "Task Order Approval Form" (attached hereto as Attachment "C"). CONSULTANT understands and expressly agrees that the execution of this Agreement by CONSULTANT and/or the submission of any proposal to furnish services does not guarantee the assignment or approval of any subsequent Task Order(s).

3. PERSONNEL

A. Project Manager

1 For each Task Order, DISTRICT shall designate a staff representative who shall
2 act as DISTRICT'S Project Manager ("Project Manager") for the Task Order. In
3 the event DISTRICT changes its Project Manager, it shall notify CONSULTANT
4 in writing.

5 B. CONSULTANT'S Representative

6 CONSULTANT shall appoint a Designated Representative for each assigned
7 Task Order who shall be responsible for coordinating all aspects of the assigned
8 Task Order. CONSULTANT'S Designated Representative shall be available to
9 DISTRICT'S Project Manager at reasonable times. In the event CONSULTANT
10 changes its Designated Representative, it shall notify DISTRICT in writing.

11 C. Substitution of Key Personnel

12 At the time of Task Order approval, CONSULTANT shall identify to
13 DISTRICT'S Project Manager the Key Personnel who are responsible for
14 executing Task Order. Should one or more of the identified Key Personnel
15 become unavailable, CONSULTANT may substitute other personnel of equal or
16 greater competence upon DISTRICT'S written approval. In the event that
17 DISTRICT and CONSULTANT cannot come to an agreement regarding
18 substitution of the Key Personnel, DISTRICT may terminate the Task Order,
19 pursuant to the applicable provisions of this Agreement.

20 4. TERM

21 The term of this Agreement shall become effective on the date the Agreement is
22 executed by DISTRICT'S Board of Supervisors, and shall remain in effect through the
23 required date for completion of an assigned Task Order, provided that such Task Order
24 was approved prior to June 30, 2018 and is to be completed by June 30, 2019.
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1 5. COMPENSATION

2 CONSULTANT shall receive compensation for all services satisfactorily performed and
3 expenses incurred under this Agreement in accordance with the terms of the approved
4 Task Order(s). The maximum amount of any Task Order approved pursuant to this
5 Agreement shall not exceed four hundred thousand dollars (\$400,000). The cumulative
6 total of all task orders shall not exceed \$1,200,000.00 over the entire term of this
7 Agreement.

8 6. PAYMENT

9 Payment shall be made in accordance with the Compensation/Fee Rate Schedule
10 attached to an approved Task Order. Unless otherwise agreed, progress payments shall
11 be processed a monthly basis. Upon satisfactory performance of CONSULTANT'S
12 services pursuant to an approved Task Order, DISTRICT shall pay CONSULTANT
13 within forty-five (45) days after DISTRICT'S approval of CONSULTANT'S invoice(s).
14 DISTRICT shall not pay interest or finance charges on any outstanding balance(s).

15 CONSULTANT shall keep employee and expense records according to customary
16 accounting methods and such records shall, upon request, be available for inspection by
17 DISTRICT to verify CONSULTANT'S invoices. CONSULTANT'S invoices shall
18 itemize charges to conform with the Compensation/Fee Rate Schedule negotiated for the
19 specific Task Order. DISTRICT shall notify CONSULTANT of any disputed charges
20 within thirty (30) days of receipt of CONSULTANT'S invoice. **The DISTRICT**
21 **reserves the right to withhold payment for work that is not invoiced in a timely**
22 **manner.**

23 7. INVOICES
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1 All work shall be invoiced in a timely manner. All invoices shall be mailed directly to
2 the DISTRICT'S Accounts Payable Section. Each invoice shall include the following
3 information:

4 a) Task Order Number – (as provided by DISTRICT).

5 b) Billing Period – (indicating the date(s) when the services were rendered).

6 Monthly invoices shall be mailed to the DISTRICT no later than the 15th day of the
7 month following the end of the Billing Period. Periodic single invoices shall be mailed
8 within 45 days of Task Order completion. Incomplete invoices will be returned to
9 CONSULTANT for correction.

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11 8. PROJECT PERFORMANCE

12 A. Commencement of Services

13 CONSULTANT shall commence performance of the services for each Task
14 Order upon receipt of DISTRICT'S approved Task Order.

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16 B. Time of Completion

17 Time is of the essence in the performance of this Agreement. CONSULTANT
18 shall complete services in accordance with the schedule(s) set forth in the
19 approved Task Order(s).

20 9. LICENSES – At all times while performing services under this Agreement,
21 CONSULTANT, its employees, agents, contractors and subcontractors shall possess all
22 necessary and appropriate federal and/or state permits and maintain professional licenses
23 required by the applicable Federal, State and local regulations.

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25 10. STANDARD OF CARE

26 While performing the services, CONSULTANT shall exercise the reasonable
27 professional care and skill customarily exercised by reputable members of
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1 CONSULTANT'S profession practicing in the State of California, and shall use
2 reasonable diligence and best judgment while exercising CONSULTANT'S professional
3 skill and expertise. By executing this Agreement, CONSULTANT represents and
4 maintains that CONSULTANT has the necessary experience and expertise to skillfully
5 perform all services, duties and obligations required by this Agreement and to fully and
6 adequately complete each approved Task Order.

7
8 If, pursuant to this Agreement, CONSULTANT is engaged as a "Professional Engineer"
9 pursuant to Section 6701 of the Professional Engineers Act (Chapter 7 of Division 3 of
10 the Business and Professions Code), then CONSULTANT assumes responsible charge
11 of the work pursuant to Section 6703 of the Professional Engineers Act; and shall be
12 wholly responsible for the completeness and accuracy of all data, technical studies,
13 reports, plans, specifications and estimates prepared pursuant to this Agreement, and
14 shall check all of its work product accordingly.

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16 11. ERRORS AND OMISSIONS

17 In the event CONSULTANT'S data, technical studies, reports, plans, specifications,
18 estimates or any work products contain any errors or omissions that cause DISTRICT to
19 incur additional expense beyond what would have otherwise resulted if there were no
20 errors or omissions in CONSULTANT'S data, technical studies, reports, plans,
21 specifications, estimates or any work products, such additional expense shall be borne
22 solely by CONSULTANT.

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24 12. PERMITS AND RIGHTS OF ENTRY

25 DISTRICT shall obtain all necessary rights of entry that may be required in order that
26 CONSULTANT may perform the services stipulated by an approved Task Order within
27 and upon privately-owned property. CONSULTANT shall obtain all necessary permits
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1 or rights of entry that may be required in order that may CONSULTANT perform the
 2 services stipulated by an approved Task Order from any and all affected public entities.
 3 Sufficient evidence of having obtained such permits and/or rights of entry shall be
 4 furnished to DISTRICT by CONSULTANT, prior to initiation of work.
 5 CONSULTANT shall prosecute the work in such a manner as to minimize public
 6 inconvenience and possible hazard, and shall restore the streets and other work areas to
 7 their original condition and former usefulness as soon as practicable. CONSULTANT
 8 shall be responsible for the protection of public and private property adjacent to the work
 9 and shall exercise due caution to avoid damage to such property.
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11 13. NOTICES

12 Any and all notices sent or required to be sent to the parties of this Agreement will be
 13 mailed by first class mail, postage prepaid, to the following addresses:

14 RIVERSIDE COUNTY FLOOD CONTROL	Watearth, Inc.
15 AND WATER CONSERVATION DISTRICT	685 South Lucas Avenue, Suite 904
16 1995 Market Street	Los Angeles, CA 90017
17 Riverside, CA 92501	Attn: Jennifer J. Walker
Attn: Finance Division	

18 14. REQUIRED INSURANCE

19 CONSULTANT shall not commence operations until DISTRICT has been furnished
 20 with original certificate(s) of insurance and original certified copies of endorsements and
 21 if requested, certified original policies of insurance including all endorsements and any
 22 and all other attachments as required in this Section.

23 Without limiting or diminishing CONSULTANT'S obligation to indemnify or hold
 24 DISTRICT harmless, CONSULTANT shall procure and maintain or cause to be
 25 maintained, at its sole cost and expense, the following insurance coverages during the
 26 term of this Agreement:
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1 A. Workers' Compensation

2 If CONSULTANT has employees as defined by the State of California,
3 CONSULTANT shall maintain statutory Workers' Compensation Insurance
4 (Coverage A) as prescribed by the laws of the State of California. Policy shall
5 include Employer's Liability (Coverage B) including Occupational Disease with
6 limits not less than \$1,000,000 per person per accident. Policy shall be endorsed
7 to waive subrogation in favor of DISTRICT and, if applicable, to provide a
8 Borrowed Servant/Alternate Employer endorsement.
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10 B. Commercial General Liability

11 Commercial General Liability insurance coverage, including but not limited to,
12 premises liability, unmodified contractual liability, products and completed
13 operations liability, personal and advertising injury, and cross liability coverage,
14 covering claims which may arise from or out of CONSULTANT'S performance
15 of its obligations hereunder. Policy shall name the Riverside County Flood
16 Control and Water Conservation District, the County of Riverside, its agencies,
17 districts, special districts, and departments, their respective directors, officers,
18 Board of Supervisors, employees, elected or appointed officials, employees,
19 agents or representatives as additional insureds. Policy's limit of liability shall
20 not be less than \$1,000,000 per occurrence combined single limit. If such
21 insurance contains a general aggregate limit, it shall apply separately to this
22 Agreement or be no less than two (2) times the occurrence limit.
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25 C. Vehicle Liability

26 If vehicles or mobile equipment are used in the performance of the obligations
27 under this Agreement, CONSULTANT shall maintain liability insurance for all
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1 owned, non-owned or hired vehicles so used in an amount not less than
2 \$1,000,000 per occurrence combined single limit. If such insurance contains a
3 general aggregate limit, it shall apply separately to this Agreement or be no less
4 than two (2) times the occurrence limit. Policy shall name the Riverside County
5 Flood Control and Water Conservation District, the County of Riverside, its
6 agencies, districts, special districts, and departments, their respective directors,
7 officers, Board of Supervisors, elected or appointed officials, employees, agents
8 or representatives as additional insureds.
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10 D. Professional Liability

11 CONSULTANT shall maintain Professional Liability Insurance providing
12 coverage for CONSULTANT'S performance of work included within this
13 Agreement, with a limit of liability of not less than \$1,000,000 per occurrence
14 and \$2,000,000 annual aggregate. If CONSULTANT'S Professional Liability
15 Insurance is written on a claims made basis rather than an occurrence basis, such
16 insurance shall continue through the term of this Agreement and CONSULTANT
17 shall purchase at his sole expense either: 1) an Extended Reporting Endorsement
18 (also known as Tail Coverage); or 2) Prior Dates Coverage from a new insurer
19 with a date retroactive to the date of, or prior to, the inception of this Agreement;
20 or 3) demonstrate through Certificates of Insurance that CONSULTANT has
21 maintained continuous coverage with the same or original insurer. Coverage
22 provided under items: 1), 2) or 3) will continue as long as the law allows.
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25 E. General Insurance Provisions – All Lines

26 a. Any insurance carrier providing insurance coverage hereunder shall be
27 admitted to the State of California and have an A.M. BEST rating of not
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1 less than an A: VIII (A: 8) unless such requirements are waived, in
2 writing, by the County Risk Manager. If the County's Risk Manager
3 waives a requirement for a particular insurer such waiver is only valid for
4 the specific insurer and only for one policy term.

5 b. CONSULTANT must declare its insurance self-insured retention for each
6 coverage required herein. If any such self-insured retention exceeds
7 \$500,000 per occurrence each such retention shall have the prior written
8 consent of the County Risk Manager before the commencement of
9 operations under this Agreement. Upon notification of self-insured
10 retention deemed unacceptable to DISTRICT, and at the election of the
11 County's Risk Manager, CONSULTANT'S carriers shall either: 1) reduce
12 or eliminate such self-insured retention with respect to this Agreement
13 with DISTRICT, or 2) procure a bond which guarantees payment of
14 losses and related investigations, claims administration, and defense costs
15 and expenses.
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18 c. CONSULTANT shall cause their insurance carrier(s) to furnish
19 DISTRICT with: 1) a properly executed original certificate(s) of
20 insurance and original certified copies of endorsements effecting
21 coverage as required herein; and 2) if requested to do so orally or in
22 writing by the County Risk Manager, provide original certified copies of
23 policies including all endorsements and all attachments thereto, showing
24 such insurance is in full force and effect. Further, said certificate(s) and
25 policies of insurance shall contain the covenant of the insurance carrier(s)
26 that thirty (30) days written notice shall be given to DISTRICT prior to
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1 any material modification, cancellation, expiration, or reduction in
2 coverage of such insurance. In the event of a material modification,
3 cancellation, expiration, or reduction in coverage, this Agreement shall
4 terminate forthwith, unless DISTRICT receives, prior to such effective
5 date, another properly executed original certificate of insurance and
6 original copies of endorsements or original certified policies, including all
7 endorsements and attachments thereto, evidencing coverages set forth
8 herein and the insurance required herein is in full force and effect.
9 Individual(s) authorized by the insurance carrier to do so on its behalf
10 shall sign the original endorsements for each policy and the certificate of
11 insurance.
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13 d. It is understood and agreed by the parties hereto that CONSULTANT'S
14 insurance shall be construed as primary insurance, and DISTRICT'S
15 insurance and/or deductibles and/or self-insured retentions or self-insured
16 programs shall not be construed as contributory.
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18 e. If, during the term of this Agreement or any extension thereof, there is a
19 material change in the scope of services; or there is a material change in
20 the equipment to be used in the performance of the scope of work which
21 will add additional exposures (such as the use of aircraft, watercraft,
22 cranes, etc.); or the term of this Agreement, including any extensions
23 thereof, exceeds five (5) years, DISTRICT reserves the right to adjust the
24 types of insurance required under this Agreement and the monetary limits
25 of liability for the insurance coverage currently required herein, if, in the
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1 County Risk Manager's reasonable judgment, the amount or type of
2 insurance carried by CONSULTANT has become inadequate.

3 f. CONSULTANT shall pass down the insurance obligations contained
4 herein to all tiers of subcontractors working under this Agreement.

5 g. The insurance requirements contained in this Agreement may be met with
6 a program(s) of self-insurance acceptable to DISTRICT.

7
8 h. CONSULTANT agrees to notify DISTRICT of any claim by a third party
9 or any incident or event that may give rise to a claim arising from the
10 performance of this Agreement.

11 15. INDEMNIFICATION

12 CONSULTANT shall indemnify and hold harmless DISTRICT (including its directors,
13 officers, Board of Supervisors, elected and appointed officials, employees, agents and
14 representatives) from any liability, claim, damage, proceeding or action, present or
15 future, based upon, arising out of or in any way relating to CONSULTANT'S (including
16 its officers, employees, subcontractors and agents) actual or alleged negligent, reckless
17 or willful misconduct, acts or omissions related to this Agreement, performance under
18 this Agreement, or failure to comply with the requirements of this Agreement, including
19 but not limited to: (a) property damage; (b) bodily injury or death; or (c) any other
20 element of any kind or nature whatsoever.

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22 CONSULTANT shall defend, at its sole expense, including all costs and fees (including
23 but not limited to attorney fees, cost of investigation, defense and settlements or awards),
24 DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed
25 officials, employees, agents and representatives) in any claim, proceeding or action for
26 which indemnification is required.
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1 With respect to any of CONSULTANT'S indemnification requirements,
2 CONSULTANT shall, at its sole cost, have the right to use counsel of their own choice
3 and shall have the right to adjust, settle, or compromise any such claim, proceeding or
4 action without the prior consent of DISTRICT; provided, however, that such adjustment,
5 settlement or compromise in no manner whatsoever limits or circumscribes
6 CONSULTANT'S indemnification obligations to DISTRICT.

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8 CONSULTANT'S indemnification obligations shall be satisfied when CONSULTANT
9 has provided to DISTRICT the appropriate form of dismissal (or similar document)
10 relieving DISTRICT from any liability for the claim, proceeding or action involved.

11 The specified insurance limits required in this Agreement shall in no way limit or
12 circumscribe CONSULTANT'S obligations to indemnify and hold harmless DISTRICT
13 from third party claims.

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15 In the event there is conflict between this section and California Civil Code Section
16 2782, this section shall be interpreted to comply with California Civil Code Section
17 2782. Such interpretation shall not relieve CONSULTANT from indemnifying
18 DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed
19 officials, employees, agents and representatives) or the County of Riverside to the fullest
20 extent allowed by law.

21 16. WORK PRODUCT

22 CONSULTANT shall provide DISTRICT with all data, calculations, technical studies,
23 plans, specifications, computer files, field notes, estimates, drawings, logs, maps,
24 exhibits, reports and any other documents as set forth in the approved Task Order(s). All
25 data, calculations, technical studies, plans, specifications, computer files, field notes,
26 drawings, logs, maps, exhibits, reports and any other documents produced by
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1 CONSULTANT in the performance of the services as set forth in the approved Task
2 Order(s) shall become and remain the sole property of DISTRICT. CONSULTANT
3 shall not publish or transfer any material produced or resulting from activities supported
4 by this Agreement without the written consent of the General Manager-Chief Engineer
5 of DISTRICT. If any such material is subject to copyright or trademark, the parties
6 agree that the right to any and all copyright and/or trademark in and to the material is
7 expressly reserved to DISTRICT. If any such material is copyrighted, the parties hereto
8 understand and agree that DISTRICT reserves a royalty-free, non-exclusive, and
9 irrevocable license to reproduce, publish, and use such material, in whole or in part, and
10 to authorize others to do so, provided written credit is given the author.

