

**AGREEMENT REGARDING CONSTRUCTION OF CONVEYANCE PROJECT  
BETWEEN THE  
DEPARTMENT OF WATER RESOURCES  
AND THE  
CONVEYANCE PROJECT COORDINATION AGENCY**

THIS AGREEMENT (the “Agreement”) is made by and between the Department of Water Resources of the State of California (“DWR”) and the Conveyance Project Coordination Agency, a California joint powers authority (the “Authority”), each of which is sometimes referred to below as “Party” and which are collectively referred to as the “Parties.”

**RECITALS**

A. The Delta Reform Act of 2009, set forth in Water Code § 85000, *et seq.* (“Delta Reform Act”) recognizes the close connection that exists between the ecosystem health of the Sacramento-San Joaquin Delta (the “Delta”) and the ability to secure crucial water supplies transported through the Delta from its tributaries for water users throughout the State.

B. DWR is a department within the State of California Natural Resources Agency and is responsible for constructing, operating, and maintaining the State Water Resource Development System, more commonly known as the State Water Project (“SWP”).

C. DWR desires to design and construct a new Delta water conveyance facility (the “Conveyance Project”) described in greater detail in Exhibit A (“Project Description”), to be constructed, owned and operated by DWR, that would convey water from the Sacramento River north of the Delta through the Delta directly to the existing SWP and Central Valley Project (“CVP”) pumping plants located in the South Delta.

D. The purposes of the Conveyance Project are to make physical improvements to the SWP and operational improvements to the SWP and CVP necessary to improve, protect and maintain: ecosystem health; water quality; and water supplies so that the SWP and CVP are capable of reliably delivering water within a stable regulatory framework at costs that are not so high as to preclude, and in amounts that are sufficient to support, the financing of the investments necessary to fund construction and operation of facilities and/or improvements (referred to collectively herein as the “Conveyance Project Purposes”).

E. The Authority is a separate public agency organized pursuant to the Joint Exercise of Powers Act (California Government Code Sections 6500, *et seq.*) pursuant to a joint powers agreement, dated \_\_\_\_\_, 201\_\_, to assist DWR in the design, construction and implementation of the Conveyance Project in partnership with DWR.

F. The Authority consists of water agencies that contract for, or are comprised of water agencies that contract for, water supplies from the SWP, the CVP or both.

G. DWR and the member agencies of the Authority wish to complete the Conveyance Project in a safe, timely, cost-effective and efficient manner.

H. DWR and the Authority wish to partner because the Authority members constitute many or all of the public water agencies that bear the ultimate obligation to reimburse DWR and/or pay for the Conveyance Project.

I. As a condition precedent to entering into this Agreement, DWR and the Authority have developed guidelines, administrative parameters and requirements applicable to the implementation of the Conveyance Project, hereinafter referred to as the “Guidelines” which are set forth in the attached Exhibit B-1, and the Project Description.

J. In order to facilitate the safe, timely, cost-effective and efficient completion of the Conveyance Project, DWR established a dedicated enterprise within it following consultation with stakeholders and management professionals, referred to herein as the “Design and Construction Enterprise” or the “DCE,” that will develop streamlined processes and procedures consistent with applicable law and DWR’s authorities that are responsive to the unique requirements of the Conveyance Project.

NOW, THEREFORE, the Authority and DWR agree as follows:

#### AGREEMENT

- 1) Agreement Purposes. The Authority’s and DWR’s purposes in entering into this Agreement and creating and/or contributing to the DCE, should the Conveyance Project be approved, are as follows:
  - a) To safely design, construct and deliver the Conveyance Project on time, on budget and in accordance with approved specifications, while managing risk prudently.
  - b) To create a governance structure within DWR, using personnel with authority assigned to them by the Director of DWR, that is:
    - i) Equipped with the independence to carry out its mission in a manner that complies with regulatory and legal requirements;
    - ii) Capable of timely, efficient and cost-effective decision-making under all situations and uncertainties;
    - iii) A new way for DWR and public water agencies like the members of the Authority to work together;
    - iv) Accountable, financially transparent; and
    - v) Responsible towards risk management.
  - c) To achieve the Conveyance Project Purposes.

- 2) Special Purpose Enterprise within DWR. There is within DWR a special purpose office designated the Design and Construction Enterprise (“DCE”) that was established by the Director of DWR in June 2014. The DCE is dedicated solely to the timely design, construction and implementation, or to causing the timely design, construction and implementation of, the Conveyance Project.
  - a) DWR shall perform the work described in this Agreement through the DCE as described in section 4 of this Agreement, the Guidelines and the Project Description.
  - b) The DCE shall be headed by a world class project manager who shall be designated the Program Director of DWR (“Program Director”) for purposes of design, construction and implementation of the Conveyance Project as described in section 3 of this Agreement.
- 3) Designation, Duties, Resources and Oversight of Program Director.
  - a) Designation. As soon as practicable after the effective date of this Agreement, DWR and the Authority shall enter into a contract with a project manager for the Conveyance Project who shall be designated the Program Director. The Authority shall be a signatory to the agreement between the Program Director and DWR so as to allow the Program Director to (A) provide regular reports, information and updates to the Authority on a real time basis and (B) be subject to joint performance evaluations from DWR and the Authority necessary for the Program Director’s continued engagement. The Program Director shall not be engaged without the written concurrence of the Authority. The Director of DWR may terminate the Program Director; provided, however, that a subsequent Program Director shall not be engaged without the concurrence of the Authority. DWR shall (A) ensure that the Program Director is in attendance at any duly called meeting of the Authority Board on at least five days’ notice, (B) direct the Program Director to fully and promptly provide reports as required by this Agreement and to respond to any inquiries concerning the Conveyance Project from the Authority Board, (C) direct the Program Director to provide all material information and reports concerning the Conveyance Project to the Authority Board at the same time such information or report is provided to DWR, and (D) delegate necessary and appropriate authority to the Program Director to oversee the contracting process as set forth in the Guidelines, and take such other actions to efficiently manage the Conveyance Project in accordance with the Agreement.
  - b) Duties. The Program Director shall be authorized to act as described in this Agreement and any subsequent agreement between DWR, the Authority and the Program Director. The Program Director will be responsible for oversight and management of the DCE including all aspects of the design, construction and implementation of the Conveyance Project and will be delegated requisite authority to carry out such responsibilities as permitted by law.

- c) Coordination. To permit real time information sharing and coordinate the efforts of the Authority and DWR, the Program Director shall provide status report meetings to the Board of Directors of the Authority (“Authority Board”) on an as needed basis but no less than monthly basis. Such meetings shall be held in accordance with law and the frequency of such meetings may be modified by the mutual written consent of DWR and the Authority.
- d) Resources. An informal information resource (“Program Advisory Group”) consisting of technical experts from DWR and members of the Authority shall be created as soon as practicable after the effective date of this Agreement to advise the Program Director on day-to-day engineering, geotechnical, and other project-related technical matters and issues and their resolution. The Program Advisory Group shall be ad hoc in nature and serve solely as a technical resource for the Program Director and a vehicle for collaborative input. Recommendations of the Program Advisory Group shall not be binding on any Party and shall be afforded substantial deference by the Program Director.
- e) Oversight. The Director of DWR shall have the final decision making authority on all aspects of the design, construction and implementation of the Conveyance Project.
  - i) In the event that a matter would have a material effect, as defined below (“Material Impact”), on the Conveyance Project, the Director of DWR shall make a final decision on the matter only with the written concurrence of the Authority Board. Each of the following matters shall constitute a Material Impact that shall require the advice and concurrence of the Authority Board:
    - (1) Any actions, including without limitation any agreement or series of related contracts for work to be performed in connection with the design, construction or implementation of the Conveyance Project, which in the reasonable judgment of the Authority Board cumulatively would cause more than Ten Million Dollars (\$10,000,000) in increased costs or a five percent (5%) increase in budgeted costs (whichever is less) for a budgeted item in Exhibit E hereto;
    - (2) Any actions that, in the reasonable judgment of the Authority Board, could cumulatively add sixty (60) or more days to the Conveyance Project schedule previously approved by the Parties;
    - (3) Any actions that, in the reasonable judgment of the Authority Board, could impact the water delivery capability, project life, or operations and maintenance costs of the Conveyance Project; or
    - (4) Any Permit (as defined in section 5 of this Agreement) that, in the reasonable judgement of the Authority Board, would result in a Material Impact as defined in subparts (1) through (3) of this section 3.
  - ii) As to matters that have a non-material effect (i.e., any matter that has not been defined above as a “Material Impact”) or prior to termination of the Program Director, DWR shall review any recommendations made by the Authority Board, and shall meet and confer with the Authority Board if a recommendation

is inconsistent with this Agreement the Project Description or DWR's mandatory legal duty. After such a meet and confer meeting, the Director of DWR shall make a final decision on the matter, which need not be consistent with the recommendation of the Authority Board.