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12 17. TERMINATION

13 At any time during the term of this Agreement, DISTRICT may:

14 A. Agreement

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16 1) Terminate this Agreement without cause upon providing CONSULTANT
17 thirty (30) days written notice stating the extent and effective date of
18 termination; or
19 2) Upon five (5) days written notice, terminate this Agreement for
20 CONSULTANT default, if CONSULTANT refuses or fails to comply
21 with the provisions of this Agreement or fails to make progress so as to
22 endanger performance and does not cure such failure within a reasonable
23 period of time. In the event of such termination, DISTRICT may proceed
24 with the work in any such manner it deems appropriate.
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26 In the event DISTRICT issues a Notice of Termination, CONSULTANT shall: i)
27 stop all work under this Agreement on the date specified in the Notice of
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1 Termination; and ii) transfer to DISTRICT and deliver in the manner, and to the
2 extent, if any, as directed by DISTRICT, any work product, data or reports
3 prepared by CONSULTANT, whether partially or fully completed.

4 In the event DISTRICT terminates this Agreement, DISTRICT shall make
5 payment for all services performed in accordance with this Agreement to the date
6 of termination, a total amount which bears the same ratio to the total maximum
7 fee otherwise payable under this Agreement as the services actually bear to the
8 total services necessary for performance of this Agreement. Notwithstanding any
9 of the other provision of this Agreement, CONSULTANT rights under this
10 Agreement shall terminate (except for fees accrued prior to the date of
11 termination) upon dishonesty, or a willful or material breach of this Agreement
12 by CONSULTANT; or in the event of CONSULTANT'S unwillingness or
13 inability for any reason whatsoever to perform the duties hereunder; or if the
14 Agreement is terminated pursuant to Section 28 (NON-DISCRIMINATION). In
15 such event, CONSULTANT shall not be entitled to any further compensation
16 under this Agreement. The rights and remedies of DISTRICT provided in this
17 section shall not be exclusive and are in addition to any other rights and remedies
18 provided by law or under this Agreement.

19
20
21 B. Approved Task Order

22 Terminate an approved Task Order or portion thereof without cause upon
23 providing CONSULTANT fourteen (14) days written notice stating the extent
24 and effective date of termination. In the event DISTRICT issues a Notice of
25 Termination for an approved Task Order, CONSULTANT shall: i) stop all work
26 under the Task Order on the date specified in the Notice of Termination; and ii)
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1 transfer to DISTRICT and deliver in the manner, and to the extent, if any, as
2 directed by DISTRICT, any work product, data or reports prepared by
3 CONSULTANT, whether partially or fully completed.

4 In the event DISTRICT terminates an approved Task Order, DISTRICT shall
5 make payment for all services satisfactorily performed in accordance with the
6 negotiated Task Order to the date of termination, a total amount which bears the
7 same ratio to the total maximum fee otherwise payable under the Task Order as
8 the services actually bear to the total services necessary for performance of the
9 Task Order.
10

11 18. BASIC SERVICES OF CONSULTANT

12 The scope of services associated with the performance of any specific Task Order under
13 this Agreement shall be expressly defined and agreed upon prior to the approval of the
14 Task Order by DISTRICT'S General Manager-Chief Engineer. Any changes to the
15 approved scope of services must be authorized by DISTRICT'S General Manager-Chief
16 Engineer, and shall be made in accordance with Section 22 (CHANGES TO TASK
17 ORDER SCOPE OF SERVICES).
18

19 All work prepared by CONSULTANT shall be subject to the approval of DISTRICT'S
20 Project Manager. CONSULTANT shall allow Project Manager to inspect and review
21 CONSULTANT'S work in progress at any reasonable time. All reports, working papers,
22 and similar work products prepared for submission in the course of providing services
23 under this Agreement shall be submitted to the Project Manager in draft form. In the
24 event that Project Manager, in his or her sole discretion, determines the formally
25 submitted work product to be incomplete or otherwise inadequate, CONSULTANT may
26 be required to revise and resubmit the work at no additional cost to DISTRICT. Should
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1 CONSULTANT fail to make requested corrections in a timely manner, such corrections
2 may be made by DISTRICT, and the cost thereof charged to CONSULTANT. Neither
3 DISTRICT'S review nor approval shall give rise to any liability or responsibility on the
4 part of DISTRICT, or waive any of DISTRICT'S rights, or relieve CONSULTANT of its
5 professional responsibilities or obligations under this Agreement.

6 19. PREVAILING WAGE

7 All workers shall be paid not less than the general prevailing rate of wages and benefits
8 for work of a similar character in the locality in which the work is performed, as
9 provided in Labor Code Sections 1770 et seq. Pursuant to the Labor Code, DISTRICT
10 has obtained for the Board of Supervisors of DISTRICT from the Director of the
11 Department of Industrial Relations, State of California, his determinations of general
12 prevailing rates of per diem wages applicable to the work, and for holiday and overtime
13 work, including employer payments for health and welfare, pension, vacation,
14 apprentices and similar purposes for each craft, classification or type of workman
15 needed, as set forth on the schedule which is on file at DISTRICT office, and which will
16 be made available to any interested person upon request.
17

18
19 20. INDEPENDENT CONTRACTOR

20 CONSULTANT and the agents and employees of CONSULTANT, shall act at all times
21 in an independent capacity during the term of this Agreement and in the performance of
22 the services to be rendered hereunder and shall not act as or shall not be and shall not in
23 any manner be considered to be employees or agents of DISTRICT.
24

25 21. SUBCONTRACTING

26 CONSULTANT may, at CONSULTANT'S own expense, retain or employ sub-
27 consultants to accomplish certain portions of the work covered by this Agreement.
28

1 However, except as specifically provided in the Compensation/Fee Rate Schedule
2 attached to the approved Task Order or as expressly identified in this Agreement, no
3 portion of the services pertinent to this Agreement shall be subcontracted without prior
4 written approval and authorization by DISTRICT.

5 Should one or more of the sub-consultants, as identified in the Compensation/Fee Rate
6 Schedule attached to the approved Task Order or as expressly identified in this
7 Agreement, become unavailable, CONSULTANT may substitute other sub-consultants
8 of equal or greater competence upon written approval by DISTRICT. In the event that
9 DISTRICT and CONSULTANT cannot agree as to the substitution of the sub-
10 consultant, DISTRICT may terminate the Task Order, pursuant to the applicable
11 provisions of this Agreement.
12

13 In the event CONSULTANT subcontracts any portion of CONSULTANT'S duties under
14 this Agreement, CONSULTANT shall require its Sub-consultants to comply with the
15 terms of this Agreement in the same manner as required of CONSULTANT. The fact
16 that CONSULTANT employs Sub-consultants not in his regular employ shall not relieve
17 CONSULTANT of any responsibility regarding the adequacy of the Sub-consultant's
18 work performed or services provided pursuant to this Agreement.
19

20 22. CHANGES TO TASK ORDER SCOPE OF SERVICES

21 CONSULTANT shall not perform any additional work or services outside the scope of
22 an approved Task Order without the prior written approval of DISTRICT'S General
23 Manager-Chief Engineer. If at any time during the performance of an approved Task
24 Order, CONSULTANT believes that it is necessary to include certain work or services
25 which are not clearly covered under the scope of an approved Task Order,
26 CONSULTANT shall immediately notify the Project Manager in writing of
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1 CONSULTANT'S assertion that the work is out of scope. Said notification by
2 CONSULTANT to the Project Manager shall not in any way be construed as proving
3 that the work or services in question are outside the scope of the Task Order. The Project
4 Manager must approve or reject CONSULTANT'S assertion in writing. In the event the
5 Project Manager determines that CONSULTANT is correct, the additional work or
6 services shall be authorized by a new or revised Task Order that covers the new scope,
7 cost and schedule. In the event that such notification is not given or if the Project
8 Manager is not afforded an opportunity to negotiate the appropriate fee for such
9 additional services prior to CONSULTANT'S commencement of such additional
10 services, then CONSULTANT shall be deemed to have agreed to perform the work or
11 services without any additional compensation and to have accepted sole responsibility
12 for the performance of said work or services. Extra work done or services performed
13 without a new or revised Task Order from DISTRICT'S General Manager-Chief
14 Engineer shall be considered unauthorized and shall not be paid for by DISTRICT.

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17 At any time during the performance of an approved Task Order, DISTRICT may request
18 that CONSULTANT perform extra services. Any work which is determined by
19 DISTRICT to be necessary for the proper completion of the approved Task Order, but
20 which neither CONSULTANT nor DISTRICT reasonably anticipated would be
21 necessary at the time the scope of services for the assigned Task Order was approved,
22 must be authorized by DISTRICT'S General Manager-Chief Engineer by a new or
23 revised Task Order.
24

25 At any time during the performance of the Task Order, the Project Manager, upon
26 providing five (5) days written notice to CONSULTANT, may delete services and the
27 associated fees from the Task Order. In the event DISTRICT requests deletion of
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1 services from the Task Order, DISTRICT shall make payment for all services
2 satisfactorily performed in accordance with the negotiated Task Order up to the effective
3 date of deletion; the amount of the payment shall be prorated to the total services
4 necessary for completion of the Task Order. Any work product developed for the deleted
5 services shall be provided to DISTRICT.

6 23. DISPUTES

7
8 A. In the event CONSULTANT considers any work demanded of CONSULTANT
9 to be outside the requirements of this Agreement, or if CONSULTANT considers
10 any order, instruction or decision of DISTRICT to be unfair, CONSULTANT
11 shall promptly, upon receipt of such order, instruction or decision, ask for a
12 written confirmation of the same whereupon CONSULTANT shall proceed
13 without delay to perform the work or to conform to the order, instruction, or
14 decision. However, if CONSULTANT finds such order, instruction or decision
15 unsatisfactory, CONSULTANT shall, within twenty-one (21) calendar days after
16 receipt of same, file a written protest with DISTRICT stating clearly and in detail
17 its objections and reasons therefor. Except for such protests or objections as are
18 made of record in the manner specified and within the time stated herein, and
19 except for such instances where the basis of a protest could not reasonably have
20 been foreseen by CONSULTANT within the time limit specified for protest,
21 CONSULTANT hereby waives all grounds for protests or objections to orders,
22 instruction, or decisions of DISTRICT and hereby agrees that, as to all matters
23 not included in such protests, the orders, instructions and decisions of DISTRICT
24 will be limited to matters properly falling within DISTRICT'S authority.
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1 B. Any controversy or claim arising out of or relating to this Agreement which
2 cannot be resolved by mutual agreement may be settled by arbitration, provided
3 that the parties hereto mutually agree to submit to arbitration.

4 C. Neither the pendency of a dispute nor its consideration by arbitration shall excuse
5 CONSULTANT from full and timely performance in accordance with the terms
6 of this Agreement.
7

8 24. ASSIGNMENT

9 Neither this Agreement nor any part thereof shall be assigned by CONSULTANT
10 without the prior written consent of DISTRICT.

11 25. CONFLICT OF INTEREST

12 CONSULTANT covenants that it presently has no interest, including but not limited to,
13 other projects or independent contracts, and shall not acquire any such interest, direct or
14 indirect, which would conflict in any manner or degree with the performance of services
15 required to be performed under this Agreement. CONSULTANT further covenants that
16 in the performance of this Agreement, no person having any such interest shall be
17 employed or retained by it under this Agreement.
18

19 26. JURISDICTION/LAW/SEVERABILITY

20 This Agreement is to be construed in accordance with the laws of the State of California.
21 If any provision of this Agreement is held by a court of competent jurisdiction to be
22 invalid, void or unenforceable, the remaining provisions shall be declared severable and
23 shall be given full force and effect to the extent possible.
24

25 Any legal action, in law or equity related to the performance or interpretation of this
26 Agreement shall be filed only in the Superior Court for the State of California located in
27 Riverside, California, and the parties waive any provision of law providing for a change
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1 of venue to another location. Prior to the filing of any legal action, the parties shall be
2 obligated to attend a mediation session with a neutral mediator to try to resolve the
3 dispute.

4 27. WAIVER

5 Any waiver by DISTRICT of any breach of any one or more of the terms of this
6 Agreement shall not be construed to be a waiver of any subsequent or other breach of the
7 same or any other term thereof. Failure on the part of DISTRICT to require exact, full
8 and complete compliance with any terms of this Agreement shall not be construed as in
9 any manner changing the terms hereof, or estopping DISTRICT from enforcement
10 hereof.
11

12 28. NON-DISCRIMINATION

13 In the performance of the terms of this Agreement, CONSULTANT shall not engage in
14 nor permit others he may employ to engage in discrimination in the employment of
15 persons because of the race, color, national origin or ancestry, religion, physical
16 handicap, disability as defined by the Americans with Disabilities Act (ADA), medical
17 condition, marital status or sex of such persons, in accordance with the provision of
18 California Labor Code Section 1735.
19

20 29. NON-APPROPRIATION OF FUNDS

21 It is mutually agreed and understood that the obligation(s) of DISTRICT are limited by
22 and contingent upon the availability of DISTRICT funds for the reimbursement of
23 CONSULTANT'S fees. In the event that such funds are not forthcoming for any reason,
24 DISTRICT shall immediately notify CONSULTANT in writing. This Agreement shall
25 be deemed terminated and have no further force and effect immediately upon receipt of
26 DISTRICT'S notification by CONSULTANT. In the event of such termination,
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1 CONSULTANT shall be entitled to reimbursement of its costs in accordance with
2 Section 5 (COMPENSATION) and Section 6 (PAYMENT).

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement on

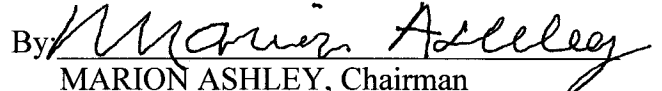
SEP 01 2015

(to be filled in by Clerk of the Board)

RECOMMENDED FOR APPROVAL:

**RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**

By: 
WARREN D. WILLIAMS
General Manager-Chief Engineer

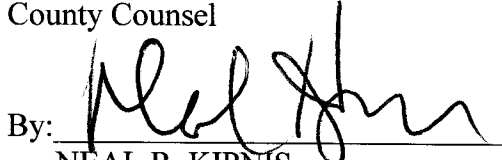
By: 
MARION ASHLEY, Chairman
Riverside County Flood Control and Water
Conservation District Board of Supervisors

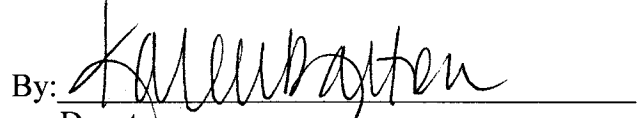
APPROVED AS TO FORM:

ATTEST:

GREGORY P. PRIAMOS
County Counsel

KECIA HARPER-IHEM
Clerk of the Board

By: 
NEAL R. KIPNIS
Deputy County Counsel

By: 
Deputy

(SEAL)

On-Call Consulting Services Agreement
Watearth, Inc. (FY 2015-16 to FY 2017-18)
06/11/15
MHW:blm

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Watearth, Inc.

Jennifer J. Walker
Signature of Responsible Officer

Jennifer J. Walker
Printed Name

President
Title

On-Call Consulting Services Agreement
Watearth, Inc. (FY 2015-16 to FY 2017-18)
06/11/15
MHW:blm

Attachment A - Service Categories & Tasks

Watearth, Inc.

has been selected for the service categories and tasks identified below

Service Category	Task	Task Name	Selected?
A - Hydrology and Hydraulics	1	Hydrology and Planning Studies	
	2	Hydraulic Modeling	
	3	2-Dimensional Floodplain Mapping	
	4	Design of Flood Control Facilities (Full PS&E)	
	5	Stream Geomorphology/Scour Assessment and Restoration	
	6	FEMA CLOMR/LOMR Preparation	
	7	Dam Inundation Study and Mapping	
	8	Levee Certification	
B - Structural	1	Custom Structure Design (Reinforced Concrete)	
	2	Evaluating Structural Integrity of Exist. FC Structures	
C - Construction	1	Full Service Construction Management	
	2	Inspection	
	3	Materials Testing and Analysis	
D - Geotech	1	Subsurface Soils Investigation and Engineering Analysis	
	2	Dam/Levee Design and Rehabilitation	
	3	Potholing and Utility Location	
E - Environmental	1	CEQA, NEPA compliance, Incl doc prep, etc.	
	2	Cultural resources investigations, surveys, and monitoring	
	3	Paleontological resources investigations, surveys, and monitoring	
	4	General biological resources assessment, MSHCP Consistency, HANS, JPR, and DBESP	
	5	Focused surveys	
	6	Pre-construction bird and other species surveys	
	7	Jurisdictional delineations, permit prep and negotiation, HMMP Report prep	
	8	Habitat restoration and enhancement, HMMP impl., and plant pallet/seed mix	
	9	Phase 1 and Phase 2 ESA, and/or hazardous material presence/absence reports	
	10	Air quality and GHG analysis and mitigation pursuant to the AQMD standards and CEQA	
	11	Noise and vibration studies and mitigation prepared pursuant to CEQA	
F - Watershed	1	NPDES and MS4 Program Administration and Support	Y
	2	TMDL/Basin Planning Support	
	3	Water Quality Monitoring and Assessment	
	4	Laboratory Analysis	
	5	Public Education/Outreach Program Support	Y
	6	Water Conservation	
G - Plan Check	1	Full Service Plan Checking	

Capacity for on-call services= \$1,200,000

Attachment B

Scope of Services

Service Categories

- A. Hydrology and Hydraulics
- B. Structural Design
- C. Construction Oversight and Management
- D. Geotechnical and Potholing
- E. Environmental and Regulatory Compliance
- F. Watershed Protection Programs
- G. Development Plan Check

Service Category A. HYDROLOGY AND HYDRAULICS

Task A.1 Hydrology and Planning Studies

Work performed under this section involves the identification and development of preliminary engineering designs to assist the District with the development of recommended drainage facility alternatives or to analyze existing conditions.