- f) Early Identification and Resolution of Material Impact Issues. Prior to any decision by the Authority Board or DWR under paragraph 3(e), the Director of DWR, or the Director's designee, and the Chair of the Authority Board, or the Chair's designee, shall jointly meet and confer with the Program Director (1) on any matter that either Party or the Program Director identifies as potentially having a Material Impact on the Conveyance Project under paragraph 3(e)(i), (2) on recommendations of the Authority Board on any matter under paragraph 3(e)(ii), and (3) to attempt to avoid any disputes between the Parties concerning the matter.
- 4) Design and Construction Enterprise's Execution of Services. In satisfying its obligations under this Agreement to the Authority, DWR shall be responsible for complying with all applicable laws and regulations, under the powers and procedures provided to DWR. DWR shall perform the work described in this Agreement through its employees, agents, consultants and contractors in the DCE as follows:
  - a) Contracting for design, construction and implementation of the Conveyance Project will be carried out by the DCE. All public project, equipment, and architectural and engineering procurements shall be conducted in accordance with State Contracting Act and other contracting requirements imposed by law that are applicable to DWR; provided, however, that the DCE may develop and implement procedures to improve efficiency, consistent with DWR policy and applicable law.
  - b) The DCE shall be staffed with qualified individuals with expertise relative to their duties and job descriptions selected by the Program Director, as that term is defined below, who may be recruited or drawn from whatever source available, whether it is from DWR, other public water agencies or private industry, in accordance with Section 4 of the Guidelines (DCE Staffing Administration). Prior to implementing any proposed changes in Section 4 of the Guidelines, DWR shall consult with the Authority Board to receive input on the proposed changes.
  - c) All lead DCE personnel shall be retained and shall expend all work time solely on the Conveyance Project. In this regard, the DCE shall have designated legal counsel, which may hire outside specialty counsel, as appropriate and as permitted by law.
  - d) All DCE personnel shall be under the management of the Program Director, provided that DWR will also assign a career executive appointee to the DCE in order to supervise DWR personnel working under the direction of the Program Director.
  - e) In order to facilitate the effective management of the Conveyance Project, all DCE personnel shall be housed in a physically separate, discrete office section and/or building outside of the current facilities occupied by DWR and/or any of the members of the Authority, unless otherwise requested or directed by the Program Director.

- f) Upon the completion of the Conveyance Project by the DCE and resolution of all pending design or construction disputes relating to the Conveyance Project, DWR shall dissolve the DCE.
- 5) Permits and Environmental Compliance. Implementation, construction and operation of the Conveyance Project will require the third party consents, permits, orders and/or agreements listed on Exhibit C attached hereto and incorporated herein by this reference. Members of the Authority constitute many or all of the public water agencies that will bear the financial cost of any conditions and mitigation measures required thereunder, as well as the impact of any operational limitations or criteria that affect the capability project life, operation and maintenance costs of the Conveyance Project. For purposes of this Agreement, the term “Permits” is intended to include those consents, permits, orders and/or agreements necessary for the design and construction, but not the operation of, the Conveyance Project. In recognition of the special status of the members of the Authority, DWR and the Authority shall closely coordinate with one another on the submission of applications and discussions with permit agencies for the Permits and share documents and other information.
- 6) Project Design.
- a) No material change in the Project Description shall be made, and the Conveyance Project shall not be constructed or implemented other than in strict accordance with the Project Description, without the express written concurrence of both Parties. From time to time, the DWR may propose to incorporate additional features or elements into the Conveyance Project, and such additional features or elements shall become a part of the Conveyance Project and the Project Description for purposes of this Agreement upon, but only upon, the express written concurrence of the Authority Board if such additional features or elements constitute a material change. Prior to developing any material proposed changes in the Project Description, DWR shall consult with the Authority Board to receive input on the proposed changes.
- b) DWR shall furnish the Authority Board with copies of all prepared contract drawings, specifications, drainage and grading plans, and data concerning said facilities in accordance with the Design and Construction Quality Program attached hereto as Exhibit B-1.1. Thereafter, until a final contract is awarded and approved for any facility, element or portion thereof that is the subject of such contract, DWR shall furnish the Authority Board with copies of any modified or newly-developed drawings, specifications, drainage and grading plans, data, addenda, and any changes and additions to same. All of the drawings and specific actions shall be prepared under the responsible charge of a registered professional engineer as defined in Section 6701 of the California Business and Professions Code.
- 7) Property Acquisition.
- a) The Parties acknowledge that the Conveyance Project will require the acquisition of a substantial amount of real and personal property. Real property may be acquired in any manner permitted by State law and in the form of fee title, easements or as any other interests. The responsibility for identifying real property that will be acquired, and for acquiring such property, shall be DWR’s; provided,

that all such property shall be identified and acquired in accordance with the Property Acquisition Plan attached hereto as Exhibit D. No changes in or deviations from that plan shall be made without the express written concurrence of both Parties.

- b) DWR shall provide a semi-annual report to the Authority Board that includes (i) a list of real properties that have been acquired since the last semi-annual report and that are then proposed for acquisition, (ii) a brief description of each such real property, (iii) a description of any environmental or other unique issues affecting any of such real properties, (iv) the purchase price or (except where disclosure would jeopardize negotiations) the anticipated purchase price for each such property, (v) whether such real property was or will be acquired from a willing seller or via condemnation and (vi) any other factors or circumstances the DCE and the Authority Board reasonably believes to be relevant. Promptly upon the receipt of each such report, the Authority Board shall provide DWR with its comments with respect thereto, which the DCE shall consider as it thereafter pursues real property.

8) Budget and Schedule.

- a) The Parties shall conduct annual meetings to review the budget for the Conveyance Project. At the first annual budget meeting and at the budget meeting for each subsequent calendar year, DWR shall present an annual budget and schedule, a five-year forecast, and the overall Conveyance Project budget forecast for concurrence by the Authority Board. The budget presented by DWR shall include, at a minimum, individual contract estimates with a contingency amount. The Parties shall conduct quarterly meetings to review actual and forecasted expenditures against the approved budget.
- b) If an individual contract package or task exceeds or is forecast to exceed the budgeted amount in the annual budget, or if a budget category exceeds or is forecast to exceed the budgeted amount in the annual budget, DWR shall submit a modified budget to the Authority Board. The Authority Board's written concurrence in any modified budget is required before DWR commits or make expenditures in excess of those then budgeted. The initial budget categories shall be those listed in the overall budget in Exhibit E. The Parties may add or change the budget categories at any time by mutual written agreement.

- 9) Annual Report. Not later than May 1 of each calendar year, DWR shall prepare and provide to the Authority a draft annual report describing DWR's activities under this Agreement during the immediately preceding calendar year as well as the status of the Conveyance Project. Upon receipt of such draft report, the Authority shall have 14 calendar days within which to provide written comments on the draft report DWR, which shall consider such comments and incorporate those it determines to be appropriate. Within 14 calendar days after the receipt of the Authority's comments, DWR shall produce the final draft of the annual report for the relevant calendar year.

10) Record Keeping.

- a) DWR shall maintain all records directly pertinent to the performance of the Conveyance Project work in accordance with generally accepted accounting principles and practices as applicable. DWR shall also require the Program Director to maintain all records used in the preparation or support of any cost submissions from contractors, consultants and vendors, including any original bids, changes, claims, or other requests for reimbursement or any extensions of time to complete any work for the Conveyance Project.
  - b) DWR shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management under this Agreement. The DCE shall be responsible for preparing budgets, expenditure reports and controls, and institute cost containment measures.
  - c) Records maintained according this section 10 shall be retained until 3 years past the notice of completion of the Conveyance Project, or until final settlement of all design and construction related claims, disputes, or litigation, whichever occurs later.
- 11) Auditing. Throughout construction of the Conveyance Project, the Authority shall have the right to review or conduct audits of the books and records of DWR relating to the Conveyance Project and in connection with such right, the Authority shall have the right upon demand, to review, inspect, audit or reproduce at its expense all costs and accounting information and any other information, including, without limitation, books, documents, logs, papers and records (including electronic media) of DWR and all contractors, consultants, and vendors involving transactions related to this Agreement or to design and construction of the Conveyance Project, to the extent that DWR has such rights through its contracts with such entities. DWR shall provide within its contracts with all contractors, consultants and vendors the right of the Authority to conduct such audits as provided herein.
- 12) Specific Performance. The Parties acknowledge and agree that the Conveyance Project is unique, and that monetary damages may not be sufficient or calculable if DWR breaches this Agreement. The Parties further acknowledge and agree that DWR and the Authority's members have invested significant time and resources in preliminary planning studies and environmental review consistent with the requirements of CEQA, before agreeing to the terms of this Agreement. The Authority represents and DWR acknowledges that the Authority's members would not make these expenditures and resource commitments without this Agreement and is and will be making further expenditures and resource commitments in reasonable reliance upon DWR's performance of its obligations under this Agreement. Accordingly, in addition to any other remedies available to the Authority in the event of a breach or threatened breach of this Agreement by DWR, DWR agrees that the Authority shall be entitled to specific performance by DWR of DWR's procedural and administrative obligations under Sections 3 (Designation, Duties, Resources and Oversight of Program Director), 4 (Design and Construction Enterprise's Execution of Services), 5 (Permits and Environmental Compliance), 6 (Project Design), 8 (Budget and Schedule), 10 (Recording Keeping), and 11(Auditing) of this Agreement.



13) Completion and Acceptance. All of the construction carried out by this Agreement shall be regularly inspected by DWR through its DCE enterprise, which shall coordinate with the Project Advisory Group, in accordance with the State Contract Act for conformity with the drawings and specifications included in the Project Requirements. At the Authority's request, DWR shall provide the results of any inspection to the Authority. After work on each construction Agreement has been completed, a final inspection will be performed by DWR in accordance with the State Agreement Act. The DCE shall provide reasonable notice to the Authority before making a final inspection for each Agreement and shall give the Authority, at its election, the opportunity to participate in the inspection. Thirty days before the DWR intends to issue a notice of completion for each Agreement, it shall notify the Authority. Before the DWR issues any notice of completion, the Authority may provide recommendations about the notice to DWR. Following the completion and acceptance by DWR of the Conveyance Project into the State Water Project, the Authority shall have no obligation for the operation, maintenance, repair or replacement of any element of the Conveyance Project.

14) Notices.

- a) Written communications concerning this Agreement shall be delivered in person to the following person or deposited in the United States mail, postage prepaid, addressed to the other Party at the following addresses:

*[Insert Addresses for both Parties]*

- b) In addition to any other notices required to be given under this Agreement, DWR shall notify the Authority of any major delay in construction resulting from unforeseen conditions encountered by a tunnel boring machine or from flood, fire or other natural occurrences as soon as practicable after the discovery thereof.

15) Term. The term of this Agreement shall be from the date first written above until December 31, 2029 or the completion of the Conveyance Project and resolution of disputes as noted above in Section [ ], whichever is later; provided, however, that this Agreement shall not become effective until (i) approved by the Department of General Services and (ii) after completion of the environmental review under CEQA and, if appropriate, DWR approval of the Conveyance Project and posting of a Notice of Determination for the Conveyance Project as described in § 15094 of the CEQA Guidelines. Prior to the effective date of this agreement, neither DWR or the Authority is limited in any way in its discretion or the discretion of any trustee or responsible agency, department, board or commission with jurisdiction over the Conveyance Project, from exercising any discretion available to such entity or associated trustee or responsible agency, department, board or commission with respect to the Conveyance Project, including but not limited to the discretion to (i) make such modifications deemed necessary to mitigate significant environmental impacts, (ii) select other feasible alternatives to avoid such impacts; (iii) balance the benefits against unavoidable significant impacts prior to taking final action if such significant impacts cannot otherwise be avoided, or (iv) determine not to proceed with one or more component of the Conveyance Project.

- 16) Standard Clauses. The Standard Clauses attached hereto as Exhibit F are incorporated herein by this reference.
- 17) Incorporation by Reference. Each of the Exhibits hereto is incorporated herein by this reference.
- 18) Insurance Requirements. The Program Director shall annually review annually the insurance and risk management programs and make recommendations regarding the same to DWR and the Authority.
- 19) Authority. The signatories for the Authority represent that they are appropriately authorized to enter into this Agreement. A certified copy of a resolution or minute order authorizing the Authority to enter into this Agreement shall be delivered to the DCE and DWR at the time the Authority executes the Agreement.
- 20) Cooperation. The Parties acknowledge that implementation and construction of the Conveyance Project and the other activities contemplated by this Agreement will require frequent interaction between them. The Parties shall at all times work cooperatively, diligently and in good faith to accomplish the goals of this Agreement and the construction of the Conveyance Project. Provisions within this Agreement allowing for the opinion, judgment, approval, review, or determination of either party are not intended to be and shall not be construed as permitting such opinion, judgment, approval, review, or determination to be arbitrary, capricious, or unreasonable. Accordingly, each Party shall act with diligence and shall make their respective staffs available to each other as needed to efficiently implement this Agreement. Each Party shall designate a principal contact person for that Party, who may be changed from time to time, and such other appropriate staff members and consultants to participate on such Party's behalf in activities undertaken pursuant to this Agreement. The principal contact person for each Party shall be responsible for coordinating meetings and other activities under this Agreement with the principal contact person for the other Party. Meetings shall occur as the principal contacts determine are necessary, and each Party shall make its expertise and resources reasonably available for activities under this Agreement.
- 21) No Agency. The relationship of the Parties under this Agreement is solely that of contracting parties and, where expressly specified, as principal and agent. No new public agency is created hereby.
- 22) No Waiver of Sovereign Authority. Nothing herein shall constitute a waiver or relinquishment of the sovereign authority of any Party with respect to any decision related hereto, including, but not limited to, the decision to participate in any action hereunder or to participate in an action separate and apart here from. Each Party retains all authorities and powers granted to it by law.
- 23) Amendment. This Agreement may be amended only by an agreement executed by the Parties and will only become effective upon approval by DGS.
- 24) Assignment. Except as expressly set forth in this Agreement, no rights and duties of any of the Parties under this Agreement may be assigned or delegated without the express prior written consent of all the other Parties, and any attempt to assign or delegate such rights or duties without such consent shall be null and void. This

Agreement shall inure to the benefit of and be binding upon the permitted successors and assigns of the Parties.

25) Venue. The Parties hereby submit to the exclusive jurisdiction of and venue in the courts located in the County of Sacramento, California.

*(Remainder of Page Intentionally Left Blank)*

DRAFT

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date last written below.

STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: Director of Water Resources

Date: \_\_\_\_\_

CONVEYANCE PROJECT  
COORDINATION AGENCY

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: Executive Officer

Date: \_\_\_\_\_

DRAFT



CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## PROJECT DESCRIPTION

Exhibit A | V. 4

**DISCLAIMER** – Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 8-10-15

# EXHIBIT A – PROJECT DESCRIPTION

## TABLE OF CONTENTS

1.0 Purpose and Background ..... 3

2.0 Description of Facility Components, Permits and Mitigation ..... 7

3.0 Performance Standards and Design Considerations ..... 17

DRAFT

## 1.0 PURPOSE AND BACKGROUND

The California WaterFix defined as Alternative 4a in the Draft BDCP/California WaterFix Environmental Impact Report/Environmental Impact Statement, is one of the several alternatives under consideration for diverting water from the Sacramento River to existing State Water Project (SWP) and federal Central Valley Project (CVP). The purpose of this exhibit is to set forth the general responsibilities and scope of work of the DCE and to provide reference points for the triggering of the materiality and concurrence provisions of Section 3.e.i and Section 6.b. In this regard, the following initial engineering design, planning, and construction obligations are set forth below. It is also understood by the parties that the California WaterFix shall be subject to CEQA, NEPA and other environmental regulatory and permitting requirements and that the project design, construction and related mitigation may be affected accordingly. The decision as to whether the parties then wish to proceed with the project, in the event of a project modification or change, shall be subject to the procedures set forth in the main body of the DCE Agreement, to the extent that such environmental clearance or permitting changes or further engineering design refinements trigger the materiality and concurrence provisions referenced above.

The California WaterFix overall alignment is shown in Figure ES-1 and the system configuration is illustrated in Figure ES-2.

A significant engineering effort was undertaken to formulate and define the design criteria for each major component of the California WaterFix resulting in the optimization in alignment and other features, including the following general components:

- Three Intake Facilities along the Sacramento River in the north Delta with fish-screened on-bank intake structures and conveyance tunnels (North Tunnels).
- An Intermediate Forebay (IF) to receive flow from each Intake Facility and provide for gravity flow delivery through dual Main Tunnels to the North Clifton Court Forebay.
- A Pumping Plant located at the northeast corner of Clifton Court Forebay (CCF).
- CCF will be divided into two parts: North Clifton Court Forebay (NCCF) and South Clifton Court Forebay (SCCF). These forebays are in the south Delta, near Banks PP and Jones PP approach canals and will provide storage and flow regulation. NCCF will receive the flow from the Intake Facilities; SCCF will function as a replacement of the current CCF. SCCF will consist of the southern portion of the existing CCF, with expansion to the south into Byron Tract 2.
- Head of Old River operable barrier with control gates to reduce migration of San Joaquin River watershed salmonids into the South Delta through the Old River. It consists of five independent 125-foot bottom-hinged gates, with a fish passage structure, boat lock with gates at each end, control building, boat lock operator's building, and communications antenna, as well as floating and pile-supported warning signs, water level recorders, and navigation lights.

The detailed descriptions of each component listed above are set forth in the Conceptual Engineering Report (CER) Vols. 1-3 dated July 1, 2015 which is hereby incorporated by this reference. For the purposes of developing the DCE Agreement, specifically to set forth the project description and project scope of work, a summary of the project components and performance requirements have been developed and documented in this Exhibit. It is intended that this Exhibit will be used to determine if material changes to the program are contemplated in preliminary and final design phases of the program. The definition of the type or scope of modifications that would constitute a material change is set forth in Section 3.e.i and Section 6.b of the DCE Agreement. If such material changes are contemplated, then this Exhibit will be utilized, in conjunction with the DCE Agreement to determine if such changes merit elevation to DWR and the Authority for concurrence and approval.

The DCE is responsible for delivering the permits required to construct the facilities and implement the mitigation measures identified in this document. These permits are expressly listed in Exhibit C of the DCE Agreement.

The DCE shall also be responsible for complying with and implementing pre-operational environmental commitments and mitigation, as required by the CEQA/NEPA process. This includes the mitigation for direct impacts of the project footprint and mitigation required for 404 water quality permits and other permits. Alternative 4A is proposed as a Section 7 consultation, and mitigation measures may be necessary to avoid, reduce, minimize or compensate for its adverse environmental effects. To the extent there are any, these will be documented in the Environmental Impact Report (EIR)/Environmental Impact Statement (EIS). The specific mitigation measures to be accomplished are listed in this exhibit, the budget and implementation schedule are included in Exhibit E.

The environmental commitments made during the construction period developed as performance standards. For example, DWR and the regulatory agencies agreed to a performance standard of no net loss of Greater Sandhill Crane usage days on Staten Island. DWR developed a menu of Avoidance and Mitigation Measures (AMMs) that may or may not be implemented to ensure the performance standard. If the Cranes adapt well to the construction activity there may be little or no additional cost. The DCE will be responsible for monitoring and managing the environmental commitments. In addition, the DCE will be responsible for developing and implementing a plan to successfully transition the long-term responsibility for maintenance of the mitigation measure for the remainder of their useful life after such time as the DCE is no longer in existence.