- Development of hydrology using District approved methods
- Evaluation of detention storage options / locations
- Development of alternative facility types and alignments
- Perform hydrologic routing and hydraulic calculations as needed
- Develop planning level cost estimates using District approved unit cost analysis
- Comparison and evaluation of alternatives
- Preparation of report summarizing the study

Task A.2 Hydraulic Modeling

Firms responding to this task must demonstrate knowledge and experience developing and performing computerized hydraulic models for the design or analysis of flood control facilities and structures. Required modeling may include, but is not limited to: improved or natural open channels, levees, drop structures, closed conduit systems, inlets, hydraulic junctions, street flow capacity, culvert design and bridge/pier analysis. All work shall be performed in accordance with District standards and any special criteria established by the District.

Consultants shall identify in their Service Category Qualifications what hydraulic modeling software packages their firm has expertise in. Of additional interest is firms with experience and expertise developing and running scale physical hydraulic models of complicated hydraulic structures that may be considered for construction.

Prospective firms shall indicate the qualifications, experience, licenses, certificates and academic degrees that their employees, who will be performing these services, possess. All hydraulic modeling and reports must be stamped and signed by a Civil Engineer licensed in the State of California.

Task A.3 Two-Dimensional Floodplain Modeling

Firms shall have experience and technical capability of developing two-dimensional hydraulic models using Flo-2DPRO, or other District accepted programs. Firms shall be familiar with rainfall and hydrograph model inputs and incorporating the District' Hydrology Manual. Firms shall use topographic mapping provided by the District or if not available, supplement with USGS or best available topography. Firms shall be able to estimate model inputs including channel cross sections, computational grid and roughness values from topographic data, aerial photographs and field reconnaissance. Firms must prepare reports documenting the approach of the 2D analysis and the

resulting discharges, depths and velocities at identified points of interest, and prepare associated work maps and final exhibits.

Task A.4 Design of Flood Control Facilities (Full PS&E)

Firms responding to this task must demonstrate qualifications and experience preparing plans, detailed specifications and cost estimates for the construction or repair of flood control facilities. Consultants shall be multi-disciplined, licensed in California and capable of providing civil, structural and engineering services for stormwater facilities such as, but not limited to open channels, underground storm drains, (debris) basins, culverts, levees, etc. Projects may also require design or repair for a variety of elements related to stormwater facility projects such as roads, pavement, traffic signals, detours and traffic control, right-of-way engineering, maintenance and repair plans, water quality BMPs, environmental compliance, and topographic mapping.

All designs must incorporate a third-party constructability review, be incorporated into plan, profile and detail sheets meeting the District's drafting requirements, and be stamped and signed by a Civil Engineer licensed in California.

Task A.5 Stream Geomorphology/Scour Assessment and Restoration

Firms responding to this task must demonstrate that it has staff with expertise and applicable* experience to provide all of the following types of services, including any field investigations, hydrologic and/or hydraulic modeling necessary:

- Investigate and assess current conditions of stream systems to identify potential causes for geomorphic instability.
- Estimate the type and direction of future stream geomorphology based on existing conditions and anticipated future development.
- Estimate long term sediment transport.
- Provide a formal report containing detailed, project specific, tailored recommendations for construction of localized scour protections, or for creek restoration projects that would establish geomorphic stability without compromising flood conveyance or maintainability. The expectation is that this report would provide all necessary information to facilitate development of plans for construction.

**Applicable experience must be for ephemeral stream systems in semi-arid/arid environments comparable to Riverside County.*

Task A.6 FEMA CLOMR/ LOMR Preparation

Firms shall prepare hydrologic models and hydraulic models including a duplicate effective, corrected effective, existing and proposed conditions model, as needed. Firms shall prepare the water surface elevation profiles, floodplain workmaps and annotated FIRMs. Firms shall prepare MT-2 forms to include in a package to FEMA detailing the changes initiating the revised floodplain mapping. Prepare

Map Revision application package to include hydrologic and hydraulic models, completed FEMA certification forms, floodplain workmaps, revised flood profile, and annotated FIRM panels showing the revised floodplain. Firms shall coordinate with the District and FEMA to revise the CLOMR/LOMR based on review comments.

Task A.7 Dam Inundation Study and Mapping

Firms shall be disciplined and capable of providing engineering services to develop a dam inundation study. These services include a hydrologic analysis, dam break analysis, hydraulic modeling, and appropriate dam inundation mapping limits based on multiple dam failure scenarios. Hydrologic modeling will be performed in accordance with the District's Hydrology Manual (dated April 1978) and HMR 58/59 to generate the Probable Maximum Flood (PMF). Dam breach analyses may utilize both actual dam characteristics and empirical equations for both fair weather and hydrologic scenarios. Using topographic mapping, develop hydraulic models that will dynamically route the spillway and dam-breach hydrographs to the appropriate outfalls. Tasks would include preparation of a report including the technical studies and inundation maps in accordance with Cal-EMA regulations and guidelines.

Task A.8 Levee Certification

Firms shall review previous geotechnical reports and/or complete additional geotechnical analysis to determine whether the levee meets the FEMA criteria for slope stability, foundation stability and settlement. Firms shall prepare hydrologic and hydraulic modeling to determine whether the levee meets the FEMA criteria for freeboard. Toe scour shall be calculated to determine bank protection and foundation stability. Interior drainage analysis will involve determining whether high flow in the channel will flood interior areas due to backwater. Prepare updated floodplain maps, as necessary, including "without levee" floodplains. Prepare Letter of Map Revision application package to include hydrologic and hydraulic models, completed FEMA certification forms, floodplain workmaps, revised flood profile, and annotated FRIM panels showing the revised floodplain. Firms shall coordinate with the District and FEMA to revise the LOMR based on review comments.

Service Category B. STRUCTURAL DESIGN

Task B.1 Custom Structural Design (Reinforced Concrete)

Firms responding to this task must demonstrate experience, knowledge and familiarity with performing reinforced concrete structural design for new, or rehabilitation of existing flood control facilities.

Typical reinforced concrete flood control facilities include, but are not limited to: box culverts, pipes, rectangular channels, trapezoidal channels, bridges, drop structures, pier noses, cutoff walls, retaining walls, parapet walls and junctions. Firm should also be capable of designing modifications to standard structures as needed to accommodate penetrations, non-standard junctions, utility protection measures etc. All work shall be performed in accordance with current applicable codes, District standards and any special criteria established by the District.

All structural designs, dimensions and reinforcing steel schedules will be required to be detailed on project plans and stamped by a Civil Engineer registered in the State of California.

Task B.2 Evaluating Structural Integrity of Existing Flood Control Structures

Firms responding to this task must demonstrate experience, knowledge and familiarity with performing structural analysis, non-intrusive field inspections such as high definition video inspections, or intrusive means such as core drilling to assess the structural integrity of existing structures. Assessment of such structures may be due to the aging of such facility or due to proposed temporary or permanent loads that maybe beyond the as-built condition.

All work shall be performed in accordance with current applicable State and Federal codes

All structural analysis, inspection reports and repair recommendations will be summarized in a report stamped by a Civil Engineer registered in the State of California.

Service Category C. CONSTRUCTION OVERSIGHT AND MANAGEMENT

Task C.1 Full Service Construction Management

Firms responding to this task must have an established team of local staff that is qualified and experienced in providing full service Construction Management for flood control or similar linear underground projects. Relevant past experience should include construction management for linear projects within the 'built' environment, such as within existing paved public roads, and experience with applicable codes and standards used in the construction of flood control facilities.

Firms providing Full Service Construction Management would, acting as an agent of the District, provide all necessary oversight to verify and enforce compliance with the plans and specifications, over the three phases of a construction project: Preconstruction, Construction, and Closeout.

Firms must present an established and appropriately qualified local team that covers the following roles:

- 1) *Construction Manager*: This person would be responsible for coordinating all consultant operations in providing full-service construction management, and would be the primary point of coordination with the District and the Contractor. The personnel in this role should have a minimum 5 years' experience as a lead in providing construction management over relevant construction projects. Must be a PE-Civil in California and should have knowledge of hydraulics and reinforced concrete structures.
- 2) *Field Inspector*: See C.2 below for requirements.
- 3) *Materials Testing and Analysis*: See C.3 below for requirements.

Task C.2 Inspection

Firms responding to this task must identify local staff that have the experience and qualifications to provide full or part time inspection on flood control projects, including all documentation necessary to track progress, estimate quantities, verify payment requests, etc. Emphasis should be placed on experience inspecting construction projects within a 'built' environment, such as within existing paved public roads, and experience with applicable standards and conventions used in the construction of flood control facilities.

The inspector(s) shall have a minimum of five (5) years of experience inspecting relevant construction projects and shall be a trained competent person as defined by 29 CFR 1926.650. Inspection staff that are certified as a Qualified SWPPP Practitioner (QSP) are also desired to ensure that the District (as project owner and LRP) stays in compliance with the Construction General Permit.

Task C.3 Materials Testing and Analysis

Firms responding to this task must identify the staff available to perform material (such as earthwork and concrete construction) testing and reporting, and the equipment and/or laboratories that will be utilized. Testing may consist of, but not limited to the following:

- Soil Sieve and Proctor Testing
- Soil Consolidation Testing
- Field Density Testing
- Concrete Cylinder Fabrication and Testing
- Asphalt Concrete Testing
- Precast Concrete materials and fabrication audits.

Staff identified for providing Materials Testing and Analysis must have a minimum of two (2) years of relevant experience specifically including experience in the use of a Nuclear Moisture/Density Gauge, and must have and maintain all required industry or equipment certifications. Possession of appropriate American Concrete Institute (ACI) Certifications is preferred.

Service Category D. GEOTECHNICAL AND POTHOLING

Task D.1 Subsurface Soils Investigation and Engineering Analysis

Firms responding to this task must demonstrate relevant experience and appropriate licensure/certifications for providing the following types of Geotechnical Engineering Services, **including performance of any necessary field investigations and lab testing that may be required** to support design of flood control facilities.

Field Investigations and Engineering Recommendations for

- Grading and Site Clearing that may be necessary for the construction of the project
- Potential groundwater impacts for the project
- Allowable bearing capacity, and foundation preparation/ground improvement
- Flexible and Rigid Pavement Design
- Moisture Content necessary to use excavated soils in Compacted Fill
- Soil Classification and Physical Properties
- Lateral earth pressure for design or analysis of earth retaining structures
- Slope Stability and Protection
- Seismic Stability
- Seepage Analysis
- Open and Braced Excavation (Shallow/Deep)
- Infiltration feasibility

Task D.2 Dam/Levee Design and Rehabilitation

The District is seeking firms with experience and qualifications in designing new Dams/Levees, as well as rehabilitating existing Dams/Levees.

Firms responding to this task must demonstrate relevant experience and appropriate licensure for the types of work described below:

Most dams will be under the jurisdiction of California Department of Water Resources, Division of Safety of Dams (DSOD), thus, experience working with DSOD is desired. The consultant will be expected to lead a multidisciplinary team to perform work such as feasibility studies, site reconnaissance and geotechnical/geologic investigations, seismic and stability analysis, embankment material sourcing and selection, seepage analyses and mitigation, filter design, spillway and outlet works design, and analysis and mitigation of potential failure modes. The consultant may also be tasked to review, study and analyze existing dams and provide recommendations and construction plans for rehabilitation measures.

With regards to levees, the consultant must have demonstrated experience in the design of earthen levees, slope protection, scour/toe protection, foundation requirements, embankment material, seepage analysis, slope stability, settlement analyses, levee transitions, etc., and design such structures to meet Federal Emergency Management Agency (FEMA) criteria. The consultant may also be tasked to investigate existing levees and prepare a report of the findings with recommendations for rehabilitation.

Task D.3 Potholing and Utility Location

Firms responding to this task shall demonstrate relevant experience, licensure and certifications for providing Underground Utility Potholing Services for District Capital Improvement Projects, including all of the following:

- Coordination with each of the utility companies, such as for verifying utility type and material, ensuring protection of the utility during potholing, etc.
- Secure any required encroachment permits, including design and implementation of any necessary temporary traffic controls as may be required by the local agency.
- Performance of air vacuum excavation "Air Knife" pothole technology or other appropriate investigative methods.
- Detailed reports including ALL of the following:
 - Size and dimensions of utility and/or encasement
 - Type and material of utility
 - Depth to top and bottom of utility
 - Digital photographs of utility
 - Thickness and type of all paving materials
 - Additional conflicts/observations such as previously unidentified utilities, unusual subsurface conditions, utility encasements, etc.
- Restoration of the property, pavement, landscaping etc., following potholing.

Service Category E. ENVIRONMENTAL AND REGULATORY COMPLIANCE

Task E.1 CEQA and/or NEPA cCompliance and Constraints Analysis, including Document Preparation, Noticing, Distribution and Public Meetings

Prepare and distribute CEQA documents such as an Initial Study, Mitigated Negative Declaration, and/or Environmental Impact Report (EIR). On occasion, separate or joint CEQA and NEPA documents may be required.

Provide measures and/or recommendations to mitigate potentially significant impacts; and prepare Mitigation Monitoring and Reporting Program (MMRP), when necessary.

Attend public scoping meetings and/or public hearings to support the District, and prepare and distribute applicable public notices (e.g., Notice of Intent, Notice of Preparation, Notice of Determination, etc.).

Prepare a Preliminary Environmental Assessment Report (PEAR), which is an environmental constraints analysis that generally includes all CEQA topics, MSHCP compliance and any potential regulatory permitting issues (401/404/1602). The PEAR assists the District to identify design constraints early in the planning process. *Note that although similar in intent, this is not the same as a Caltrans PEAR.*

Task E.2 Cultural Resources Investigations, Surveys and Monitoring, including Short Notice Discovery Response and Assessment

Prepare a Cultural Resources Report that addresses all potential issues related to archaeological, traditional, and built environment resources in accordance with applicable Federal, State, and local laws and regulations regarding cultural resources pursuant to CEQA/NEPA and/or regulatory permitting processes including, but not limited to Section 106 of the National Historic Preservation Act.

Typical services include record search, map and literature search; Sacred Lands records check with the Native American Heritage Commission (NAHC); scoping with tribes; pedestrian surveys, identification of the Area of Potential Effect (APE); cultural resource recordation and evaluation; mitigation plans; Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER), when necessary.

Conduct cultural resources monitoring for District construction and/or maintenance activities.

Consultants should be available on short notice (24 to 72 hours) to assess and respond to any accidental cultural resources discoveries during ongoing construction, operations and maintenance work. This includes evaluating any discoveries in compliance with applicable laws and regulations.

Task E.3 Paleontological Resources Investigations, Surveys and Monitoring, including Short Notice Discovery Response and Assessment

Prepare a Paleontological Resources assessment including paleontological resource records searches, literature searches, and pedestrian surveys in order to identify potential issues related to paleontological resources in accordance with applicable Federal, State, and local laws and regulations, CEQA/NEPA environmental review and/or regulatory permitting processes.

Conduct paleontological resources monitoring for District construction and/or maintenance activities. For properties found to have high sensitivity for paleontological resources, provide paleontological resource mitigation plans, construction monitoring, recovery of resources, preparation and identification of specimens, and reporting that meets County of Riverside review standards.

Consultants should be available on short notice (24 to 72 hours) to assess and respond to any accidental paleontological resource discoveries during ongoing construction, operations and maintenance work. This includes evaluating any discoveries in compliance with applicable laws and regulations.

Task E.4 General Biological Resources Assessment, MSHCP Consistency Assessment, HANS, JPR, and DBESP

Prepare a Biological Resources Assessment that addresses any potential biological issues and concerns for the project area including, but not limited to:

- Literature review and reconnaissance surveys to prepare habitat assessments for sensitive or listed plant and wildlife species;
- Biological resources impact analysis in accordance with CEQA; in terms of regional planning, and city, state, and federal laws and guidelines to comply with all existing biological resource laws, regulations, and court precedent;
- Propose recommendations for avoidance and/or measures to minimize impacts;
- Applicable Habitat Conservation Plans consistency assessment, such as the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Coachella Valley MSHCP and Tribal Habitat Conservation Plan; and
- Prepare Joint Project Review (JPR), Determination of Biological Equivalent or Superior Preservation (DBESP), and Habitat Assessment & Negotiation Strategy (HANS), if necessary.

Task E.5 Focused Surveys

Perform focused surveys for sensitive or listed plant and wildlife species to comply with CEQA, MSHCP, FESA and CESA. Staff must be familiar with accepted protocols for listed and/or sensitive species.

COMMON RIVERSIDE COUNTY LISTED SPECIES

Species	
arroyo toad	least Bell's vireo
Bonytail chub	mountain yellow-legged frog
California least tern	mountain plover
California red-legged frog	peninsular bighorn sheep
Casey's June beetle	quino checkerspot butterfly
Coachella Valley fringe-toed lizard	razorback sucker
coastal California gnatcatcher	San Bernardino kangaroo rat
Colorado pikeminnow	Santa Ana sucker
Delhi Sands flower-loving fly	Riverside fairy shrimp
desert pupfish	southwestern willow flycatcher
Desert slender salamander	Stephens' kangaroo rat
desert tortoise	vernal pool fairy shrimp
flat-tailed horned lizard	Yuma clapper rail

Task E.6 Pre-construction Nesting Bird, Burrowing Owl and Other Species Surveys, and Short Notice Biological Resources Discovery Response and Assessment

Perform pre-construction surveys for nesting birds, burrowing owls and other species to comply with CEQA, MSHCPs, FESA, CESA, Migratory Bird Act and regulatory permits. Consultants should be available by short notice (24 to 72 hours) to respond and assess species sited near the District's construction, operations and/or maintenance work and recommend avoidance measures.

Task E.7 Jurisdictional Delineations, including Permit Preparation and Negotiation with Resource Agencies, and HMMP Report Preparation

Prepare a Jurisdictional Area Delineation Report and Impact Analysis, including significant nexus evaluation, that addresses all potential issues related to "Waters of the U.S." and wetlands (Clean Water Act), "Waters of the State" and wetlands (Porter-Cologne Water Quality Control Act), and areas under the jurisdiction of the California Department of Fish and Game Code (Section 1600 et seq.).

Prepare 401/404/1602 permit applications and provide support to District during discussions and negotiations with regulatory agencies during the permitting process.