DRAFT



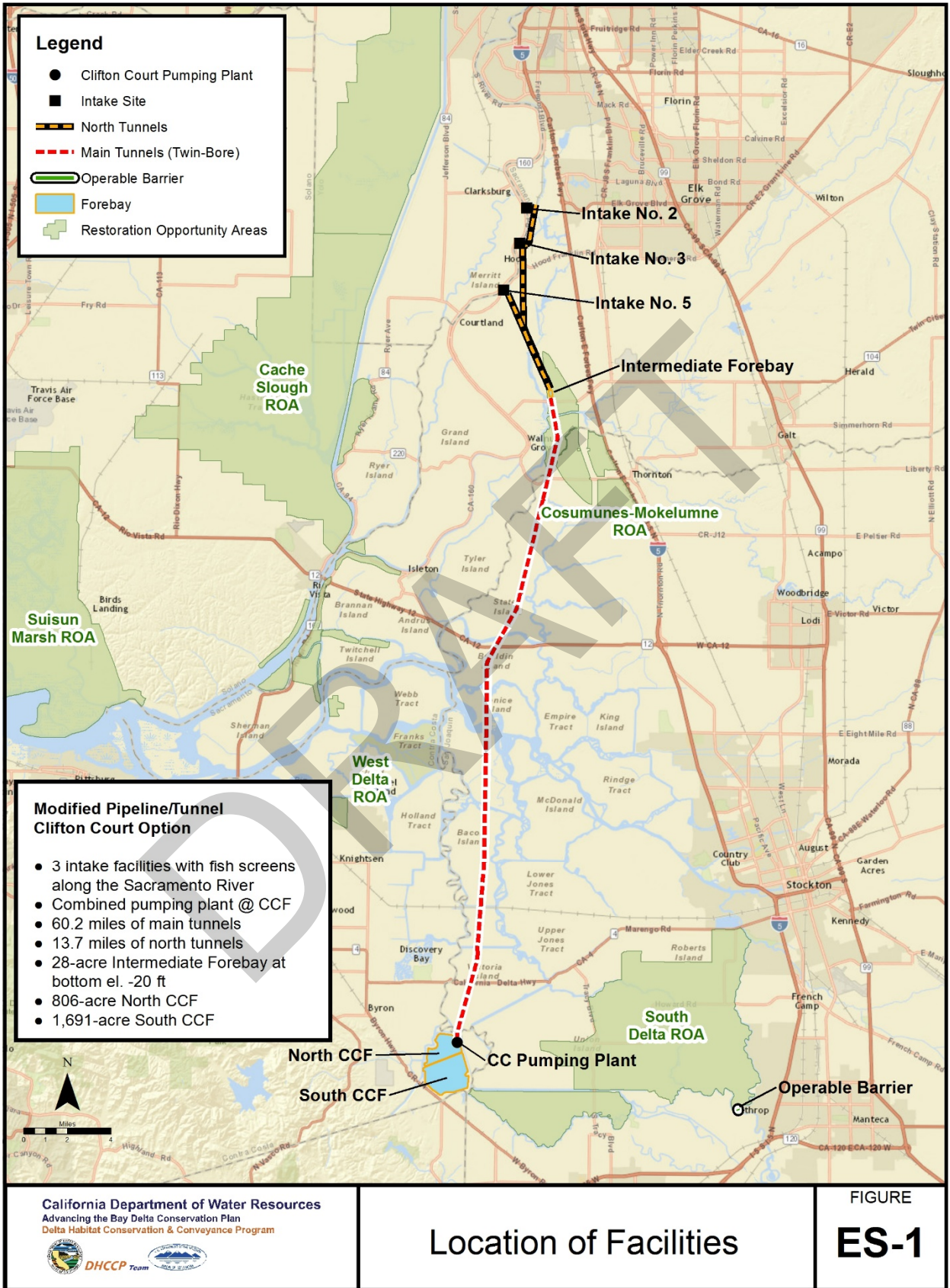
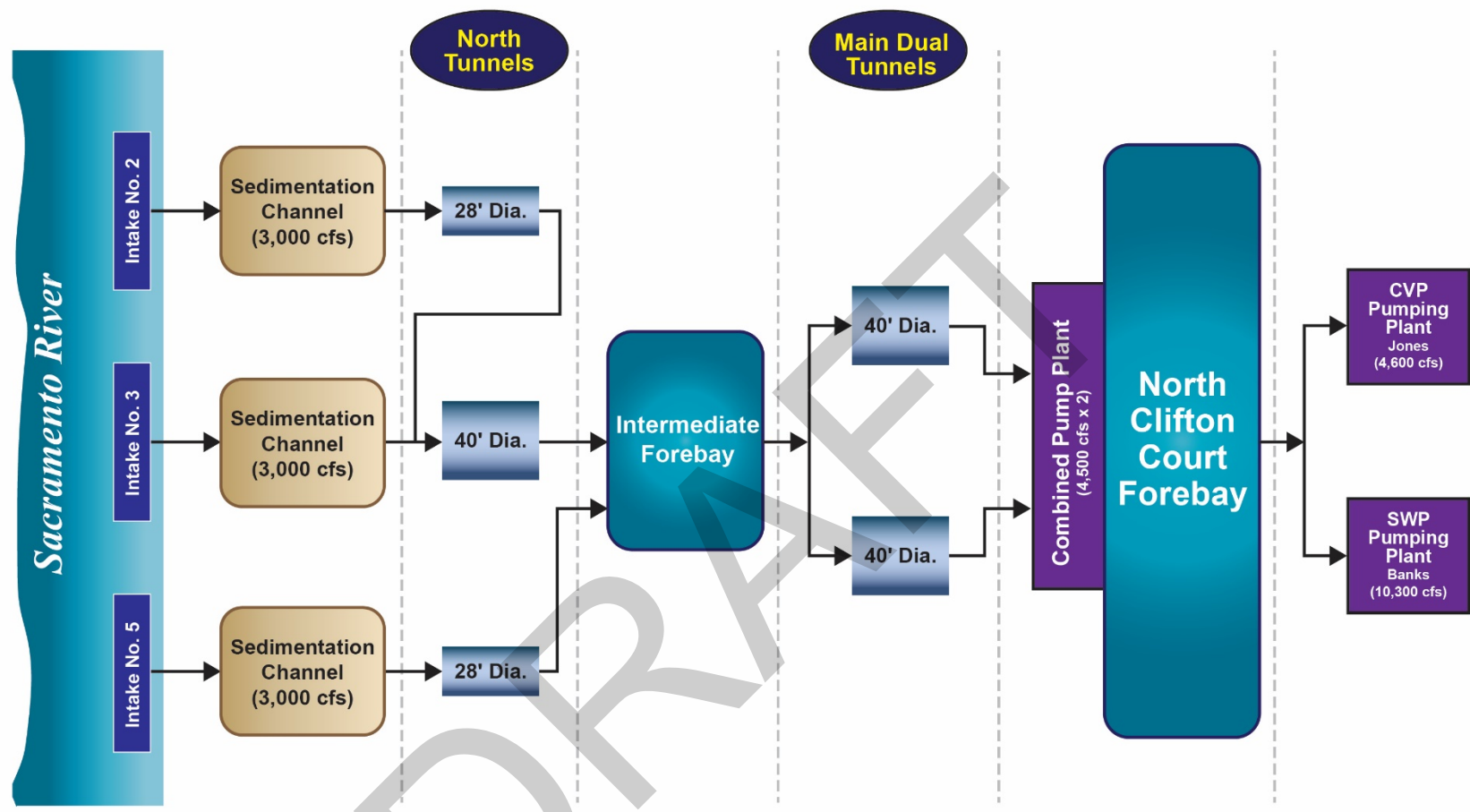


Figure ES-1: Location of Facilities

\\usnadapp01\CR-ES-RM\Engineering\TProjects\Bay\_Delta\DHCCP\Support\DCER\_DWR\FigES-2\_ConveyanceSchematic\_DCEVersion.al 20150729 \*DWR.NVA



California Department of Water Resources  
Advancing the Bay Delta Conservation Plan  
Delta Habitat Conservation & Conveyance Program



### Conveyance Schematic – Optimized Alternative 4A

FIGURE  
**ES-2**

Figure ES- 2: Conveyance Schematic

## 2.0 DESCRIPTION OF FACILITY COMPONENTS

### INTAKES

The three Intake Facilities (Intakes No. 2, 3, and 5) will each have a capacity of 3,000 cfs as proposed by DWR and the Fish Facilities Technical Team (FFTT). Intake numbering is consistent with the earlier concept of the system referred to as the Pipeline/Tunnel Option (PTO).

Each Intake Facility will consist of the following:

- A fish-screened intake structure that employs state-of-the-art on-bank fish screens.
- Twelve large gravity collector box conduits that will extend through the levee to convey flow to the sedimentation system.
- A sedimentation system consisting of gravity settling basin to capture sand-sized sediment and a drying lagoon for sediment drying and disposal.

The sedimentation basins will provide the transition from the collector box conduits to an outlet shaft that will discharge into a tunnel leading to the IF. A substation with transformers and switching equipment will be located on each site for electrical power supply.