Prepare a native Habitat Mitigation and Monitoring Plan (HMMP) in compliance with project permits.

Task E.8 Habitat Restoration and Enhancement, HMMP Implementation, and Plant Pallet/Seed Mix for District Mitigation Projects and/or Facilities

Perform field work such as invasive plant removal, trash removal, plantings including hydroseed and container plants, irrigation placement and maintenance, monitoring and reporting to meet the requirements of an approved HMMP. Additionally, consultants should be able to provide plant pallet/seed mix for District projects and facilities.

Task E.9 Phase I and Phase 2 ESA, and/or Hazardous Material Presence/Absence Reports, Monitoring and Short Notice Discovery Response and Assessment

Provide Hazardous Materials report to evaluate potential impacts related to environmental hazards and hazardous materials and determine the presence/absence of any hazardous materials in accordance with California Government Code Section 65962.5. Consultant should assess potential for discovering hazardous materials during construction, operation and maintenance of District facilities, and should make recommendations on how to handle any potential hazardous waste.

Perform hazardous material monitoring during construction and maintenance of District facilities.

Consultant should be available by short notice (24 to 72 hours) to assess and respond to any accidental hazardous material discoveries during the District's ongoing construction, operations and maintenance work. This would include monitoring and evaluating any hazardous materials discoveries in compliance with all applicable laws and regulations.

Task E.10 Air Quality and Greenhouse Gas Analysis with Project and Programmatic-level Technical Expertise, and Mitigation pursuant to the AQMD Standards and CEQA

Provide air quality and greenhouse gas (GHG) impact analyses for District construction and maintenance activities, and programmatic analysis for Master Drainage Plans. The air quality and GHG analysis should be prepared in accordance with the South Coast Air Quality Management District (SCAQMD) requirements and will support the District's CEQA analysis.

Task E.11 Noise and vibration studies and mitigation prepared pursuant to CEQA

Provide noise and vibration analysis for potential construction and maintenance impacts on nearby sensitive receptors to support the District's CEQA analysis.

Service Category F. WATERSHED PROTECTION PROGRAMS

Task F.1 NPDES Program Administration and Support

Firms proposing to provide support to the District in the development of NPDES compliance programs must demonstrate qualifications and experience in one or more of the following tasks:

General NPDES Program Support

May include efforts such as, but not limited to: researching and providing expert guidance and recommendations regarding regulatory issues at the federal, state, and local level on Regional and General NPDES Permits and related policies, law and regulations; developing letters (or other professional correspondence) and/or providing expert testimony on the District's behalf; representing the District and/or Permittees at stakeholder/technical groups or meetings; developing Permit compliance documents; annual reporting; and developing associated tools to facilitate compliance strategies.

NPDES MS4 Permit Support

May include efforts such as, but not limited to: researching regulations, other compliance programs, and permits in support of permit renewal process and/or compliance program development; developing cost-effective strategies for addressing Permittee issues and/or permit compliance requirements; developing Reports of Waste Discharge and/or comments and alternative language to draft/redline permits; and providing expert testimony and draft comment letters to local, state and federal agencies regarding NPDES MS4 issues.

Program Assessment and Reporting

May include efforts such as but not limited to: compiling/analyzing data for annual report submittals; providing compliance program audits and recommendations for improvement; and coordination and preparation of reports (including annual reports) and assessments required to demonstrate and document compliance with MS4 Permits.

Training/Outreach

May include efforts such as, but not limited to: developing and implementing creative and effective methods for training/outreach on relevant issues such as Low Impact Development, MS4 Permit Implementation for Permittees, Pollution Prevention Practices and other Regional and Statewide General NPDES Permits

Program Funding

Identify, and facilitate additional methods for funding NPDES compliance programs, such as, but not limited to: identifying grant opportunities; developing applications and providing administration for grants; as well as, other available funding mechanisms.

Task F.2 TMDL/Basin Planning Support

Firms proposing to provide support to the District in the development of and compliance with TMDLs, and in facilitating updates to the Basin Plan must demonstrate qualifications and experience in one or more of the following tasks:

Basin Planning Support

May include efforts such as, but not limited to: Supporting Use Attainability Analyses, Site Specific Objectives and/or other Water Quality Control Plan amendments with literature review, regulatory alternatives assessment, monitoring, modeling and task force facilitation.

303(d) List Evaluation

Review of draft 303(d) lists for errors, gaps, and other issues that may facilitate appropriate listing/de-listing of water quality parameters; designing and implementing programs to gather relevant information and perform the analyses necessary to support de-listing of appropriate constituents; and preparing written comments and testimony on existing or potential future 303(d) listings.

TMDL Development Coordination

May include efforts such as, but not limited to: providing expert guidance and technical support to MS4 Permittee stakeholders during the development of TMDLs; leading third party TMDL efforts; and coordinating and facilitating responses to Regional Board CWC 13267 information requests.

TMDL Compliance Support

May include efforts such as, but not limited to: developing TMDL Urban Source Evaluation Plans; identifying cost-effective methods (local, sub-regional and regional structural and source control solutions) for compliance with TMDL Waste Load Allocations; supporting MS4 Permittee negotiations with regulators and other responsible parties to design and fund cost effective compliance approaches; developing TMDL compliance assessment and verification approaches; and developing required TMDL reports.

Pollutant Fate and Transport Modeling

May include efforts such as, but not limited to: developing advanced models estimating pollutant loads from various sources including urban, natural and uncontrollable sources and evaluating compliance program effectiveness; incorporating other study results into existing TMDL models; providing expert evaluation of modeling efforts by other parties including the adequacy of such models to address stated goals.

Task F.3 Water Quality Monitoring and Assessment

Firms proposing to provide support to the District and/or the Permittees' monitoring programs must demonstrate qualifications and experience in one or more of the following tasks:

Monitoring Program Design

May include efforts such as, but not limited to: development of monitoring programs, procedures, training and resources consistent with USEPA, SWAMP and Regional requirements; and preparation of special studies regarding stormwater science, monitoring, and/or compliance programs.

Monitoring Program Reporting and Assessment

May include efforts such as, but not limited to: preparation of annual monitoring reports in accordance with the MS4 Permits or other regional and statewide General NPDES Permits; conducting statistical and/or other compliance analyses of monitoring data and/or other data; producing professional exhibits and maps displaying tributary areas, analysis results, problem areas and other assessment data; and formatting and uploading of water quality data to CEDEN.

Water Quality Monitoring

May include efforts such as, but not limited to: performing field water quality monitoring/sampling activities and/or studies (e.g., receiving water and outfall monitoring); conducting desktop and field reconnaissance for potential sampling locations; performing illegal discharge identification monitoring; performing Bioassessment monitoring; conducting sediment bed sampling; conducting Toxicity Identification Evaluations/Toxicity Reduction Evaluations; performing procurement of access and/or special permits; preparing and submitting sampling event status reports and field data sheets.

Task F.4 Laboratory Analysis

It is preferred that firms proposing to provide lab analysis services, in support of the District and/or Permittees' monitoring requirements, meet the following qualifications:

- Appropriate Certifications (NELAP and/or other EPA/RWQCB/MS4 Permit required certifications including bioassessment taxonomy certifications);
- Stormwater Monitoring Coalition (SMC) Lab Intercalibration participation or certification for chemistry and toxicity (as appropriate). List any others that may apply (e.g., PCR etc.);
- Ability to produce SWAMP-compatible reports for CEDEN upload (paper and electronic).

In addition firms should demonstrate qualifications and experience in one or more of the types of analyses listed below. Specific analyses capabilities should be submitted with the qualification package. All sample handling, storage, and analysis will be in accordance with 40 CFR Part 136 (latest edition) "Guidelines Establishing Test Procedures for the Analysis of Pollutants", guidance developed by the State Water Resources Control Board (SWRCB) pursuant to Water Code Section 13383.5, or other methods more sensitive than those specified in 40 CFR 136. Analytical methods should comply with the Stormwater Ambient Monitoring Program (SWAMP) "MethodLookUp" list (http://checker.swamp.mpsl.mlml.calstate.edu/SWAMP_Checker/DisplayLookUp.php?List=MethodLookUp), if appropriate. Analysis results and reporting should comply with the State Water Resources Control Board (SWRCB) Minimum Levels (MLs) and/or Stormwater Ambient Monitoring Program (SWAMP) Target Reporting Limits.

Chemical Analyses

The firm should have the ability to analyze an array of constituents. Test matrices include both water and sediment.

Bacteriological Analyses

The firm should have the ability to analyze an array of microorganisms, viruses and other pathogens, including but not limited to *E. coli*, Fecal Coliform, Total Coliform, *Enterococcus*, and Fecal Streptococci. Test matrices include water and/or sediment.

Toxicological Analyses

The firm should have the ability to conduct whole effluent acute and chronic toxicity (WET) testing utilizing an array of organisms, including, but not limited to *Pseudokirchneriella subcapitata* (*Selenastrum capricornutum*), *Hyalella azteca*, *Pimephales promelas*, and *Ceriodaphnia dubia*. Test matrices should include both water and sediment as appropriate. All tests must pass USEPA test acceptability criteria. If a test fails, upon consultation with the District, the test must immediately be repeated. Reports must include the statistical results and a written summary with an explanation of any QA issues regarding that data.

Biological Analyses

The firm should have the ability to conduct biological analyses, including collection of macroinvertebrate samples, physical habitat characterization measurements, and collection of freshwater algae samples. Analysis of macroinvertebrate samples must include taxonomic composition. Analysis of algae samples must include algal taxonomic composition (diatoms and soft algae), and algal biomass (ash-free dry mass and chlorophyll-a). Biological sample and measurements must be collected in accordance with the most current SWAMP Bioassessment SOPs (e.g., Reachwide Benthos (Multihabitat) Procedure, etc.). The firm should have the ability to use bioassessment samples, measurements, and water chemistry data for calculation of an Index of Biological Integrity (IBI) for macroinvertebrates as based on the most current calculation method. The firm should have the ability to calculate an IBI for algae for a given monitoring station where bioassessment monitoring was conducted, when a calculation method is developed. The firm should have the ability to conduct stream assessments using California's Rapid Assessment Methodology for riparian plant assessment. The firm should have capacity to store and archive identified organisms on behalf of the District for a period of not less than three years from the date that all QA steps are completed. The firm should provide a description of any exceptions to these analyses and any proposed equivalent alternatives, as appropriate.

Genetic Analyses

The firm should have the ability to conduct polymerase chain reaction (PCR), quantitative PCR (qPCR), and/or digital PCR (dPCR) analyses; however, they are not required. Additional genetic analyses methodologies may also be considered.

Task F.5 Public Education/Outreach Program Support

Firms proposing to provide support for the Public Education/Outreach programs should demonstrate qualifications and experience in one or more of the following tasks.

Educational Program Development and Implementation

May include efforts such as, but not limited to developing and implementing an outreach program which focuses on pre-determined target groups, audiences, and associated stormwater pollutants of concern. Execution of the program may include advertising/promotion, and development of presentations and multi-media materials.

School Presentations

May include efforts such as, but not limited to: developing and conducting presentations on stormwater pollution and pollution prevention practices to the public; developing and distributing curriculum guides for teachers and organizations; and attending school or City-sponsored clean-ups (if needed).

Print & Electronic Media Development/Revision

Developing or maintaining a consistent program branding that may include, but not be limited to: design of messages for target audiences/groups, and delivery of that message via text, brochures, posters, billboards, tear sheets, tip cards and/or other print media; developing or maintaining existing electronic media, e-mail sign-up program, weekly e-newsletter, or other electronic media.

Website Development & Maintenance

May include efforts such as, but not limited to developing and maintaining a District Public Education website and/or maintenance of site map and navigation, content, images and updates, e-subscriber database, and tracking and analysis of monthly site traffic.

Public Outreach Events

May include efforts such as, but not limited to coordinating, staffing and managing booths at multiple and/or single day events hosted by third parties throughout the County to distribute pertinent key messages, developed materials, gather email sign-ups, and take photographs.

Business Partnerships

May include efforts such as, but not limited to contacting and maintaining partnerships with various mobile services, commercial and/or industrial facilities throughout the County to conduct various point of purchase marketing and outreach activities.

Task F.6 Water Conservation

Firms proposing to provide Water Conservation services should demonstrate knowledge and experience with groundwater recharge master planning, recharge facility design and assessment and integrated regional water management planning activities with respect to integration of water recharge functions into existing and future flood control facilities.

Water Conservation Planning & Design Support

May include efforts such as, but not limited to: providing water conservation planning services for stormwater facilities such as open channels, basins, dams and similar infrastructure. Water conservation planning may include evaluation of stormwater capture, dry weather runoff capture, artificial recharge or other water sources within existing or proposed District facilities. Setting appropriate regional water conservation goals based on quantitative and qualitative evaluation of local groundwater basin master plans, salt and nutrient management plans, urban water management plans or other appropriate planning studies or groundwater investigations. Development of criteria to assist in establishing priorities for individual water conservation projects, including consideration of water resource needs, multipurpose opportunities, water rights considerations and other opportunities/constraints that should be assessed when considering water conservation projects. Preparation of planning reports, plans and specifications, and cost estimates for various water conservation projects. Applying for and managing water conservation grants.

Hydrologic and Hydrogeologic Investigations

May include efforts such as, but not limited to: conducting hydrologic and hydrogeologic investigations of potential recharge sites. These would include field investigations, and hydraulic and geotechnical analyses necessary to characterize recharge potential of existing and future project sites; evaluating the potential for groundwater mounding and its potential impacts on recharge volumes; assessing ambient groundwater quality and potential recharge source water quality to determine potential constraints and opportunities for recharge; performing cone penetration tests, soil borings (including soil sampling), infiltrometer testing, and long term pilot-percolation tests using ASTM or other appropriate standards for such work.

Service Category G. DEVELOPMENT PLAN CHECK

Task G.1 Full Service Plan Checking

Overview

The District provides comprehensive plan check services for a variety of land development projects (e.g., subdivisions, plot plans, use permits, etc.). Additionally, other projects that are not associated with a specific land development proposal, e.g., outside agency capital improvement/public works projects or major encroachment permits) may also be reviewed.

Typically, the following plans, calculations and documents shall be reviewed for compliance with the land-use authority's recommended Conditions of Approval and/or District engineering and maintenance standards and other applicable requirements:

- Drainage improvement plans including storm drain, detention basin, levee and channel plans;
- Hydrologic and hydraulic calculations;
- Structural calculations;
- Street improvement plans (drainage related);
- Grading plans (rough and fine);
- Water-sewer plans (conflict with drainage plans only);
- Final subdivision maps and environmental constraint sheets;
- Adequacy of right of way and/or easement requirements;
- Covenants, conditions and restrictions (CC&R's);
- Bonding estimates (drainage improvements);
- CEQA documents; regulatory/resource agency permits; MSHCP compliance documents;
- Water quality management plans (WQMP);
- Encroachment permits (EP);
- Geotechnical reports;
- Storm Water Pollution Prevention Plans (SWPPP); and
- Technical specifications (drainage improvements).

Review Process

Generally, the land-use authority's Conditions of Approval serve as the initial scope of work for review of a developer's improvement plans/project. District Plan Check staff will discuss each project in detail with the Consultant and define project specific scope of work, including any special requirements, prior to authorizing any work. Consultant shall propose a budget for each assignment prior to commencing the plan review.

Overall Procedure and Deliverables

- 1) Consultant shall write corrections directly on the submitted plans, reports and related documents and prepare a summary checklist of review comments. This will include calling out any conflicts, mistakes, inaccuracies and/or omissions shown on the plans. Provide substantive comments identifying any portion of the project that, in the opinion of Consultant, does not meet or satisfy the applicable hydrology/hydraulics, structural design, environmental/regulatory or operation and maintenance requirements.
- 2) It is critically important that the first plan review is comprehensive and that the Consultant provides as much feedback as possible to the applicant and the applicant's engineer. Specific plan-check comments shall be annotated in red on the plans, reports or related documents. In addition, a concise and descriptive plan check comment letter summarizing the most substantive comments on the plans and any additional comments not indicated on the plans shall be prepared. All correspondence shall be prepared on Consultant's letterhead stationary stamped and signed by the Consultant and countersigned by District staff prior to sending out plan check letter. A copy of the comment letter and check prints shall be neatly packaged and made ready for pickup by the applicant's engineer. Consultant shall promptly notify the applicant's engineer to pick up the redlines.
- 3) All plans and correspondence shall be neatly organized and submitted to District staff for filing.
- 4) Upon receipt of 60% plan submittal the 3rd submittal (typical), coordinate scheduling of a District "all hands" meeting to introduce and discuss the project with pertinent District staff.
- 5) Approval letters for all plans, hydrologic and hydraulic studies, environmental documents, regulatory permits, WQMP and any other reports shall be clear, concise and shall specifically identify each submitted document by date.
- 6) After the check prints have been reviewed and approved (QA/QC) by the Chief of Planning, advise applicant's engineer to proceed with the printing of the final mylar plan set.
- 7) Initial each mylar sheet of the final drawings prior to recommending for signature.
- 8) Ensure that four (4) copies of the approved final WQMP are submitted to District prior to issuance of a final approval letter.
- 9) Update case status in the District's improvement plan tracking system (DLMT).

Time

Time is of the essence. Completed plan review comments shall be returned to the applicant/engineer within three (3) weeks of authorization to proceed. Consultant must allow sufficient time to review all plan check comments with District staff prior to providing comments to the applicant/engineer.

Review of Improvement Plans

The following are key elements of the plan check process and services required:

- 1) Examine the overall concept prior to checking the details. Any fatal flaws must be identified as early as possible. Conduct a thorough investigation of the proposed facility, and its relationship to other facilities, waterbodies, adjacent projects and real property.
- 2) Review hydrology and hydraulic reports to ensure the proposed facility has adequate capacity to convey the design peak discharge (interim or ultimate condition, whichever is greater).
- 3) Determine whether the proposed improvement's drainage facilities are to be operated and maintained by the District, or whether they are facilities to be "maintained by others". If the subject improvements are:
 - a) *District Maintained Facilities*: The Improvement Plans shall be checked for meeting District's drafting, design, and operation and maintenance standards. Consultant should further check for appropriate right of way, egress and ingress routes and consult with District staff for specifics, as necessary. Plans shall be reviewed not only for constructability but also for practicality of maintenance.
 - b) *Facilities Maintained By Others*: The Improvement Plans shall be checked in accordance with the Memorandum of Understanding between the District and the Riverside County Transportation Department dated June 24, 2008 and any amendments or addendum thereto. The maintaining agency shall be consulted and kept informed of progress, constraints and unique situations.
- 4) Improvement plan reviews shall include but may not be limited to all of the following tasks:
 - a) Checking the design for conformance with:
 - 1) Approved Tentative Map, Specific Plans and Site Plans;
 - 2) Applicable conditions of approval;
 - 3) Other agencies' recommendations (i.e., Riverside County Transportation Department, Caltrans, etc.);
 - 4) District Master Drainage Plans or other proposed drainage plans;
 - 5) District Drafting Standards; and
 - 6) Standard and General Construction Notes.
 - b) Checking for good engineering practice and verifying that the proposed design will function properly with emphasis on:
 - 1) Structural integrity of facility;
 - 2) Hydraulic capacity;
 - 3) Facility alignment;
 - 4) Inlet & Outlet conditions;
 - 5) Appropriate construction notes and general notes;
 - 6) Constructability;

- 7) Access for maintenance and ease of maintenance including rehabilitation/restoration;
 - 8) All pertinent information including right of way/easement limits shown on plans
 - 9) Proximity to other utility lines; and
 - 10) Other items that may be unique to the project.
- c) Checking the associated street improvement plans, grading plans, sewer and water plans to ensure no conflict with drainage facility.

Review of Environmental Documents and Regulatory Permits

The following guidelines provide the minimum standards of practice that must be met in reviewing environmental documents submitted in conjunction with the review of improvement plans for facilities that are to be owned, operated and maintained by the District, not only for construction, but also for subsequent Operation and Maintenance. Ensure that any compensatory mitigation proposed with the project would not in any way encumber or otherwise prohibit the District from carrying out its operation and maintenance responsibilities in any manner.

- 1) *California Environmental Quality Act (CEQA)*: Ensure that the Project Description of any applicable CEQA document(s) accurately describes and specifically discusses the construction, operation and maintenance of any facilities that the District is to accept for ownership, including any offsite facilities.
- 2) *Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)*: Review MSHCP compliance documentation of the proposed construction of all onsite and offsite drainage facilities with Section 3.2.1. (Criteria Area and Public/Quasi Public Lands); Section 6.1.2. (Riparian/Riverine Areas and Vernal Pools); Section 6.1.3. (Narrow Endemic Plant Species); Section 6.1.4. (Urban/Wildlife Interface Guidelines); Section 6.3.2. (Additional Surveys); Section 7.5.3. (Construction Guidelines); and Appendix "C" of the MSHCP. Ensure that the MSHCP compliance documents adequately address future District maintenance activities.
- 3) *Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP)*: Review CVMSHCP compliance documentation of the proposed construction of all onsite and offsite drainage facilities and ensure compliance documents adequately address future District maintenance activities, pursuant to Section 13.5 of the "Implementing Agreement" between the District and Coachella Valley Association of Governments. Requirements include: (1) Compliance with relevant processes and measures to ensure application of the Conservation Area requirements set forth in Section 4 of the CVMSHCP; (2) Compliance with the applicable Land Use Adjacency Guidelines as set forth in Section 4.5 of the CVMSHCP; (3) Compliance with the Avoidance, Minimization and Mitigation Measures in Section 4.4 of the CVMSHCP; (4) Ensure implementation consistent with the Species Conservation Goals and Objectives in Section 9 of the CVMSHCP; (5) Permanently protect and manage Mitigation Land within the reserve system legally owned and/or controlled by the entity unless conveyed to the Coachella Valley Conservation Commission; and (6) Participate in the Joint

Project Review Process for its projects within the Conservation Areas as described in Section 6.6.1.1 of the Plan, if applicable.

- 4) *Regulatory Permits*: Review draft regulatory permits authorizing the construction, operation and future maintenance of the proposed flood control facilities, including U.S. Army Corps of Engineers Section 404 permits, Regional Water Quality Control Board Section 401 Water Quality Certifications, California Department of Fish and Game Section 1602 Streambed Alteration Agreements and Regional Water Quality Control Board Porter-Cologne program Waste Discharge Requirements. Ensure that the draft regulatory permits include/address all necessary future District maintenance activities.

Review of Water Quality Management Plans

Consultant shall review the final project-specific WQMP and shall use the checklist for corresponding to appropriate municipal stormwater (MS4) permit. The checklist can be found in Appendix F of the *Drainage Area Management Plan (DAMP)* for Santa Ana Region and Santa Margarita Region, and Appendix I of the *Storm Water Management Plan (SWMP)* for Colorado River Region (White Water). The permits/WQMP checklists are updated regularly, therefore it is the Consultant's responsibility to ensure that all WQMPs are reviewed pursuant to applicable permits.

Review of Encroachment Permits

Consultant shall review the encroachment permit in accordance with scope of work defined by the Operations and Maintenance Division including but not limited to the requirements covered above.

ATTACHMENT "C"

TASK ORDER APPROVAL FORM

CONSULTANT: _____

PROJECT NAME: _____

The Scope of Services for this Task Order, a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference, shall constitute an approved Task Order pursuant to the Agreement between DISTRICT and CONSULTANT dated @ ("AGREEMENT"). CONSULTANT agrees to perform the services described in Exhibit "A" for a fee amount of @ unless otherwise modified by DISTRICT'S Project Manager in a subsequent Task Order Approval. All charges shall be consistent with the Compensation/Fee Rate Schedule which is attached as Exhibit "B" and incorporated herein by this reference.

Performance of the services shall be subject to the terms and conditions contained in the AGREEMENT.

Dated this _____ day of _____
(To be filled in by General Manager-Chief Engineer)

**RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**

By: _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

[FIRM NAME]

By: _____
[NAME]
[Title]

ATTACHMENT "C"

TASK ORDER APPROVAL FORM

CONSULTANT: _____

PROJECT NAME: _____

The Scope of Services for this Task Order, a copy of which is attached hereto as Exhibit "A" and incorporated herein by this reference, shall constitute an approved Task Order pursuant to the Agreement between DISTRICT and CONSULTANT dated @ ("AGREEMENT"). CONSULTANT agrees to perform the services described in Exhibit "A" for a fee amount of @ unless otherwise modified by DISTRICT'S Project Manager in a subsequent Task Order Approval. All charges shall be consistent with the Compensation/Fee Rate Schedule which is attached as Exhibit "B" and incorporated herein by this reference.

Performance of the services shall be subject to the terms and conditions contained in the AGREEMENT.

Dated this _____ day of _____
(To be filled in by General Manager-Chief Engineer)

**RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**

By: _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

[FIRM NAME]

By: _____
[NAME]
[Title]

CONSULTING SERVICES AGREEMENT
FY 2015-16 to FY 2017-18

The RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, hereinafter called "DISTRICT", and TRC SOLUTIONS, INC., hereinafter called "CONSULTANT", hereby agree as follows:

1. SERVICE CATEGORY

Upon DISTRICT'S request, CONSULTANT shall provide on-call services to DISTRICT for Service Category E, as further described in "Service Categories & Tasks", attached hereto as Attachment "A", in accordance with applicable federal, state, and local laws and regulations.

2. SCOPE OF SERVICES

As requested by DISTRICT, CONSULTANT shall provide those services as described in the "Scope of Services", attached hereto as Attachment "B", on an "on-call" basis. During the term of this Agreement, DISTRICT may request CONSULTANT to submit one or more proposals within any of the Service Categories for which the CONSULTANT is selected pursuant to Attachment "A". In the event DISTRICT finds CONSULTANT'S proposal acceptable, DISTRICT may issue one or more Task Orders, the form of which shall generally conform with the "Task Order Approval Form" (attached hereto as Attachment "C"). CONSULTANT understands and expressly agrees that the execution of this Agreement by CONSULTANT and/or the submission of any proposal to furnish services does not guarantee the assignment or approval of any subsequent Task Order(s).

3. PERSONNEL

A. Project Manager

1 For each Task Order, DISTRICT shall designate a staff representative who shall
2 act as DISTRICT'S Project Manager ("Project Manager") for the Task Order. In
3 the event DISTRICT changes its Project Manager, it shall notify CONSULTANT
4 in writing.

5 B. CONSULTANT'S Representative

6 CONSULTANT shall appoint a Designated Representative for each assigned
7 Task Order who shall be responsible for coordinating all aspects of the assigned
8 Task Order. CONSULTANT'S Designated Representative shall be available to
9 DISTRICT'S Project Manager at reasonable times. In the event CONSULTANT
10 changes its Designated Representative, it shall notify DISTRICT in writing.

11 C. Substitution of Key Personnel

12 At the time of Task Order approval, CONSULTANT shall identify to
13 DISTRICT'S Project Manager the Key Personnel who are responsible for
14 executing Task Order. Should one or more of the identified Key Personnel
15 become unavailable, CONSULTANT may substitute other personnel of equal or
16 greater competence upon DISTRICT'S written approval. In the event that
17 DISTRICT and CONSULTANT cannot come to an agreement regarding
18 substitution of the Key Personnel, DISTRICT may terminate the Task Order,
19 pursuant to the applicable provisions of this Agreement.

20 4. TERM

21 The term of this Agreement shall become effective on the date the Agreement is
22 executed by DISTRICT'S Board of Supervisors, and shall remain in effect through the
23 required date for completion of an assigned Task Order, provided that such Task Order
24 was approved prior to June 30, 2018 and is to be completed by June 30, 2019.
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1 5. COMPENSATION

2 CONSULTANT shall receive compensation for all services satisfactorily performed and
3 expenses incurred under this Agreement in accordance with the terms of the approved
4 Task Order(s). The maximum amount of any Task Order approved pursuant to this
5 Agreement shall not exceed four hundred thousand dollars (\$400,000). The cumulative
6 total of all task orders shall not exceed \$800,000.00 over the entire term of this
7 Agreement.

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9 6. PAYMENT

10 Payment shall be made in accordance with the Compensation/Fee Rate Schedule
11 attached to an approved Task Order. Unless otherwise agreed, progress payments shall
12 be processed a monthly basis. Upon satisfactory performance of CONSULTANT'S
13 services pursuant to an approved Task Order, DISTRICT shall pay CONSULTANT
14 within forty-five (45) days after DISTRICT'S approval of CONSULTANT'S invoice(s).
15 DISTRICT shall not pay interest or finance charges on any outstanding balance(s).

16 CONSULTANT shall keep employee and expense records according to customary
17 accounting methods and such records shall, upon request, be available for inspection by
18 DISTRICT to verify CONSULTANT'S invoices. CONSULTANT'S invoices shall
19 itemize charges to conform with the Compensation/Fee Rate Schedule negotiated for the
20 specific Task Order. DISTRICT shall notify CONSULTANT of any disputed charges
21 within thirty (30) days of receipt of CONSULTANT'S invoice. **The DISTRICT**
22 **reserves the right to withhold payment for work that is not invoiced in a timely**
23 **manner.**

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26 7. INVOICES

1 All work shall be invoiced in a timely manner. All invoices shall be mailed directly to
 2 the DISTRICT'S Accounts Payable Section. Each invoice shall include the following
 3 information:

4 a) Task Order Number – (as provided by DISTRICT).

5 b) Billing Period – (indicating the date(s) when the services were rendered).

6 Monthly invoices shall be mailed to the DISTRICT no later than the 15th day of the
 7 month following the end of the Billing Period. Periodic single invoices shall be mailed
 8 within 45 days of Task Order completion. Incomplete invoices will be returned to
 9 CONSULTANT for correction.

10 8. PROJECT PERFORMANCE

11 A. Commencement of Services

12 CONSULTANT shall commence performance of the services for each Task
 13 Order upon receipt of DISTRICT'S approved Task Order.

14 B. Time of Completion

15 Time is of the essence in the performance of this Agreement. CONSULTANT
 16 shall complete services in accordance with the schedule(s) set forth in the
 17 approved Task Order(s).

18 9. LICENSES – At all times while performing services under this Agreement,
 19 CONSULTANT, its employees, agents, contractors and subcontractors shall possess all
 20 necessary and appropriate federal and/or state permits and maintain professional licenses
 21 required by the applicable Federal, State and local regulations.

22 10. STANDARD OF CARE

23 While performing the services, CONSULTANT shall exercise the reasonable
 24 professional care and skill customarily exercised by reputable members of
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1 CONSULTANT'S profession practicing in the State of California, and shall use
2 reasonable diligence and best judgment while exercising CONSULTANT'S professional
3 skill and expertise. By executing this Agreement, CONSULTANT represents and
4 maintains that CONSULTANT has the necessary experience and expertise to skillfully
5 perform all services, duties and obligations required by this Agreement and to fully and
6 adequately complete each approved Task Order.

7 If, pursuant to this Agreement, CONSULTANT is engaged as a "Professional Engineer"
8 pursuant to Section 6701 of the Professional Engineers Act (Chapter 7 of Division 3 of
9 the Business and Professions Code), then CONSULTANT assumes responsible charge
10 of the work pursuant to Section 6703 of the Professional Engineers Act; and shall be
11 wholly responsible for the completeness and accuracy of all data, technical studies,
12 reports, plans, specifications and estimates prepared pursuant to this Agreement, and
13 shall check all of its work product accordingly.

14
15 11. ERRORS AND OMISSIONS

16 In the event CONSULTANT'S data, technical studies, reports, plans, specifications,
17 estimates or any work products contain any errors or omissions that cause DISTRICT to
18 incur additional expense beyond what would have otherwise resulted if there were no
19 errors or omissions in CONSULTANT'S data, technical studies, reports, plans,
20 specifications, estimates or any work products, such additional expense shall be borne
21 solely by CONSULTANT.

22
23 12. PERMITS AND RIGHTS OF ENTRY

24 DISTRICT shall obtain all necessary rights of entry that may be required in order that
25 CONSULTANT may perform the services stipulated by an approved Task Order within
26 and upon privately-owned property. CONSULTANT shall obtain all necessary permits
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1 or rights of entry that may be required in order that may CONSULTANT perform the
 2 services stipulated by an approved Task Order from any and all affected public entities.
 3 Sufficient evidence of having obtained such permits and/or rights of entry shall be
 4 furnished to DISTRICT by CONSULTANT, prior to initiation of work.
 5 CONSULTANT shall prosecute the work in such a manner as to minimize public
 6 inconvenience and possible hazard, and shall restore the streets and other work areas to
 7 their original condition and former usefulness as soon as practicable. CONSULTANT
 8 shall be responsible for the protection of public and private property adjacent to the work
 9 and shall exercise due caution to avoid damage to such property.

10 13. NOTICES

11 Any and all notices sent or required to be sent to the parties of this Agreement will be
 12 mailed by first class mail, postage prepaid, to the following addresses:

14 RIVERSIDE COUNTY FLOOD CONTROL	TRC Solutions, Inc.
15 AND WATER CONSERVATION DISTRICT	123 Technology Drive
16 1995 Market Street	Irvine, CA 92618
Riverside, CA 92501	Attn: Joseph Stenger
17 Attn: Finance Division	

18 14. REQUIRED INSURANCE

19 CONSULTANT shall not commence operations until DISTRICT has been furnished
 20 with original certificate(s) of insurance and original certified copies of endorsements and
 21 if requested, certified original policies of insurance including all endorsements and any
 22 and all other attachments as required in this Section.

23 Without limiting or diminishing CONSULTANT'S obligation to indemnify or hold
 24 DISTRICT harmless, CONSULTANT shall procure and maintain or cause to be
 25 maintained, at its sole cost and expense, the following insurance coverages during the
 26 term of this Agreement:
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A. Workers' Compensation

If CONSULTANT has employees as defined by the State of California, CONSULTANT shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employer's Liability (Coverage B) including Occupational Disease with limits not less than \$1,000,000 per person per accident. Policy shall be endorsed to waive subrogation in favor of DISTRICT and, if applicable, to provide a Borrowed Servant/Alternate Employer endorsement.

B. Commercial General Liability

Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of CONSULTANT'S performance of its obligations hereunder. Policy shall name the Riverside County Flood Control and Water Conservation District, the County of Riverside, its agencies, districts, special districts, and departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, employees, agents or representatives as additional insureds. Policy's limit of liability shall not be less than \$1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this Agreement or be no less than two (2) times the occurrence limit.

C. Vehicle Liability

If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, CONSULTANT shall maintain liability insurance for all

1 owned, non-owned or hired vehicles so used in an amount not less than
2 \$1,000,000 per occurrence combined single limit. If such insurance contains a
3 general aggregate limit, it shall apply separately to this Agreement or be no less
4 than two (2) times the occurrence limit. Policy shall name the Riverside County
5 Flood Control and Water Conservation District, the County of Riverside, its
6 agencies, districts, special districts, and departments, their respective directors,
7 officers, Board of Supervisors, elected or appointed officials, employees, agents
8 or representatives as additional insureds.

9 D. Professional Liability

10 CONSULTANT shall maintain Professional Liability Insurance providing
11 coverage for CONSULTANT'S performance of work included within this
12 Agreement, with a limit of liability of not less than \$1,000,000 per occurrence
13 and \$2,000,000 annual aggregate. If CONSULTANT'S Professional Liability
14 Insurance is written on a claims made basis rather than an occurrence basis, such
15 insurance shall continue through the term of this Agreement and CONSULTANT
16 shall purchase at his sole expense either: 1) an Extended Reporting Endorsement
17 (also known as Tail Coverage); or 2) Prior Dates Coverage from a new insurer
18 with a date retroactive to the date of, or prior to, the inception of this Agreement;
19 or 3) demonstrate through Certificates of Insurance that CONSULTANT has
20 maintained continuous coverage with the same or original insurer. Coverage
21 provided under items: 1), 2) or 3) will continue as long as the law allows.