### INTAKE/FISH SCREEN CRITERIA

The Intake Facilities will be located along the Sacramento River, at sites selected in coordination with the FFTT. Intakes will be on-bank structures with fish screens similar to the Sacramento River intakes owned by the Freeport Regional Water Authority (FRWA), Glenn-Colusa Irrigation District, and Tehama-Colusa Canal Authority. Each of the three intake sites will vary slightly in terms of bathymetric conditions and design river levels. All of the intakes are sized at the design WSE to provide approach velocities at the fish screen of less than or equal to 0.20 fps and screen sweeping velocity equal or greater than 0.2 fps at an intake flow rate of 3,000 cfs.

#### Intake Screen Conceptual Design Criteria

Screens	
Type	Fixed vertical flat-plate profile bar screen
Material	304 stainless steel
Screen Slot Opening Size	1.75 millimeters (0.069 inch)
Screen Porosity	27 percent

The state-of-the-art fish screen system consists of screen panels and flow control baffles that form a barrier to prevent fish from being drawn into the intake and a traveling screen cleaning system. The screen panels are arranged in groups, with each screen bay group providing sufficient screen area for 500 cfs of diversion. There are six separate screen bay groups per Intake Facility, all of which are hydraulically independent.

These flow control baffles are designed to evenly distribute the approach velocity to each screen such that it meets the guidelines developed by the FFTT.

All fish screen bay groups are separated by piers with appropriate guides to allow for easy installation and removal of screen and solid panels as well as the flow control baffle system and bulkheads

The design Water Surface Elevation (WSE) for each site was established as the 99 percent exceedance (Sacramento River stage) elevation. The maximum design WSE was established as the 200-year flood elevation plus an 18-inch allowance for SLR.

## TUNNELS

The proposed conveyance tunnels are arranged in two groupings: the North Tunnels and the Main Tunnels. The North Tunnels consist of three separate tunnel reaches totaling approximately 14 miles that connect the three Intake Facilities to the IF. The Main Tunnels consist of twin bore tunnels that connect the IF to the Clifton Court Pump Plants, located approximately 30 miles south of the IF.

The North Tunnels are two single-bore 28-foot and one single-bore 40-foot inside diameter (ID) tunnels. The Main Tunnels are twin-bore 40-foot inside diameter tunnels. The inlets and outlets will be equipped with isolation structures to allow the tunnels to be dewatered, maintained, and inspected.

---

### TUNNEL CONSTRUCTION CONSIDERATIONS

The compatibility of the tunneling excavation method with anticipated ground conditions is a critical design and construction consideration. Currently, geotechnical information for the proposed tunnel alignment is limited. Once adequate geotechnical investigations have been performed, preliminary design evaluations will refine the recommendations for tunnel excavation and support methods. Considering the current state of practice, and industry average tunneling rates for the anticipated ground conditions, and including contracting considerations, 10 to 11 tunnel-boring machines (TBM) may be required.

---

### SYSTEM CONFIGURATION AND SIZING

The tunnels will flow under pressurized conditions at all times and will not be subject to open channel flow conditions. The size of each tunnel reach is dictated by the required hydraulic capacity and flow velocities to suspend sediment and minimize sediment buildup in the downstream end of the tunnels. The tunnel segments north of the Intermediate Forebay (IF) are designated as North Tunnels (i.e. Reaches 1 through 3), while the segments south of the IF (i.e. Reaches 4 through 7) are designated as the Main Tunnels.

Intake No. 2 will be connected to a junction structure at Intake No.3 via a 28-ft ID tunnel. At the junction structure, the flows from Intakes 2 and 3 are combined and conveyed through a single 40-ft ID tunnel to the Intermediate Forebay (IF). The flow from intake 5 is taken directly to the IF using a single 28 ft ID tunnel.

The conveyance system's hydraulics are primarily established by the necessity to achieve gravity flow from the IF to the suction side of the pump shafts located at the NCCF pumping facility. The calculated system head loss is mostly driven by the friction losses through the tunnels. Pressurized pipe calculations represented the tunnels and used the Manning's friction coefficient of  $n = 0.0145$ , which is a conservative design value for slightly rough internal surface conditions in segment-lined tunnels.

All tunnels are designed to slope continuously from north to south, without siphons. This provides for a self-draining tunnel system. The preliminary tunnel inverts range from 122 to 135 feet below mean sea level (msl) for the North Tunnels and from 147 to 163 feet below msl for the Main Tunnels. The preliminary tunnel invert elevations are based on assumed ground conditions with liquefiable soil at the upper strata. Additional geotechnical investigation will be required during the preliminary and final design phases to finalize the tunnel profile. In addition, the proposed vertical alignment of the Main Tunnels conforms to a Port of Stockton restriction at the undercrossing of the San Joaquin River (SJR) and Stockton Deep Water Ship Channel. Upon further geotechnical exploration and analysis, the invert elevation for the tunnels will be optimized to determine the actual minimum required depth of cover.

---

### MAINTENANCE AND DEWATERING ACCESS

Each tunnel will be designed to be isolated and dewatered separately for inspection and maintenance if required. The provisions for isolation and/or dewatering will include control structures at each end of the tunnel. Flows into and out of the IF will be controlled by sets of primary and secondary fixed-wheel roller gates are used to isolate each tunnel and allow its dewatering for inspection. The roller gates are configured to provide on/off

control only, and will not be used to modulate flows. At the pumping plants, valves on the discharge piping will isolate the upstream end of each tunnel.

---

#### TUNNEL SUPPORT-SEGMENT DESIGN

Based on early project research and planning, a single-pass tunnel liner system was chosen to balance water conveyance requirements, project schedule, and construction cost. The tunnel liner system will consist of precast concrete segmental liner with bolted-gasketed joints. The tunnel liner system will be designed for all the following load cases to ensure reliable performance during the minimum 100-year design life of the system:

- Full external ground load and external ground water pressure.
- Net internal pressure (difference between internal hydraulic pressure and external ground water pressure). Ground overburden to counteract the internal pressure is ignored at this conceptual phase but will be considered during preliminary and final design once detailed geotechnical data is available.
- Earthquake design – Finite element model on ground-tunnel interaction based on Maximum Considered Earthquake (MCE) events.
- Construction loads, including segment handling/lifting, hoisting, erection, and TBM push-off.
- Leakage control based on acceptable performance criteria.

For the 40-foot ID tunnels, it is anticipated that a 9-piece ring configuration would be used, with segment thickness of 20 inches minimum. The segments (7,000 psi minimum compressive strength) will be cast and steam-cured in concrete segment plants under strict quality control measures and delivered to the tunneling sites. Reinforcement will consist of both high strength steel reinforcement (up to 80,000 psi) and steel fiber for permanent ground loads and construction handling loads. Steel reinforcement will increase segment strength and durability and provide crack control.

Given the hydraulic grade line and ground cover of the tunnels, it is anticipated that the North Tunnels will be subjected to net tension conditions on a regular basis; whereby the internal pressure will exceed the external pressure (soil and water). The Main Tunnels are expected to operate in a net compression mode virtually all of the time. If the segment ring is subjected to internal tension, special positive connections across the joint and tension reinforcement are necessary to transfer the tensile force throughout the segments. In general, however, a bolted-gasketed tunnel liner system is designed for compressive ring forces and is seldom subject to net tension. It is important that testing and analysis are conducted during preliminary and final design phases to optimize the tunnel liner system to resist the tension force.

In addition to strength requirements, leakage control through the liner is essential to ensure liner performance. Once detailed geotechnical data is available during preliminary design, the segment liner will be designed to limit water leakage by considering surrounding ground-liner interaction and ground permeability. At the same time, design factors such as effective ground overburden, high strength bolts, shear dowels, post-tensioning system, ferrous push-fit connectors, and proprietary joint connectors will be more fully analyzed as part of the final segment design.

---

#### INTERMEDIATE FOREBAY

The IF is located on the Glanville Tract, east of the Pearson District and west of Interstate 5. The IF serves as an atmospheric break in the system from the inlet to the dual Main Tunnels. This break in the system allows the flows from each Intake to merge and distribute equally to each barrel of the Main Tunnels, improving operational stability in the Clifton Court pumping plant, and allows independent operation of each of the North Tunnels and the Main Tunnels.

The IF has no regulating gates controlling gravitational flow to the Main Tunnels; therefore, no daily operational storage is necessary at IF beyond that necessary to accommodate water surface changes at the downstream

NCCF. The IF at bottom elevation -20 feet, at 28 acres, is the smallest practical size to allow construction of the inlet and outlet structures and to provide sufficient reduction in velocity to capture sand-sized sediment not otherwise captured at the Intake Facilities.

---

#### NORTH CLIFTON COURT FOREBAY

The NCCF provides the daily operational storage required to equalize and balance differences between the south Delta inflow and water exported by the SWP and CVP pumps. Preliminary calculations indicate an operational storage capacity range of approximately 4,970 to 8,100 acre-feet (AF), with an approximate water storage surface area of nominally 806 acres, depending on depth.

Constraints on the exporting pumping plants fixed a normal forebay operating range of 7.0 feet (elevation +0.50 to +7.5 feet). This operating range results in approximately 4,970 AF of potential active storage in NCCF. Additional operating storage up to 8,100 AF can be obtained by operating NCCF at a range of up to 9.0 feet, which is within the efficient operating range of both NCCF and the export pumping plants.

NCCF is connected with new control structures and canals to the existing approach canals to the export pumping plants.