22 E. General Insurance Provisions – All Lines

- 23
24 a. Any insurance carrier providing insurance coverage hereunder shall be
25 admitted to the State of California and have an A.M. BEST rating of not
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1 less than an A: VIII (A: 8) unless such requirements are waived, in
2 writing, by the County Risk Manager. If the County's Risk Manager
3 waives a requirement for a particular insurer such waiver is only valid for
4 the specific insurer and only for one policy term.

5 b. CONSULTANT must declare its insurance self-insured retention for each
6 coverage required herein. If any such self-insured retention exceeds
7 \$500,000 per occurrence each such retention shall have the prior written
8 consent of the County Risk Manager before the commencement of
9 operations under this Agreement. Upon notification of self-insured
10 retention deemed unacceptable to DISTRICT, and at the election of the
11 County's Risk Manager, CONSULTANT'S carriers shall either: 1) reduce
12 or eliminate such self-insured retention with respect to this Agreement
13 with DISTRICT, or 2) procure a bond which guarantees payment of
14 losses and related investigations, claims administration, and defense costs
15 and expenses.
16

17 c. CONSULTANT shall cause their insurance carrier(s) to furnish
18 DISTRICT with: 1) a properly executed original certificate(s) of
19 insurance and original certified copies of endorsements effecting
20 coverage as required herein; and 2) if requested to do so orally or in
21 writing by the County Risk Manager, provide original certified copies of
22 policies including all endorsements and all attachments thereto, showing
23 such insurance is in full force and effect. Further, said certificate(s) and
24 policies of insurance shall contain the covenant of the insurance carrier(s)
25 that thirty (30) days written notice shall be given to DISTRICT prior to
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1 any material modification, cancellation, expiration, or reduction in
2 coverage of such insurance. In the event of a material modification,
3 cancellation, expiration, or reduction in coverage, this Agreement shall
4 terminate forthwith, unless DISTRICT receives, prior to such effective
5 date, another properly executed original certificate of insurance and
6 original copies of endorsements or original certified policies, including all
7 endorsements and attachments thereto, evidencing coverages set forth
8 herein and the insurance required herein is in full force and effect.
9 Individual(s) authorized by the insurance carrier to do so on its behalf
10 shall sign the original endorsements for each policy and the certificate of
11 insurance.
12

- 13 d. It is understood and agreed by the parties hereto that CONSULTANT'S
14 insurance shall be construed as primary insurance, and DISTRICT'S
15 insurance and/or deductibles and/or self-insured retentions or self-insured
16 programs shall not be construed as contributory.
- 17 e. If, during the term of this Agreement or any extension thereof, there is a
18 material change in the scope of services; or there is a material change in
19 the equipment to be used in the performance of the scope of work which
20 will add additional exposures (such as the use of aircraft, watercraft,
21 cranes, etc.); or the term of this Agreement, including any extensions
22 thereof, exceeds five (5) years, DISTRICT reserves the right to adjust the
23 types of insurance required under this Agreement and the monetary limits
24 of liability for the insurance coverage currently required herein, if, in the
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County Risk Manager's reasonable judgment, the amount or type of insurance carried by CONSULTANT has become inadequate.

f. CONSULTANT shall pass down the insurance obligations contained herein to all tiers of subcontractors working under this Agreement.

g. The insurance requirements contained in this Agreement may be met with a program(s) of self-insurance acceptable to DISTRICT.

h. CONSULTANT agrees to notify DISTRICT of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

15. INDEMNIFICATION

CONSULTANT shall indemnify and hold harmless DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives) from any liability, claim, damage, proceeding or action, present or future, based upon, arising out of or in any way relating to CONSULTANT'S (including its officers, employees, subcontractors and agents) actual or alleged negligent, reckless or willful misconduct, acts or omissions related to this Agreement, performance under this Agreement, or failure to comply with the requirements of this Agreement, including but not limited to: (a) property damage; (b) bodily injury or death; or (c) any other element of any kind or nature whatsoever.

CONSULTANT shall defend, at its sole expense, including all costs and fees (including but not limited to attorney fees, cost of investigation, defense and settlements or awards), DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives) in any claim, proceeding or action for which indemnification is required.

1 With respect to any of CONSULTANT'S indemnification requirements,
2 CONSULTANT shall, at its sole cost, have the right to use counsel of their own choice
3 and shall have the right to adjust, settle, or compromise any such claim, proceeding or
4 action without the prior consent of DISTRICT; provided, however, that such adjustment,
5 settlement or compromise in no manner whatsoever limits or circumscribes
6 CONSULTANT'S indemnification obligations to DISTRICT.
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8 CONSULTANT'S indemnification obligations shall be satisfied when CONSULTANT
9 has provided to DISTRICT the appropriate form of dismissal (or similar document)
10 relieving DISTRICT from any liability for the claim, proceeding or action involved.

11 The specified insurance limits required in this Agreement shall in no way limit or
12 circumscribe CONSULTANT'S obligations to indemnify and hold harmless DISTRICT
13 from third party claims.
14

15 In the event there is conflict between this section and California Civil Code Section
16 2782, this section shall be interpreted to comply with California Civil Code Section
17 2782. Such interpretation shall not relieve CONSULTANT from indemnifying
18 DISTRICT (including its directors, officers, Board of Supervisors, elected and appointed
19 officials, employees, agents and representatives) or the County of Riverside to the fullest
20 extent allowed by law.

21 16. WORK PRODUCT
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23 CONSULTANT shall provide DISTRICT with all data, calculations, technical studies,
24 plans, specifications, computer files, field notes, estimates, drawings, logs, maps,
25 exhibits, reports and any other documents as set forth in the approved Task Order(s). All
26 data, calculations, technical studies, plans, specifications, computer files, field notes,
27 drawings, logs, maps, exhibits, reports and any other documents produced by
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1 CONSULTANT in the performance of the services as set forth in the approved Task
2 Order(s) shall become and remain the sole property of DISTRICT. CONSULTANT
3 shall not publish or transfer any material produced or resulting from activities supported
4 by this Agreement without the written consent of the General Manager-Chief Engineer
5 of DISTRICT. If any such material is subject to copyright or trademark, the parties
6 agree that the right to any and all copyright and/or trademark in and to the material is
7 expressly reserved to DISTRICT. If any such material is copyrighted, the parties hereto
8 understand and agree that DISTRICT reserves a royalty-free, non-exclusive, and
9 irrevocable license to reproduce, publish, and use such material, in whole or in part, and
10 to authorize others to do so, provided written credit is given the author.

11
12 17. TERMINATION

13 At any time during the term of this Agreement, DISTRICT may:

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15 A. Agreement

- 16 1) Terminate this Agreement without cause upon providing CONSULTANT
17 thirty (30) days written notice stating the extent and effective date of
18 termination; or
19 2) Upon five (5) days written notice, terminate this Agreement for
20 CONSULTANT default, if CONSULTANT refuses or fails to comply
21 with the provisions of this Agreement or fails to make progress so as to
22 endanger performance and does not cure such failure within a reasonable
23 period of time. In the event of such termination, DISTRICT may proceed
24 with the work in any such manner it deems appropriate.

25
26 In the event DISTRICT issues a Notice of Termination, CONSULTANT shall: i)
27 stop all work under this Agreement on the date specified in the Notice of
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1 Termination; and ii) transfer to DISTRICT and deliver in the manner, and to the
2 extent, if any, as directed by DISTRICT, any work product, data or reports
3 prepared by CONSULTANT, whether partially or fully completed.

4 In the event DISTRICT terminates this Agreement, DISTRICT shall make
5 payment for all services performed in accordance with this Agreement to the date
6 of termination, a total amount which bears the same ratio to the total maximum
7 fee otherwise payable under this Agreement as the services actually bear to the
8 total services necessary for performance of this Agreement. Notwithstanding any
9 of the other provision of this Agreement, CONSULTANT rights under this
10 Agreement shall terminate (except for fees accrued prior to the date of
11 termination) upon dishonesty, or a willful or material breach of this Agreement
12 by CONSULTANT; or in the event of CONSULTANT'S unwillingness or
13 inability for any reason whatsoever to perform the duties hereunder; or if the
14 Agreement is terminated pursuant to Section 28 (NON-DISCRIMINATION). In
15 such event, CONSULTANT shall not be entitled to any further compensation
16 under this Agreement. The rights and remedies of DISTRICT provided in this
17 section shall not be exclusive and are in addition to any other rights and remedies
18 provided by law or under this Agreement.

21 B. Approved Task Order

22 Terminate an approved Task Order or portion thereof without cause upon
23 providing CONSULTANT fourteen (14) days written notice stating the extent
24 and effective date of termination. In the event DISTRICT issues a Notice of
25 Termination for an approved Task Order, CONSULTANT shall: i) stop all work
26 under the Task Order on the date specified in the Notice of Termination; and ii)
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transfer to DISTRICT and deliver in the manner, and to the extent, if any, as directed by DISTRICT, any work product, data or reports prepared by CONSULTANT, whether partially or fully completed.

In the event DISTRICT terminates an approved Task Order, DISTRICT shall make payment for all services satisfactorily performed in accordance with the negotiated Task Order to the date of termination, a total amount which bears the same ratio to the total maximum fee otherwise payable under the Task Order as the services actually bear to the total services necessary for performance of the Task Order.

18. BASIC SERVICES OF CONSULTANT

The scope of services associated with the performance of any specific Task Order under this Agreement shall be expressly defined and agreed upon prior to the approval of the Task Order by DISTRICT'S General Manager-Chief Engineer. Any changes to the approved scope of services must be authorized by DISTRICT'S General Manager-Chief Engineer, and shall be made in accordance with Section 22 (CHANGES TO TASK ORDER SCOPE OF SERVICES).

All work prepared by CONSULTANT shall be subject to the approval of DISTRICT'S Project Manager. CONSULTANT shall allow Project Manager to inspect and review CONSULTANT'S work in progress at any reasonable time. All reports, working papers, and similar work products prepared for submission in the course of providing services under this Agreement shall be submitted to the Project Manager in draft form. In the event that Project Manager, in his or her sole discretion, determines the formally submitted work product to be incomplete or otherwise inadequate, CONSULTANT may be required to revise and resubmit the work at no additional cost to DISTRICT. Should

1 CONSULTANT fail to make requested corrections in a timely manner, such corrections
2 may be made by DISTRICT, and the cost thereof charged to CONSULTANT. Neither
3 DISTRICT'S review nor approval shall give rise to any liability or responsibility on the
4 part of DISTRICT, or waive any of DISTRICT'S rights, or relieve CONSULTANT of its
5 professional responsibilities or obligations under this Agreement.
6

7 19. PREVAILING WAGE

8 All workers shall be paid not less than the general prevailing rate of wages and benefits
9 for work of a similar character in the locality in which the work is performed, as
10 provided in Labor Code Sections 1770 et seq. Pursuant to the Labor Code, DISTRICT
11 has obtained for the Board of Supervisors of DISTRICT from the Director of the
12 Department of Industrial Relations, State of California, his determinations of general
13 prevailing rates of per diem wages applicable to the work, and for holiday and overtime
14 work, including employer payments for health and welfare, pension, vacation,
15 apprentices and similar purposes for each craft, classification or type of workman
16 needed, as set forth on the schedule which is on file at DISTRICT office, and which will
17 be made available to any interested person upon request.
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19 20. INDEPENDENT CONTRACTOR

20 CONSULTANT and the agents and employees of CONSULTANT, shall act at all times
21 in an independent capacity during the term of this Agreement and in the performance of
22 the services to be rendered hereunder and shall not act as or shall not be and shall not in
23 any manner be considered to be employees or agents of DISTRICT.
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25 21. SUBCONTRACTING

26 CONSULTANT may, at CONSULTANT'S own expense, retain or employ sub-
27 consultants to accomplish certain portions of the work covered by this Agreement.
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1 However, except as specifically provided in the Compensation/Fee Rate Schedule
2 attached to the approved Task Order or as expressly identified in this Agreement, no
3 portion of the services pertinent to this Agreement shall be subcontracted without prior
4 written approval and authorization by DISTRICT.

5 Should one or more of the sub-consultants, as identified in the Compensation/Fee Rate
6 Schedule attached to the approved Task Order or as expressly identified in this
7 Agreement, become unavailable, CONSULTANT may substitute other sub-consultants
8 of equal or greater competence upon written approval by DISTRICT. In the event that
9 DISTRICT and CONSULTANT cannot agree as to the substitution of the sub-
10 consultant, DISTRICT may terminate the Task Order, pursuant to the applicable
11 provisions of this Agreement.
12

13 In the event CONSULTANT subcontracts any portion of CONSULTANT'S duties under
14 this Agreement, CONSULTANT shall require its Sub-consultants to comply with the
15 terms of this Agreement in the same manner as required of CONSULTANT. The fact
16 that CONSULTANT employs Sub-consultants not in his regular employ shall not relieve
17 CONSULTANT of any responsibility regarding the adequacy of the Sub-consultant's
18 work performed or services provided pursuant to this Agreement.
19

20 22. CHANGES TO TASK ORDER SCOPE OF SERVICES

21 CONSULTANT shall not perform any additional work or services outside the scope of
22 an approved Task Order without the prior written approval of DISTRICT'S General
23 Manager-Chief Engineer. If at any time during the performance of an approved Task
24 Order, CONSULTANT believes that it is necessary to include certain work or services
25 which are not clearly covered under the scope of an approved Task Order,
26 CONSULTANT shall immediately notify the Project Manager in writing of
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1 CONSULTANT'S assertion that the work is out of scope. Said notification by
2 CONSULTANT to the Project Manager shall not in any way be construed as proving
3 that the work or services in question are outside the scope of the Task Order. The Project
4 Manager must approve or reject CONSULTANT'S assertion in writing. In the event the
5 Project Manager determines that CONSULTANT is correct, the additional work or
6 services shall be authorized by a new or revised Task Order that covers the new scope,
7 cost and schedule. In the event that such notification is not given or if the Project
8 Manager is not afforded an opportunity to negotiate the appropriate fee for such
9 additional services prior to CONSULTANT'S commencement of such additional
10 services, then CONSULTANT shall be deemed to have agreed to perform the work or
11 services without any additional compensation and to have accepted sole responsibility
12 for the performance of said work or services. Extra work done or services performed
13 without a new or revised Task Order from DISTRICT'S General Manager-Chief
14 Engineer shall be considered unauthorized and shall not be paid for by DISTRICT.

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17 At any time during the performance of an approved Task Order, DISTRICT may request
18 that CONSULTANT perform extra services. Any work which is determined by
19 DISTRICT to be necessary for the proper completion of the approved Task Order, but
20 which neither CONSULTANT nor DISTRICT reasonably anticipated would be
21 necessary at the time the scope of services for the assigned Task Order was approved,
22 must be authorized by DISTRICT'S General Manager-Chief Engineer by a new or
23 revised Task Order.

24
25 At any time during the performance of the Task Order, the Project Manager, upon
26 providing five (5) days written notice to CONSULTANT, may delete services and the
27 associated fees from the Task Order. In the event DISTRICT requests deletion of
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1 services from the Task Order, DISTRICT shall make payment for all services
2 satisfactorily performed in accordance with the negotiated Task Order up to the effective
3 date of deletion; the amount of the payment shall be prorated to the total services
4 necessary for completion of the Task Order. Any work product developed for the deleted
5 services shall be provided to DISTRICT.

6
7 23. DISPUTES

8 A. In the event CONSULTANT considers any work demanded of CONSULTANT
9 to be outside the requirements of this Agreement, or if CONSULTANT considers
10 any order, instruction or decision of DISTRICT to be unfair, CONSULTANT
11 shall promptly, upon receipt of such order, instruction or decision, ask for a
12 written confirmation of the same whereupon CONSULTANT shall proceed
13 without delay to perform the work or to conform to the order, instruction, or
14 decision. However, if CONSULTANT finds such order, instruction or decision
15 unsatisfactory, CONSULTANT shall, within twenty-one (21) calendar days after
16 receipt of same, file a written protest with DISTRICT stating clearly and in detail
17 its objections and reasons therefor. Except for such protests or objections as are
18 made of record in the manner specified and within the time stated herein, and
19 except for such instances where the basis of a protest could not reasonably have
20 been foreseen by CONSULTANT within the time limit specified for protest,
21 CONSULTANT hereby waives all grounds for protests or objections to orders,
22 instruction, or decisions of DISTRICT and hereby agrees that, as to all matters
23 not included in such protests, the orders, instructions and decisions of DISTRICT
24 will be limited to matters properly falling within DISTRICT'S authority.
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1 B. Any controversy or claim arising out of or relating to this Agreement which
2 cannot be resolved by mutual agreement may be settled by arbitration, provided
3 that the parties hereto mutually agree to submit to arbitration.

4 C. Neither the pendency of a dispute nor its consideration by arbitration shall excuse
5 CONSULTANT from full and timely performance in accordance with the terms
6 of this Agreement.
7

8 24. ASSIGNMENT

9 Neither this Agreement nor any part thereof shall be assigned by CONSULTANT
10 without the prior written consent of DISTRICT.

11 25. CONFLICT OF INTEREST

12 CONSULTANT covenants that it presently has no interest, including but not limited to,
13 other projects or independent contracts, and shall not acquire any such interest, direct or
14 indirect, which would conflict in any manner or degree with the performance of services
15 required to be performed under this Agreement. CONSULTANT further covenants that
16 in the performance of this Agreement, no person having any such interest shall be
17 employed or retained by it under this Agreement.
18

19 26. JURISDICTION/LAW/SEVERABILITY

20 This Agreement is to be construed in accordance with the laws of the State of California.
21 If any provision of this Agreement is held by a court of competent jurisdiction to be
22 invalid, void or unenforceable, the remaining provisions shall be declared severable and
23 shall be given full force and effect to the extent possible.
24

25 Any legal action, in law or equity related to the performance or interpretation of this
26 Agreement shall be filed only in the Superior Court for the State of California located in
27 Riverside, California, and the parties waive any provision of law providing for a change
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1 of venue to another location. Prior to the filing of any legal action, the parties shall be
2 obligated to attend a mediation session with a neutral mediator to try to resolve the
3 dispute.