---

#### SOUTH CLIFTON COURT FOREBAY

The SCCF is designed to be hydraulically dependent on Delta waterways and retain the same operation criteria as the existing CCF. The SCCF will include part of Byron Tract Island located on the south side of the existing CCF. The SCCF will draw its supply through the West Canal using intake gates and it will deliver flow to Banks PP. SCCF has an approximate water storage surface area of nominally 1,691 acres, depending on depth.

Constraints on the exporting pumping plants limit the normal operating range to 7.0 feet (elevation +1.1 to +8.1 feet). This operating range results in approximately 12,050 AF of potential active storage in SCCF. Additional operating storage can be obtained if the operating range is increased, which appears feasible.

---

#### CLIFTON COURT PUMP PLANT

The combined pumping plant is located at the northeastern corner of Clifton Court Forebay on a small island just south of Kings Island. This location serves as the terminus of the 40-foot main tunnels and the location of the new twin-shaft combined pumping plant station. The pump shafts are configured to provide multiple functions: 1) gravity flow of water from the river intakes into Clifton Court Forebay when the system hydraulics allows via a spillway, 2) surge protection via the spillway, and 3) housings the pumps and their controls. Under gravity flow conditions, water will bypass the pumps via three weir gates by allowing flow to discharge directly to the forebay if hydraulic conditions permit. The pump shafts will house the pump wet well, pump intakes, the main pumps themselves, and tunnel dewatering pumps. The pumping facilities will be designed to allow separate operation of the system components between the two shafts.

The two Pumping Plants receive flow from the pump shafts and lift the water into the forebay. Each pumping plant will have a design pumping capacity of 4,500 cfs, providing a total pumping capacity of 9,000 cfs in the configuration listed below.

## Pump Conceptual Design Criteria

Criteria	Concept Design Value
Pump Type	Vertical Column Discharge (VFD)
Total Number of Pumps (both Pumping Plants)	12, including 2-spares, one large pump per pump plant
Number of Large Pumps	8
Number of Small Pumps	4
Total Design Flow	9,000 cfs
Design Condition Capacity - Large Pumps	1,125 cfs
Design Condition Capacity - Small Pumps	563 cfs
Design Condition Total Dynamic Head - Large and Small Pumps	37 feet
High Head Condition (Maximum Priming Head)	40 feet
Low Head Pumping Condition (reduced speed)	~5 feet
Motor Power - Large Pumps	6,000 HP
Motor Power - Small Pumps	3,000 HP
Conceptual Selection Maximum Rotation Speed – Large Pumps	160 rpm
Conceptual Selection Maximum Rotation Speed – Small Pumps	176 rpm
Motor Enclosure	TEWAC

Note: For constant speed pumping, some low-head operating conditions require the discharge head to be artificially increased to prevent the pumps from operating beyond the pump's POR

The pump selections are designed to deliver 9,000 cfs when operating on the Design Head system curve with eight large pumps operating (or similarly, 9,000 cfs with combinations of large and small pumps, such as 7 large/2 small or 6 large/4 small). When the total dynamic head conditions are less than the Design Head, the pumps would operate at reduced speed, or fewer pumps would be used to prevent exceeding 9,000 cfs. For the Normal Low Head condition, eight large pumps would operate at approximately 84% speed to deliver 9,000 cfs.

Variable speed pump operation will be utilized to provide operational flexibility to adjust the number of pumps and the pump operating speed to optimize the hydraulic and energy efficiency of the equipment. An evaluation of energy usage reveals that the operating levels in the forebay have a significant influence on whether variable speed or constant speed operation is more cost-effective. Additional major influences on energy consumption include typical pumping rates and the duration of pumping. Details of these parameters were not available for the CER development, and will be finalized in the preliminary design of the pumping system. For the CER, the energy analysis was conducted at a high level to provide a conceptual comparison of the amount of energy required for the various operating scenarios. The following assumptions were used in the analysis, and will have to be refined in preliminary design:

- Variable Frequency Drives have an anticipated efficiency of 97.5%.
- Hydraulic efficiency is based on the pump selection from Flygt-Xylem presented in the Pumping Hydraulics Section of this document.
- The number of variable speed pumps operating in a given scenario is that which provides the greatest hydraulic efficiency.
- The added maintenance of a VFD was not considered in the comparison.

A life cycle cost evaluation comparing constant and variable speed pumping should be conducted during preliminary design when the range of water levels in the forebay has been finalized and pump selections have been made for the final system hydraulics.

## INSTRUMENTATION AND CONTROLS

Each California WaterFix facility site will include control and monitoring equipment. A Supervisory Control and Data Acquisition (SCADA) system provides for local and remote automatic and manual control and monitoring.

Currently, the communications system is planned to be implemented using some combination of fiber optic cable system(s), microwave radio, and/or leased telecommunications lines. The communications system will connect to the Delta Field Division Operations and Maintenance (O&M) Center at the south end of the project and the Joint Operations Center in Sacramento at the north end of the project.

## MITIGATION AND ENVIRONMENTAL COMMITMENTS

Alternative 4A of the Recirculated Draft EIR/EIS (RDEIR/SDEIS) for the California WaterFix contemplates ESA compliance through Section 7 of the ESA and Section 2081 of CESA, rather than through ESA Section 10 and NCCPA Section 2835. As such, different terminology has been adopted to reflect the difference in permitting strategies under state and federal endangered species laws. These 24 repackaged and limited elements of the original BDCP Conservation Measures are instead referred to as “Environmental Commitments.” (ECs). To minimize confusion, they are numbered to track the parallel BDCP Conservation Measures: Environmental Commitments 3, 4, 6, 7, 8, 9, 10, 11, 12, 15, and 16, as summarized in Table 1. Additionally, pertinent elements included as Avoidance and Minimization Measures (AMMs) and the proposed Adaptive Management and Monitoring Program would be implemented as applicable to the activities proposed under Alternative 4A. These, too, would serve a mitigation function under CEQA. All of these components would function as *de facto* CEQA and NEPA mitigation.



**Table 1: Environmental Commitments under Alternative 4A**

<b>Environmental Commitment</b>	<b>Parameter</b>
<b>Environmental Commitment 3: Natural Communities Protection and Restoration</b>	
<ul style="list-style-type: none"> <li>Valley/Foothill Riparian</li> </ul>	103 acres
<ul style="list-style-type: none"> <li>Grassland</li> </ul>	1,060 acres
<ul style="list-style-type: none"> <li>Vernal Pool Complex and Alkali Seasonal Wetland Complex</li> </ul>	150 acres
<ul style="list-style-type: none"> <li>Nontidal Marsh</li> </ul>	119 acres
<ul style="list-style-type: none"> <li>Cultivated Lands</li> </ul>	11,870 acres
<b>Total Environmental Commitment 3</b>	Up to 13,302 acres
<b>Environmental Commitment 4:</b> Tidal Natural Communities Restoration	Up to 59 acres
<b>Environmental Commitment 6:</b> Channel Margin Enhancement	Up to 4.6 levee miles
<b>Environmental Commitment 7:</b> Riparian Natural Community Restoration	Up to 251 acres
<b>Environmental Commitment 8:</b> Grassland Natural Community	Up to 1,070 acres
<b>Environmental Commitment 9:</b> Vernal Pool and Alkali Seasonal Wetland Complex restoration	Up to 34 acres
<b>Environmental Commitment 10:</b> Nontidal Marsh Restoration	Up to 832 acres
<b>Environmental Commitment 11:</b> Natural Communities Enhancement and Management	At sites protected or restored under Environmental Commitments 3–10
<b>Environmental Commitment 12:</b> Methylmercury Management	At sites restored under Environmental Commitment 4
<b>Environmental Commitment 15:</b> Localized Reduction of Predatory Fishes	At north Delta intakes and at Clifton Court Forebay
<b>Environmental Commitment 16:</b> Nonphysical Fish Barrier	At Georgiana Slough

---

#### ENVIRONMENTAL COMMITMENT 3: NATURAL COMMUNITIES PROTECTION AND RESTORATION

This action would consist of the acquisition of lands for protection and restoration of listed species habitat in perpetuity and would be implemented in the same way as described in Conservation Measure 3 in the Draft BDCP but over less area. For the purposes of Alternative 4A, this action would entail protection of up to 13,302 acres, of natural communities and cultivated land, as shown in Table 1. This protection and restoration would mitigate for the loss of terrestrial species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 4: TIDAL NATURAL COMMUNITIES RESTORATION

This action would consist of the restoration of tidal natural communities and transitional uplands and would be implemented in the same way as described in Conservation Measure 4 in Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS, but over less area. For the purposes of analysis of Alternative 4A, this action would entail restoration of up to 59 acres (including transitional uplands), as shown in Table 1. This analysis assumes that none of these 59 acres of tidal restoration will occur in the Suisun Marsh area. Tidal habitat restoration would mitigate for the physical loss of aquatic habitat associated with construction of the north Delta intake facilities. The current proposed mitigation ratio is 1:1 for a total of 59 acres. However, actual acreage may change based on further discussions with NMFS, USFWS, and DFW pertaining to the actual value of the current habitat and/or the appropriate ratio of mitigation. Based on initial discussions, the maximum ratio applied to tidal wetland mitigation is 3:1, and therefore would not exceed 177 acres for this alternative.

---

#### ENVIRONMENTAL COMMITMENT 6: CHANNEL MARGIN ENHANCEMENT

This action would consist of the enhancement of channel margin habitat and would be implemented in the same way as described in Conservation Measure 6 in the Draft BDCP but over less linear distance. For the purposes of Alternative 4A, this action would entail enhancement of up to 4.6 levee miles, as shown in Table 1. This would mitigate for the loss of salmonid habitat associated with construction of the north Delta intake facilities.