4 27. WAIVER

5 Any waiver by DISTRICT of any breach of any one or more of the terms of this
6 Agreement shall not be construed to be a waiver of any subsequent or other breach of the
7 same or any other term thereof. Failure on the part of DISTRICT to require exact, full
8 and complete compliance with any terms of this Agreement shall not be construed as in
9 any manner changing the terms hereof, or estopping DISTRICT from enforcement
10 hereof.
11

12 28. NON-DISCRIMINATION

13 In the performance of the terms of this Agreement, CONSULTANT shall not engage in
14 nor permit others he may employ to engage in discrimination in the employment of
15 persons because of the race, color, national origin or ancestry, religion, physical
16 handicap, disability as defined by the Americans with Disabilities Act (ADA), medical
17 condition, marital status or sex of such persons, in accordance with the provision of
18 California Labor Code Section 1735.
19

20 29. NON-APPROPRIATION OF FUNDS

21 It is mutually agreed and understood that the obligation(s) of DISTRICT are limited by
22 and contingent upon the availability of DISTRICT funds for the reimbursement of
23 CONSULTANT'S fees. In the event that such funds are not forthcoming for any reason,
24 DISTRICT shall immediately notify CONSULTANT in writing. This Agreement shall
25 be deemed terminated and have no further force and effect immediately upon receipt of
26 DISTRICT'S notification by CONSULTANT. In the event of such termination,
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CONSULTANT shall be entitled to reimbursement of its costs in accordance with
Section 5 (COMPENSATION) and Section 6 (PAYMENT).

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//

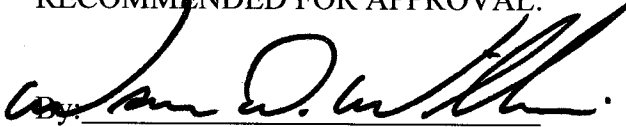
IN WITNESS WHEREOF, the parties hereto have executed this Agreement on

SEP 01 2015

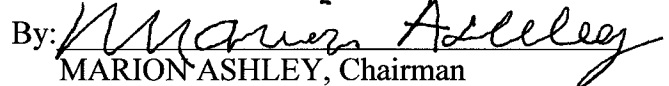
(to be filled in by Clerk of the Board)

RECOMMENDED FOR APPROVAL:

**RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT**



WARREN D. WILLIAMS
General Manager-Chief Engineer

By: 

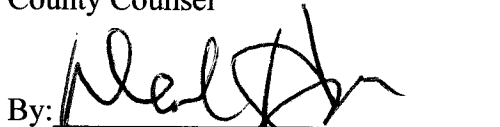
MARION ASHLEY, Chairman
Riverside County Flood Control and Water
Conservation District Board of Supervisors

APPROVED AS TO FORM:

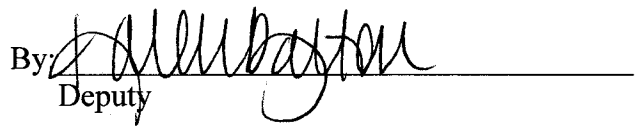
ATTEST:

GREGORY P. PRIAMOS
County Counsel

KECIA HARPER-IHEM
Clerk of the Board

By: 

NEAL R. KIPNIS
Deputy County Counsel

By: 

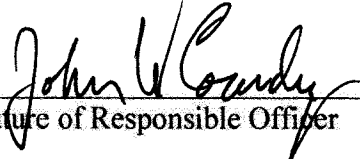
Deputy

(SEAL)

On-Call Consulting Services Agreement
TRC Solutions, Inc. (FY 2015-16 to FY 2017-18)
06/11/15
MHW:blm

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TRC SOLUTIONS, INC.



Signature of Responsible Officer

John W. Cowdery

Printed Name

Senior Vice President

Title

On-Call Consulting Services Agreement
TRC Solutions, Inc. (FY 2015-16 to FY 2017-18)
06/11/15
MHW:blm

Attachment A - Service Categories & Tasks

TRC Solutions, Inc.

has been selected for the service categories and tasks identified below

Service Category	Task	Task Name	Selected?
A - Hydrology and Hydraulics	1	Hydrology and Planning Studies	
	2	Hydraulic Modeling	
	3	2-Dimensional Floodplain Mapping	
	4	Design of Flood Control Facilities (Full PS&E)	
	5	Stream Geomorphology/Scour Assessment and Restoration	
	6	FEMA CLOMR/LOMR Preparation	
	7	Dam Inundation Study and Mapping	
	8	Levee Certification	
B - Structural	1	Custom Structure Design (Reinforced Concrete)	
	2	Evaluating Structural Integrity of Exist. FC Structures	
C - Construction	1	Full Service Construction Management	
	2	Inspection	
	3	Materials Testing and Analysis	
D - Geotech	1	Subsurface Soils Investigation and Engineering Analysis	
	2	Dam/Levee Design and Rehabilitation	
	3	Pathology and Utility Location	
E - Environmental	1	CEQA, NEPA compliance, incl doc prep, etc.	Y
	2	Cultural resources investigations, surveys, and monitoring	Y
	3	Paleontological resources investigations, surveys, and monitoring	Y
	4	General biological resources assessment, MSHCP Consistency, HANS, JPR, and DBESP	Y
	5	Focused surveys	Y
	6	Pre-construction bird and other species surveys	Y
	7	Jurisdictional delineations, permit prep and negotiation, HMMP Report prep	Y
	8	Habitat restoration and enhancement, HMMP impl., and plant pallet/seed mix	Y
	9	Phase 1 and Phase 2 ESA, and/or hazardous material presence/absence reports	Y
	10	Air quality and GHG analysis and mitigation pursuant to the AQMD standards and CEQA	Y
	11	Noise and vibration studies and mitigation prepared pursuant to CEQA	Y
F - Watershed	1	NPDES and MS4 Program Administration and Support	
	2	TMDL/Basin Planning Support	
	3	Water Quality Monitoring and Assessment	
	4	Laboratory Analysis	
	5	Public Education/Outreach Program Support	
	6	Water Conservation	
G - Plan Check	1	Full Service Plan Checking	

Capacity for on-call services= **\$800,000**

Attachment B

Scope of Services

Service Categories

- A. Hydrology and Hydraulics
- B. Structural Design
- C. Construction Oversight and Management
- D. Geotechnical and Potholing
- E. Environmental and Regulatory Compliance
- F. Watershed Protection Programs
- G. Development Plan Check

Service Category A. HYDROLOGY AND HYDRAULICS

Task A.1 Hydrology and Planning Studies

Work performed under this section involves the identification and development of preliminary engineering designs to assist the District with the development of recommended drainage facility alternatives or to analyze existing conditions.

- Development of hydrology using District approved methods
- Evaluation of detention storage options / locations
- Development of alternative facility types and alignments
- Perform hydrologic routing and hydraulic calculations as needed
- Develop planning level cost estimates using District approved unit cost analysis
- Comparison and evaluation of alternatives
- Preparation of report summarizing the study

Task A.2 Hydraulic Modeling

Firms responding to this task must demonstrate knowledge and experience developing and performing computerized hydraulic models for the design or analysis of flood control facilities and structures. Required modeling may include, but is not limited to: improved or natural open channels, levees, drop structures, closed conduit systems, inlets, hydraulic junctions, street flow capacity, culvert design and bridge/pier analysis. All work shall be performed in accordance with District standards and any special criteria established by the District.

Consultants shall identify in their Service Category Qualifications what hydraulic modeling software packages their firm has expertise in. Of additional interest is firms with experience and expertise developing and running scale physical hydraulic models of complicated hydraulic structures that may be considered for construction.

Prospective firms shall indicate the qualifications, experience, licenses, certificates and academic degrees that their employees, who will be performing these services, possess. All hydraulic modeling and reports must be stamped and signed by a Civil Engineer licensed in the State of California.

Task A.3 Two-Dimensional Floodplain Modeling

Firms shall have experience and technical capability of developing two-dimensional hydraulic models using Flo-2DPRO, or other District accepted programs. Firms shall be familiar with rainfall and hydrograph model inputs and incorporating the District' Hydrology Manual. Firms shall use topographic mapping provided by the District or if not available, supplement with USGS or best available topography. Firms shall be able to estimate model inputs including channel cross sections, computational grid and roughness values from topographic data, aerial photographs and field reconnaissance. Firms must prepare reports documenting the approach of the 2D analysis and the

resulting discharges, depths and velocities at identified points of interest, and prepare associated work maps and final exhibits.

Task A.4 Design of Flood Control Facilities (Full PS&E)

Firms responding to this task must demonstrate qualifications and experience preparing plans, detailed specifications and cost estimates for the construction or repair of flood control facilities. Consultants shall be multi-disciplined, licensed in California and capable of providing civil, structural and engineering services for stormwater facilities such as, but not limited to open channels, underground storm drains, (debris) basins, culverts, levees, etc. Projects may also require design or repair for a variety of elements related to stormwater facility projects such as roads, pavement, traffic signals, detours and traffic control, right-of-way engineering, maintenance and repair plans, water quality BMPs, environmental compliance, and topographic mapping.

All designs must incorporate a third-party constructability review, be incorporated into plan, profile and detail sheets meeting the District's drafting requirements, and be stamped and signed by a Civil Engineer licensed in California.

Task A.5 Stream Geomorphology/Scour Assessment and Restoration

Firms responding to this task must demonstrate that it has staff with expertise and applicable* experience to provide all of the following types of services, including any field investigations, hydrologic and/or hydraulic modeling necessary:

- Investigate and assess current conditions of stream systems to identify potential causes for geomorphic instability.
- Estimate the type and direction of future stream geomorphology based on existing conditions and anticipated future development.
- Estimate long term sediment transport.
- Provide a formal report containing detailed, project specific, tailored recommendations for construction of localized scour protections, or for creek restoration projects that would establish geomorphic stability without compromising flood conveyance or maintainability. The expectation is that this report would provide all necessary information to facilitate development of plans for construction.

**Applicable experience must be for ephemeral stream systems in semi-arid/arid environments comparable to Riverside County.*

Task A.6 FEMA CLOMR/ LOMR Preparation

Firms shall prepare hydrologic models and hydraulic models including a duplicate effective, corrected effective, existing and proposed conditions model, as needed. Firms shall prepare the water surface elevation profiles, floodplain workmaps and annotated FIRMs. Firms shall prepare MT-2 forms to include in a package to FEMA detailing the changes initiating the revised floodplain mapping. Prepare

Map Revision application package to include hydrologic and hydraulic models, completed FEMA certification forms, floodplain workmaps, revised flood profile, and annotated FIRM panels showing the revised floodplain. Firms shall coordinate with the District and FEMA to revise the CLOMR/LOMR based on review comments.

Task A.7 Dam Inundation Study and Mapping

Firms shall be disciplined and capable of providing engineering services to develop a dam inundation study. These services include a hydrologic analysis, dam break analysis, hydraulic modeling, and appropriate dam inundation mapping limits based on multiple dam failure scenarios. Hydrologic modeling will be performed in accordance with the District's Hydrology Manual (dated April 1978) and HMR 58/59 to generate the Probable Maximum Flood (PMF). Dam breach analyses may utilize both actual dam characteristics and empirical equations for both fair weather and hydrologic scenarios. Using topographic mapping, develop hydraulic models that will dynamically route the spillway and dam-breach hydrographs to the appropriate outfalls. Tasks would include preparation of a report including the technical studies and inundation maps in accordance with Cal-EMA regulations and guidelines.

Task A.8 Levee Certification

Firms shall review previous geotechnical reports and/or complete additional geotechnical analysis to determine whether the levee meets the FEMA criteria for slope stability, foundation stability and settlement. Firms shall prepare hydrologic and hydraulic modeling to determine whether the levee meets the FEMA criteria for freeboard. Toe scour shall be calculated to determine bank protection and foundation stability. Interior drainage analysis will involve determining whether high flow in the channel will flood interior areas due to backwater. Prepare updated floodplain maps, as necessary, including "without levee" floodplains. Prepare Letter of Map Revision application package to include hydrologic and hydraulic models, completed FEMA certification forms, floodplain workmaps, revised flood profile, and annotated FRIM panels showing the revised floodplain. Firms shall coordinate with the District and FEMA to revise the LOMR based on review comments.

Service Category B. STRUCTURAL DESIGN

Task B.1 Custom Structural Design (Reinforced Concrete)

Firms responding to this task must demonstrate experience, knowledge and familiarity with performing reinforced concrete structural design for new, or rehabilitation of existing flood control facilities.

Typical reinforced concrete flood control facilities include, but are not limited to: box culverts, pipes, rectangular channels, trapezoidal channels, bridges, drop structures, pier noses, cutoff walls, retaining walls, parapet walls and junctions. Firm should also be capable of designing modifications to standard structures as needed to accommodate penetrations, non-standard junctions, utility protection measures etc. All work shall be performed in accordance with current applicable codes, District standards and any special criteria established by the District.

All structural designs, dimensions and reinforcing steel schedules will be required to be detailed on project plans and stamped by a Civil Engineer registered in the State of California.

Task B.2 Evaluating Structural Integrity of Existing Flood Control Structures

Firms responding to this task must demonstrate experience, knowledge and familiarity with performing structural analysis, non-intrusive field inspections such as high definition video inspections, or intrusive means such as core drilling to assess the structural integrity of existing structures. Assessment of such structures may be due to the aging of such facility or due to proposed temporary or permanent loads that maybe beyond the as-built condition.

All work shall be performed in accordance with current applicable State and Federal codes

All structural analysis, inspection reports and repair recommendations will be summarized in a report stamped by a Civil Engineer registered in the State of California.

Service Category C. CONSTRUCTION OVERSIGHT AND MANAGEMENT

Task C.1 Full Service Construction Management

Firms responding to this task must have an established team of local staff that is qualified and experienced in providing full service Construction Management for flood control or similar linear underground projects. Relevant past experience should include construction management for linear projects within the 'built' environment, such as within existing paved public roads, and experience with applicable codes and standards used in the construction of flood control facilities.

Firms providing Full Service Construction Management would, acting as an agent of the District, provide all necessary oversight to verify and enforce compliance with the plans and specifications, over the three phases of a construction project: Preconstruction, Construction, and Closeout.

Firms must present an established and appropriately qualified local team that covers the following roles:

- 1) *Construction Manager*: This person would be responsible for coordinating all consultant operations in providing full-service construction management, and would be the primary point of coordination with the District and the Contractor. The personnel in this role should have a minimum 5 years' experience as a lead in providing construction management over relevant construction projects. Must be a PE-Civil in California and should have knowledge of hydraulics and reinforced concrete structures.
- 2) *Field Inspector*: See C.2 below for requirements.
- 3) *Materials Testing and Analysis*: See C.3 below for requirements.

Task C.2 Inspection

Firms responding to this task must identify local staff that have the experience and qualifications to provide full or part time inspection on flood control projects, including all documentation necessary to track progress, estimate quantities, verify payment requests, etc. Emphasis should be placed on experience inspecting construction projects within a 'built' environment, such as within existing paved public roads, and experience with applicable standards and conventions used in the construction of flood control facilities.

The inspector(s) shall have a minimum of five (5) years of experience inspecting relevant construction projects and shall be a trained competent person as defined by 29 CFR 1926.650. Inspection staff that are certified as a Qualified SWPPP Practitioner (QSP) are also desired to ensure that the District (as project owner and LRP) stays in compliance with the Construction General Permit.

Task C.3 Materials Testing and Analysis

Firms responding to this task must identify the staff available to perform material (such as earthwork and concrete construction) testing and reporting, and the equipment and/or laboratories that will be utilized. Testing may consist of, but not limited to the following:

- Soil Sieve and Proctor Testing
- Soil Consolidation Testing
- Field Density Testing
- Concrete Cylinder Fabrication and Testing
- Asphalt Concrete Testing
- Precast Concrete materials and fabrication audits.

Staff identified for providing Materials Testing and Analysis must have a minimum of two (2) years of relevant experience specifically including experience in the use of a Nuclear Moisture/Density Gauge, and must have and maintain all required industry or equipment certifications. Possession of appropriate American Concrete Institute (ACI) Certifications is preferred.

Service Category D. GEOTECHNICAL AND POTHOLING

Task D.1 Subsurface Soils Investigation and Engineering Analysis

Firms responding to this task must demonstrate relevant experience and appropriate licensure/certifications for providing the following types of Geotechnical Engineering Services, **including performance of any necessary field investigations and lab testing that may be required** to support design of flood control facilities.

Field Investigations and Engineering Recommendations for

- Grading and Site Clearing that may be necessary for the construction of the project
- Potential groundwater impacts for the project
- Allowable bearing capacity, and foundation preparation/ground improvement
- Flexible and Rigid Pavement Design
- Moisture Content necessary to use excavated soils in Compacted Fill
- Soil Classification and Physical Properties
- Lateral earth pressure for design or analysis of earth retaining structures
- Slope Stability and Protection
- Seismic Stability
- Seepage Analysis
- Open and Braced Excavation (Shallow/Deep)
- Infiltration feasibility

Task D.2 Dam/Levee Design and Rehabilitation

The District is seeking firms with experience and qualifications in designing new Dams/Levees, as well as rehabilitating existing Dams/Levees.

Firms responding to this task must demonstrate relevant experience and appropriate licensure for the types of work described below:

Most dams will be under the jurisdiction of California Department of Water Resources, Division of Safety of Dams (DSOD), thus, experience working with DSOD is desired. The consultant will be expected to lead a multidisciplinary team to perform work such as feasibility studies, site reconnaissance and geotechnical/geologic investigations, seismic and stability analysis, embankment material sourcing and selection, seepage analyses and mitigation, filter design, spillway and outlet works design, and analysis and mitigation of potential failure modes. The consultant may also be tasked to review, study and analyze existing dams and provide recommendations and construction plans for rehabilitation measures.

With regards to levees, the consultant must have demonstrated experience in the design of earthen levees, slope protection, scour/toe protection, foundation requirements, embankment material, seepage analysis, slope stability, settlement analyses, levee transitions, etc., and design such structures to meet Federal Emergency Management Agency (FEMA) criteria. The consultant may also be tasked to investigate existing levees and prepare a report of the findings with recommendations for rehabilitation.

Task D.3 Potholing and Utility Location

Firms responding to this task shall demonstrate relevant experience, licensure and certifications for providing Underground Utility Potholing Services for District Capital Improvement Projects, including all of the following:

- Coordination with each of the utility companies, such as for verifying utility type and material, ensuring protection of the utility during potholing, etc.
- Secure any required encroachment permits, including design and implementation of any necessary temporary traffic controls as may be required by the local agency.
- Performance of air vacuum excavation "Air Knife" pothole technology or other appropriate investigative methods.
- Detailed reports including ALL of the following:
 - Size and dimensions of utility and/or encasement
 - Type and material of utility
 - Depth to top and bottom of utility
 - Digital photographs of utility
 - Thickness and type of all paving materials
 - Additional conflicts/observations such as previously unidentified utilities, unusual subsurface conditions, utility encasements, etc.
- Restoration of the property, pavement, landscaping etc., following potholing.

Service Category E. ENVIRONMENTAL AND REGULATORY COMPLIANCE

Task E.1 CEQA and/or NEPA cCompliance and Constraints Analysis, including Document Preparation, Noticing, Distribution and Public Meetings

Prepare and distribute CEQA documents such as an Initial Study, Mitigated Negative Declaration, and/or Environmental Impact Report (EIR). On occasion, separate or joint CEQA and NEPA documents may be required.

Provide measures and/or recommendations to mitigate potentially significant impacts; and prepare Mitigation Monitoring and Reporting Program (MMRP), when necessary.

Attend public scoping meetings and/or public hearings to support the District, and prepare and distribute applicable public notices (e.g., Notice of Intent, Notice of Preparation, Notice of Determination, etc.).

Prepare a Preliminary Environmental Assessment Report (PEAR), which is an environmental constraints analysis that generally includes all CEQA topics, MSHCP compliance and any potential regulatory permitting issues (401/404/1602). The PEAR assists the District to identify design constraints early in the planning process. *Note that although similar in intent, this is not the same as a Caltrans PEAR.*

Task E.2 Cultural Resources Investigations, Surveys and Monitoring, including Short Notice Discovery Response and Assessment

Prepare a Cultural Resources Report that addresses all potential issues related to archaeological, traditional, and built environment resources in accordance with applicable Federal, State, and local laws and regulations regarding cultural resources pursuant to CEQA/NEPA and/or regulatory permitting processes including, but not limited to Section 106 of the National Historic Preservation Act.

Typical services include record search, map and literature search; Sacred Lands records check with the Native American Heritage Commission (NAHC); scoping with tribes; pedestrian surveys, identification of the Area of Potential Effect (APE); cultural resource recordation and evaluation; mitigation plans; Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER), when necessary.

Conduct cultural resources monitoring for District construction and/or maintenance activities.

Consultants should be available on short notice (24 to 72 hours) to assess and respond to any accidental cultural resources discoveries during ongoing construction, operations and maintenance work. This includes evaluating any discoveries in compliance with applicable laws and regulations.

Task E.3 Paleontological Resources Investigations, Surveys and Monitoring, including Short Notice Discovery Response and Assessment

Prepare a Paleontological Resources assessment including paleontological resource records searches, literature searches, and pedestrian surveys in order to identify potential issues related to paleontological resources in accordance with applicable Federal, State, and local laws and regulations, CEQA/NEPA environmental review and/or regulatory permitting processes.

Conduct paleontological resources monitoring for District construction and/or maintenance activities. For properties found to have high sensitivity for paleontological resources, provide paleontological resource mitigation plans, construction monitoring, recovery of resources, preparation and identification of specimens, and reporting that meets County of Riverside review standards.

Consultants should be available on short notice (24 to 72 hours) to assess and respond to any accidental paleontological resource discoveries during ongoing construction, operations and maintenance work. This includes evaluating any discoveries in compliance with applicable laws and regulations.

Task E.4 General Biological Resources Assessment, MSHCP Consistency Assessment, HANS, JPR, and DBESP

Prepare a Biological Resources Assessment that addresses any potential biological issues and concerns for the project area including, but not limited to:

- Literature review and reconnaissance surveys to prepare habitat assessments for sensitive or listed plant and wildlife species;
- Biological resources impact analysis in accordance with CEQA; in terms of regional planning, and city, state, and federal laws and guidelines to comply with all existing biological resource laws, regulations, and court precedent;
- Propose recommendations for avoidance and/or measures to minimize impacts;
- Applicable Habitat Conservation Plans consistency assessment, such as the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Coachella Valley MSHCP and Tribal Habitat Conservation Plan; and
- Prepare Joint Project Review (JPR), Determination of Biological Equivalent or Superior Preservation (DBESP), and Habitat Assessment & Negotiation Strategy (HANS), if necessary.

Task E.5 Focused Surveys

Perform focused surveys for sensitive or listed plant and wildlife species to comply with CEQA, MSHCP, FESA and CESA. Staff must be familiar with accepted protocols for listed and/or sensitive species.

COMMON RIVERSIDE COUNTY LISTED SPECIES

Species	
arroyo toad	least Bell's vireo
Bonytail chub	mountain yellow-legged frog
California least tern	mountain plover
California red-legged frog	peninsular bighorn sheep
Casey's June beetle	quino checkerspot butterfly
Coachella Valley fringe-toed lizard	razorback sucker
coastal California gnatcatcher	San Bernardino kangaroo rat
Colorado pikeminnow	Santa Ana sucker
Delhi Sands flower-loving fly	Riverside fairy shrimp
desert pupfish	southwestern willow flycatcher
Desert slender salamander	Stephens' kangaroo rat
desert tortoise	vernal pool fairy shrimp
flat-tailed horned lizard	Yuma clapper rail

Task E.6 Pre-construction Nesting Bird, Burrowing Owl and Other Species Surveys, and Short Notice Biological Resources Discovery Response and Assessment

Perform pre-construction surveys for nesting birds, burrowing owls and other species to comply with CEQA, MSHCPs, FESA, CESA, Migratory Bird Act and regulatory permits. Consultants should be available by short notice (24 to 72 hours) to respond and assess species sited near the District's construction, operations and/or maintenance work and recommend avoidance measures.

Task E.7 Jurisdictional Delineations, including Permit Preparation and Negotiation with Resource Agencies, and HMMP Report Preparation

Prepare a Jurisdictional Area Delineation Report and Impact Analysis, including significant nexus evaluation, that addresses all potential issues related to "Waters of the U.S." and wetlands (Clean Water Act), "Waters of the State" and wetlands (Porter-Cologne Water Quality Control Act), and areas under the jurisdiction of the California Department of Fish and Game Code (Section 1600 et seq.).

Prepare 401/404/1602 permit applications and provide support to District during discussions and negotiations with regulatory agencies during the permitting process.

Prepare a native Habitat Mitigation and Monitoring Plan (HMMP) in compliance with project permits.

Task E.8 Habitat Restoration and Enhancement, HMMP Implementation, and Plant Pallet/Seed Mix for District Mitigation Projects and/or Facilities

Perform field work such as invasive plant removal, trash removal, plantings including hydroseed and container plants, irrigation placement and maintenance, monitoring and reporting to meet the requirements of an approved HMMP. Additionally, consultants should be able to provide plant pallet/seed mix for District projects and facilities.

Task E.9 Phase I and Phase 2 ESA, and/or Hazardous Material Presence/Absence Reports, Monitoring and Short Notice Discovery Response and Assessment

Provide Hazardous Materials report to evaluate potential impacts related to environmental hazards and hazardous materials and determine the presence/absence of any hazardous materials in accordance with California Government Code Section 65962.5. Consultant should assess potential for discovering hazardous materials during construction, operation and maintenance of District facilities, and should make recommendations on how to handle any potential hazardous waste.

Perform hazardous material monitoring during construction and maintenance of District facilities.

Consultant should be available by short notice (24 to 72 hours) to assess and respond to any accidental hazardous material discoveries during the District's ongoing construction, operations and maintenance work. This would include monitoring and evaluating any hazardous materials discoveries in compliance with all applicable laws and regulations.

Task E.10 Air Quality and Greenhouse Gas Analysis with Project and Programmatic-level Technical Expertise, and Mitigation pursuant to the AQMD Standards and CEQA

Provide air quality and greenhouse gas (GHG) impact analyses for District construction and maintenance activities, and programmatic analysis for Master Drainage Plans. The air quality and GHG analysis should be prepared in accordance with the South Coast Air Quality Management District (SCAQMD) requirements and will support the District's CEQA analysis.

Task E.11 Noise and vibration studies and mitigation prepared pursuant to CEQA

Provide noise and vibration analysis for potential construction and maintenance impacts on nearby sensitive receptors to support the District's CEQA analysis.

Service Category F. WATERSHED PROTECTION PROGRAMS

Task F.1 NPDES Program Administration and Support

Firms proposing to provide support to the District in the development of NPDES compliance programs must demonstrate qualifications and experience in one or more of the following tasks:

General NPDES Program Support

May include efforts such as, but not limited to: researching and providing expert guidance and recommendations regarding regulatory issues at the federal, state, and local level on Regional and General NPDES Permits and related policies, law and regulations; developing letters (or other professional correspondence) and/or providing expert testimony on the District's behalf; representing the District and/or Permittees at stakeholder/technical groups or meetings; developing Permit compliance documents; annual reporting; and developing associated tools to facilitate compliance strategies.

NPDES MS4 Permit Support

May include efforts such as, but not limited to: researching regulations, other compliance programs, and permits in support of permit renewal process and/or compliance program development; developing cost-effective strategies for addressing Permittee issues and/or permit compliance requirements; developing Reports of Waste Discharge and/or comments and alternative language to draft/redline permits; and providing expert testimony and draft comment letters to local, state and federal agencies regarding NPDES MS4 issues.

Program Assessment and Reporting

May include efforts such as but not limited to: compiling/analyzing data for annual report submittals; providing compliance program audits and recommendations for improvement; and coordination and preparation of reports (including annual reports) and assessments required to demonstrate and document compliance with MS4 Permits.

Training/Outreach

May include efforts such as, but not limited to: developing and implementing creative and effective methods for training/outreach on relevant issues such as Low Impact Development, MS4 Permit Implementation for Permittees, Pollution Prevention Practices and other Regional and Statewide General NPDES Permits

Program Funding

Identify, and facilitate additional methods for funding NPDES compliance programs, such as, but not limited to: identifying grant opportunities; developing applications and providing administration for grants; as well as, other available funding mechanisms.

Task F.2 TMDL/Basin Planning Support

Firms proposing to provide support to the District in the development of and compliance with TMDLs, and in facilitating updates to the Basin Plan must demonstrate qualifications and experience in one or more of the following tasks:

Basin Planning Support

May include efforts such as, but not limited to: Supporting Use Attainability Analyses, Site Specific Objectives and/or other Water Quality Control Plan amendments with literature review, regulatory alternatives assessment, monitoring, modeling and task force facilitation.

303(d) List Evaluation

Review of draft 303(d) lists for errors, gaps, and other issues that may facilitate appropriate listing/de-listing of water quality parameters; designing and implementing programs to gather relevant information and perform the analyses necessary to support de-listing of appropriate constituents; and preparing written comments and testimony on existing or potential future 303(d) listings.

TMDL Development Coordination

May include efforts such as, but not limited to: providing expert guidance and technical support to MS4 Permittee stakeholders during the development of TMDLs; leading third party TMDL efforts; and coordinating and facilitating responses to Regional Board CWC 13267 information requests.

TMDL Compliance Support

May include efforts such as, but not limited to: developing TMDL Urban Source Evaluation Plans; identifying cost-effective methods (local, sub-regional and regional structural and source control solutions) for compliance with TMDL Waste Load Allocations; supporting MS4 Permittee negotiations with regulators and other responsible parties to design and fund cost effective compliance approaches; developing TMDL compliance assessment and verification approaches; and developing required TMDL reports.

Pollutant Fate and Transport Modeling

May include efforts such as, but not limited to: developing advanced models estimating pollutant loads from various sources including urban, natural and uncontrollable sources and evaluating compliance program effectiveness; incorporating other study results into existing TMDL models; providing expert evaluation of modeling efforts by other parties including the adequacy of such models to address stated goals.

Task F.3 Water Quality Monitoring and Assessment

Firms proposing to provide support to the District and/or the Permittees' monitoring programs must demonstrate qualifications and experience in one or more of the following tasks:

Monitoring Program Design

May include efforts such as, but not limited to: development of monitoring programs, procedures, training and resources consistent with USEPA, SWAMP and Regional requirements; and preparation of special studies regarding stormwater science, monitoring, and/or compliance programs.

Monitoring Program Reporting and Assessment

May include efforts such as, but not limited to: preparation of annual monitoring reports in accordance with the MS4 Permits or other regional and statewide General NPDES Permits; conducting statistical and/or other compliance analyses of monitoring data and/or other data; producing professional exhibits and maps displaying tributary areas, analysis results, problem areas and other assessment data; and formatting and uploading of water quality data to CEDEN.

Water Quality Monitoring

May include efforts such as, but not limited to: performing field water quality monitoring/sampling activities and/or studies (e.g., receiving water and outfall monitoring); conducting desktop and field reconnaissance for potential sampling locations; performing illegal discharge identification monitoring; performing Bioassessment monitoring; conducting sediment bed sampling; conducting Toxicity Identification Evaluations/Toxicity Reduction Evaluations; performing procurement of access and/or special permits; preparing and submitting sampling event status reports and field data sheets.

Task F.4 Laboratory Analysis

It is preferred that firms proposing to provide lab analysis services, in support of the District and/or Permittees' monitoring requirements, meet the following qualifications:

- Appropriate Certifications (NELAP and/or other EPA/RWQCB/MS4 Permit required certifications including bioassessment taxonomy certifications);
- Stormwater Monitoring Coalition (SMC) Lab Intercalibration participation or certification for chemistry and toxicity (as appropriate). List any others that may apply (e.g., PCR etc.);
- Ability to produce SWAMP-compatible reports for CEDEN upload (paper and electronic).

In addition firms should demonstrate qualifications and experience in one or more of the types of analyses listed below. Specific analyses capabilities should be submitted with the qualification package. All sample handling, storage, and analysis will be in accordance with 40 CFR Part 136 (latest edition) "Guidelines Establishing Test Procedures for the Analysis of Pollutants", guidance developed by the State Water Resources Control Board (SWRCB) pursuant to Water Code Section 13383.5, or other methods more sensitive than those specified in 40 CFR 136. Analytical methods should comply with the Stormwater Ambient Monitoring Program (SWAMP) "MethodLookUp" list (http://checker.swamp.mpsl.mlml.calstate.edu/SWAMP_Checker/DisplayLookUp.php?List=MethodLookUp), if appropriate. Analysis results and reporting should comply with the State Water Resources Control Board (SWRCB) Minimum Levels (MLs) and/or Stormwater Ambient Monitoring Program (SWAMP) Target Reporting Limits.

Chemical Analyses

The firm should have the ability to analyze an array of constituents. Test matrices include both water and sediment.

Bacteriological Analyses

The firm should have the ability to analyze an array of microorganisms, viruses and other pathogens, including but not limited to *E. coli*, Fecal Coliform, Total Coliform, *Enterococcus*, and Fecal Streptococci. Test matrices include water and/or sediment.

Toxicological Analyses

The firm should have the ability to conduct whole effluent acute and chronic toxicity (WET) testing utilizing an array of organisms, including, but not limited to *Pseudokirchneriella subcapitata* (*Selenastrum capricornutum*), *Hyalella azteca*, *Pimephales promelas*, and *Ceriodaphnia dubia*. Test matrices should include both water and sediment as appropriate. All tests must pass USEPA test acceptability criteria. If a test fails, upon consultation with the District, the test must immediately be repeated. Reports must include the statistical results and a written summary with an explanation of any QA issues regarding that data.

Biological Analyses

The firm should have the ability to conduct biological analyses, including collection of macroinvertebrate samples, physical habitat characterization measurements, and collection of freshwater algae samples. Analysis of macroinvertebrate samples must include taxonomic composition. Analysis of algae samples must include algal taxonomic composition (diatoms and soft algae), and algal biomass (ash-free dry mass and chlorophyll-a). Biological sample and measurements must be collected in accordance with the most current SWAMP Bioassessment SOPs (e.g., Reachwide Benthos (Multihabitat) Procedure, etc.). The firm should have the ability to use bioassessment samples, measurements, and water chemistry data for calculation of an Index of Biological Integrity (IBI) for macroinvertebrates as based on the most current calculation method. The firm should have the ability to calculate an IBI for algae for a given monitoring station where bioassessment monitoring was conducted, when a calculation method is developed. The firm should have the ability to conduct stream assessments using California's Rapid Assessment Methodology for riparian plant assessment. The firm should have capacity to store and archive identified organisms on behalf of the District for a period of not less than three years from the date that all QA steps are completed. The firm should provide a description of any exceptions to these analyses and any proposed equivalent alternatives, as appropriate.

Genetic Analyses

The firm should have the ability to conduct polymerase chain reaction (PCR), quantitative PCR (qPCR), and/or digital PCR (dPCR) analyses; however, they are not required. Additional genetic analyses methodologies may also be considered.