---

#### ENVIRONMENTAL COMMITMENT 7: RIPARIAN NATURAL COMMUNITY RESTORATION

This action would consist of the restoration of riparian natural communities and would be implemented in the same way as described in Conservation Measure 7 in the Draft BDCP but over less area. For the purposes of Alternative 4A, this action would entail restoration of up to 251 acres, as shown in Table 1. This would mitigate for the loss of terrestrial species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 8: GRASSLAND NATURAL COMMUNITY

This action would consist of the restoration of grassland habitat and would be implemented in the same way as described in Conservation Measure 8 in the Draft BDCP but over less area. For the purposes of Alternative 4A, this action would entail restoration of up to 1,070 acres as shown in Table 1. This would mitigate for the loss of terrestrial species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 9: VERNAL POOL AND ALKALI SEASONAL WETLAND COMPLEX RESTORATION

This action would consist of the restoration of vernal pool and alkali seasonal wetland complex and would be implemented in the same way as described in Conservation Measure 9 in the Draft BDCP but over less area. For the purposes of Alternative 4A, this action would entail restoration of up to 34 total acres of vernal pool complex and/or alkali seasonal wetland complex, as shown in Table 1. This would mitigate for the loss of species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 10: NON-TIDAL MARSH RESTORATION

This action would consist of the restoration of nontidal marsh and would be implemented in the same way as described in Conservation Measure 10 in the Draft BDCP but over less area. For the purposes of Alternative 4A, this action would entail restoration of up to 832 acres of nontidal marsh, as shown in Table 1. This would mitigate for the loss of species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 11: NATURAL COMMUNITIES ENHANCEMENT AND MANAGEMENT

This action would apply to all protected and restored habitats under Alternative 4A and would be implemented, where applicable, to manage and enhance these lands consistent with the approach described under Conservation Measure 11 in the Draft BDCP. These actions would support mitigation for the loss of terrestrial species habitat associated with construction of the water conveyance facilities.

---

#### ENVIRONMENTAL COMMITMENT 12: METHYLMERCURY MANAGEMENT

This action would minimize conditions that promote production of methylmercury in restored tidal wetland areas and its subsequent introduction to the food-web, and to listed species in particular. Implementation of this action would be consistent with the revised description of Conservation Measure 12 (see Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS). The portions of the measure applicable to effects in the Yolo Bypass would not apply because Yolo Bypass improvements would not be implemented as part of this alternative.

---

#### ENVIRONMENTAL COMMITMENT 15: LOCALIZED REDUCTION OF PREDATORY FISHES (PREDATOR CONTROL)

This action would reduce populations of predatory fishes at locations of high predation risk (i.e., predation hotspots) associated with construction and operation of the proposed water conveyance facilities. Implementation of this action would be consistent with the revised description of Conservation Measure 15 (see Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS); however, for the purposes of Alternative 4A, this action would be applied only to the reach of the Sacramento River adjacent to the north Delta intakes and to Clifton Court Forebay. EC15 would remove predator refuge habitat and reduce predator abundance in the construction areas. At a minimum, EC15 will target the removal of an amount of predator refuge commensurate with the amount that may be created by construction of water conveyance facilities. These measures are expected to fully mitigate any indirect effect on predation rates associated with construction.

---

#### ENVIRONMENTAL COMMITMENT 16: NONPHYSICAL FISH BARRIER

This action would be implemented to address effects related to survival of out-migrating juvenile salmonids by installing a nonphysical barrier at Georgiana Slough to redirect fish away from channels and river reaches in which survival is lower than in alternate routes. Implementation of this action would be consistent with the revised description of Conservation Measure 16 (see Appendix D, *Substantive BDCP Revisions*, of this RDEIR/SDEIS); however, for the purposes of Alternative 4A, this action would be applied only to Georgiana Slough. This commitment would mitigate for effects on salmonid survival associated with operation of north Delta intakes and associated flows.

---

#### OTHER COMMITMENTS:

A series of additional commitments in the form of funding, monitoring and program administration are also included to be performed by the DCE in support of the Environmental Commitments listed above. These items exclude all EIR/EIS mitigation costs, which are assumed to be included in the conveyance facility construction budget (e.g. air quality offsets, water quality measure, etc.). These areas include: Program Administration,

Monitoring (terrestrial and aquatic), and Property tax revenue replacement. Budgets for each of these three items have been set forth in Exhibit E of the DCE Agreement.

**Monitoring:** Monitoring is a critical element of the adaptive management program and a required component of ESA Section 7 biological opinions and CESA 2081b permits. In addition, monitoring is a critical element of the collaborative science process that informs adaptive management decision-making. The proposed compliance and effectiveness monitoring program for the CESA 2081b permit is described in Chapter 6 of that permit application. These monitoring programs overlap but have distinct elements owing to their overlapping but distinct species lists. Collaborative science for the proposed action will have the following primary functions: lead active evaluation through studies, monitoring, and testing of current and new hypotheses associated with key water operating parameters, habitat restoration, and other mitigation; gather and synthesize relevant scientific information; develop new modeling or predictive tools to improve water management in the Delta; and inform the testing and evaluation of alternative operational strategies and other management actions to improve performance from both biological and water supply perspectives. Monitoring is essential to carry out this collaborative science process. The DCE is responsible for funding and implementing a program that will ensure the monitoring envisioned under the ESA Section 7 biological opinions and the CESA 2081b permits are carried out. The anticipated range of costs for these monitoring programs is listed in Exhibit E of the DCE Agreement, with ultimate costs not expected to exceed the upper end of the range.

**Property tax revenue replacement:** This commitment from the EIR/EIS process addresses the loss of local property tax revenue that is anticipated when the California WaterFix purchases private property for use in the program. Once purchased by the program, the property is no longer on the State's tax rolls which results in a commensurate reduction in property tax revenue received by the local governmental agency from the State. Estimated reductions in property tax revenue resulting from land acquisition by the California WaterFix have been made, and the DCE is responsible for ensuring that a process is put in place to reimburse impact local governments with replacement funds. The anticipated range of these replacement funds is listed in Exhibit E of the DCE Agreement, with ultimate costs not expected to exceed the upper end of the range.

**Program Administration:** The DCE is responsible for long-term management of all the mitigation lands/conservation easements that will be needed to offset construction impacts. A range for the cost of the administrative work required to oversee the monitoring/maint as well as any reporting requirements has been established and is identified in Exhibit E. The duration of this commitment is anticipated to last up to 25 years.

**Cultural Resources:** The DCE is responsible for ensuring that Cultural Resource Studies are conducted and that Cultural Resource Mitigation Measures are adopted for Cultural Resource Impacts Associated with implementation of Environmental Commitments 3, 4, 6–12, 15, and 16. The anticipated range of costs for these activities is listed in Exhibit E of the DCE Agreement.

**Biological Resources:** The DCE is responsible for ensuring that the Environmental Commitments listed in Table 4.1-8 of the RDEIR/SDEIS are implemented. For the purposes of the RDEIR/SDEIS, these activities are considered part of the California WaterFix (Alternative 4A) and are not defined as "mitigation measures" in order to avoid confusion with those measures proposed for the purposes of CEQA and NEPA compliance. The anticipated range of costs for these activities is listed in Exhibit E of the DCE Agreement.

**Air Quality:** The DCE is responsible for the development and implementation of an Alternative or Complementary Offsite Mitigation Program to Mitigate and Offset Construction-Generated Criteria Pollutant Emissions within the SFNA to Net Zero (0) for Emissions in Excess of General Conformity *De Minimis* Thresholds (Where Applicable) and to Quantities below Applicable CEQA Thresholds for other Pollutants. The anticipated range of these replacement funds is listed in Exhibit E of the DCE Agreement, with ultimate costs not expected to exceed the upper end of the range.

## PERMITS

The DCE is responsible for obtaining and maintaining a variety of permits related to design and construction activities for the California WaterFix. The specific permits that fall under the purview of the DCE are listed in Exhibit C of the DCE Agreement.

## 3.0 PERFORMANCE STANDARDS AND DESIGN CONSIDERATIONS

These Performance Standards (Standards) have been written to provide a framework for the design of the many projects required by the California WaterFix. The purpose of these Standards is to assure uniformity in design concepts, formats, methodologies, procedures and quality of work products that are produced by the Design Consultants. These Standards will be continuously reviewed throughout the program as the design is advanced and modified if approved by the DCE.

The parties contemplate that these Performance Standards will be incorporated into the scope of work for the Design Consultants, and that the Design Consultants will prepare detailed design plans and specifications based on these standards. The Design Consultants may propose modifications to the Performance Standards, such modifications are subject to the requirements of the DCE Agreement.

### FLOOD PROTECTION CONSIDERATIONS

The California WaterFix is configured to withstand flood water levels from the following potential sources:

- 200-year return flood event in the Sacramento, Mokelumne, San Joaquin Rivers, or adjacent sloughs.
- Inundation of floodplain from a 200-year return flood event with levee breach.
- Wind-induced waves.
- Mean higher high water tides.
- SLR due to climate change over the next 100 years.

Flood water levels resulting from these factors vary across the Delta, depending on location and source. The estimated flood levels on an island-by-island basis to be used in the design for each conveyance option facility will be developed in preliminary design. All flood protection levels must be confirmed and refined during subsequent study.

Preliminary flood level elevations were based upon six potential flooding scenarios

- River flooding assuming no levee failures.
- Floodplain flooding assuming multiple river levee failures or overflows.
- Island flooding limited by levee heights.
- Island flooding limited by river stage.
- Island flooding limited by flood volume.
- Tidal flooding due to SLR and assuming a levee breach without a storm flood event.

SLR values were based on the recommendation of the Delta Vision Blue Ribbon Task Force to set SLR planning standards for critical state investments.

The recommended preliminary flood protection criteria for California WaterFix are the 200-year flood event water surface elevation, including SLR, with an additional allowance of 3-feet for free board and wind-wave run-up. These criteria resulted in a range of preliminary flood level elevations from approximately 34 feet to 25 feet, which are consistent with DWR's 2009 *Proposed Interim Levee Design for Urban and Urbanizing Area State-Federal Project Levees*. These flood protection levels will be confirmed and refined for final design.

## SEISMIC CRITERIA AND PERFORMANCE

The project is a new facility that transports water from north of the Delta to south of the Delta. The facilities within the California WaterFix are considered “critical facilities” as long delays in water delivery from the north to the south of the Delta could have a significant negative impact on human life and the California economy. Critical facilities comprise all public and private facilities deemed by a community to be essential for the delivery of vital services (FEMA 543). As a consequence of this classification, the facilities shall be designed as described as Essential Facilities as described in California Building Code (CBC) and American Society of Civil Engineers (ASCE) 7. Facilities that require extended time frames for repair/replacement (e.g. large pumps or tunnel structures) shall be designed with the highest seismic standard to prevent prolonged delays in water delivery after a large earthquake event.

DWR’s Water Resources Engineering Memorandum No. 70 (WREM-70) prescribes minimum Seismic Loading Criteria for the State Water Project, and provides different seismic loading criteria based on criticality of a facility. The WREM-70 allows flexibility so that the project engineer can judge which criteria to use. SWP facilities, located throughout California, vary in purpose and criticality. Designing all the facilities to the same seismic standard would not be feasible or cost effective. Therefore, the WREM-70 provides a wide range of seismic loading criteria for various types of facilities.

The selection of seismic loading criteria for the facilities was based on the consequences of failure, the criticality of the structure for water delivery, and the downtime and cost for the repair of the facility. Generally, higher seismic loading criteria are recommended for structures that have larger consequences of failure, greater importance for water delivery, or longer downtimes or greater costs for repair. Conversely, lower seismic loading criteria are recommended for structures that are not critical to water delivery and/or can be repaired in a reasonable time frame. For example, canals can be repaired faster/cheaper than compared to tunnels or large pumps in a pumping plant.

Project specific seismic criteria shall be developed that is consistent with WREM 70 and as shown in the table below.

**Recommended Seismic Loading Criteria for California WaterFix Facilities (Modified from WREM-70)**

Facility Type		Seismic Loading <sup>1</sup>	Selection Basis	Analysis Method <sup>2</sup>
Dams and Reservoirs		Greater of 84 <sup>th</sup> Percentile (DSHA) and 975-year Return Period (RP) (PSHA)	Modified DSOD Method	Envelope of DSHA and PSHA
Conveyance Facilities	Canal	975-yr RP (PSHA)	Damage consequence and ease of repair	PSHA
	Pipelines	Greater of 84 <sup>th</sup> percentile (DSHA) and 2475-yr RP (PSHA)	Modified FEMA Function Class IV and difficult to repair	Envelope of DSHA and PSHA
		Operational Basis Seismic Check Based on 144-yr RP (PSHA)	Performance based approach to target elastic behavior and avoid outages and subterranean repairs.	PSHA
	Tunnels (Include inlets and outlets)	Greater of 84 <sup>th</sup> percentile (DSHA) and 2475-yr RP (PSHA)	Consideration of criticality and difficulty and cost of repair	Envelope of DSHA and PSHA
		Operational Basis Seismic Check Based on 144-yr RP (PSHA)	Performance based approach to target elastic behavior and avoid outages and subterranean repairs.	PSHA
	Bridges		CalTrans Seismic Design Spectrum	CalTrans Seismic Design Criteria (SDC ver. 1.6 Appendix B)
Building and Hydraulic Structures, Utility Overcrossings, and Mechanical and Electrical Equipments	Seismic Response Based on ASCE 7 MCE	Modified ASCE 7 Design Spectral Response to Approx. 975-yr RP – Collapse Prevention Performance Level	PSHA with DSHA Cap	
	Operational Basis Seismic Check Based on 144-yr RP (PSHA)	Pseudo Performance Based Approach to target Operational Performance Level	PSHA	

<sup>1</sup> Seismic load shall be greater or equal to a deterministic spectrum from a 6.5 moment magnitude strike slip fault earthquake at a distance of 12 Km.

<sup>2</sup> PSHA – Probabilistic Seismic Hazard Analysis, DSHA – Deterministic Seismic Hazard Analysis.

## STRUCTURAL DESIGN CRITERIA

This section summarizes the codes and standards that will be generally used in structural design to promote consistency and compatibility between projects. More specific project information will be developed during execution of the project to support detailed design, engineering, and construction specifications.

All structures and parts thereof shall be designed and detailed in accordance with the design procedures as permitted in the governing codes and standards for the specific type of structure.

---

### DESIGN LIFESPAN

For the Performance Standards pertaining to the California WaterFix, the design lifespan is set at a minimum of 100 years for all facilities. All facilities shall be designed to meet or exceed all specified seismic, and flood conditions while also ensure a measure of design robustness that will protect the structures from normal wear and tear and potential effects of corrosion over the expected lifecycle.

The design life of a structure is generally associated with the robustness of the feature to withstand a variety of environmental conditions during the anticipated operational life of the facility. Typically, longer durations of design lifespan are specified based on the critical or lifeline nature of a structure or facility. The longer design life (100-year) provides a higher level of performance and durability in order to maintain continuous system operation with minimum disruption of service. Typically, a structure is required to withstand a variety of deterministic and probabilistic loads (wind, seismic, operation, corrosion, fatigue, etc.) that might be anticipated to occur over the life of the structure. Consequently, a structure with a design life of 100 years will have the ability to withstand higher design loads than a structure with a design life of 50 years. A design lifespan is a factor that is taken into account during the design phase of a project component or facility. A design lifespan is not a guarantee of ultimate longevity. Consequently, it is recognized that a structure with a 100-year design lifespan won't necessarily imply a system that lasts for 100 years. One established service life design methodology that is built on a broad base of experience and that resides in the public domain is the International Federation for Structural Concrete (fib) Model Code for Service Life Design (fib Bulletin 34, 2006). This methodology has recently been implemented in ISO 16204:2012 Service Life Design of Concrete Structures. The methodology was developed through the publicly funded DuraCrete research project and was validated by a consortium of universities and consulting firms to offer a reliability-based approach similar in principle to modern limit states design-based structural design codes.

The fib methodology provides a rational probability-based approach to service life design of concrete structures subject to corrosion, a major deterioration mechanism for bridges, tunnels and marine structures. The approach is analogous to structural design for which durability-related loads and resistances are assessed and quantified probabilistically, considering element specific exposures and material properties. For example, durability loads include surface chloride concentrations and ambient temperature, and durability resistances include concrete cover and permeability. Based on the fib methodology, durability requirements can be quantified and measured to verify that the required materials and properties are achieved.

Flood considerations have also been taken into account during the system's development and configuration. The California WaterFix is intended to withstand a 200-year return flood event, as well as estimated sea level rise due to climate change over the next 100 years (recognized by an additional 18-inch allowance). These criteria will affect facility elevation, construction of levees, embankment design, and other flood protection measures.



---

## STANDARDS AND CODES

The following list of standards and codes is not meant to be all inclusive; rather it is a representative list of codes and standards to be utilized in the design of the California WaterFix facilities. Due to the current proposed timeline for design and construction of the project, the “next (or upcoming) cycle” of model codes shall be used as the design basis for structures, including but not limited to:

- United States Army Corps of Engineers (USACE) Engineering Manuals
- 2013 California Building Code (2013 CBC) [based on 2012 International Building Code (IBC) and all referenced standards including: American Society of Civil Engineers (ASCE) 7-10 Minimum Design Loads for Buildings and Other Structures, American Concrete Institute (ACI) 318-11, & 530/530.1-13, American Institute of Steel Construction (AISC) Steel Construction Manual 14th Edition and 2010 documents (341, 358 & 360), American Welding Society (AWS) D1.1/D1.1M:2010 Structural Welding Code-Steel, 22nd Ed.]
- American Association of State Highway and Transportation Officials LRFD Bridge Design Specifications 6th Edition along with any published California Amendments by the California Department of Transportation (AASHTO BDS2012). Seismic design of bridges and highways shall conform to the latest Caltrans Seismic Design Criteria (SDC).
- Standard Specifications and Standard Plans published by the California Department of Transportation (Caltrans), latest edition, where applicable
- American Water Works Association (AWWA) Manual M9 Concrete Pressure Pipe 3rd Edition 2008 and AWWA Manual M11 Steel Pipe-A Guide for Design and Installation 4th Edition 2004.

The codes and standards listed above shall be used, unless the Preliminary Design Report (PDR) designates another edition to be used. Local jurisdictional codes shall be reviewed for special requirements.



CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## GUIDELINES

Exhibit B-1 | V. 3

**DISCLAIMER** – Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 9-18-15

# EXHIBIT B-1- GUIDELINES

## Guidelines, Administrative Parameters, and Requirements Applicable to the Implementation of the California WaterFix through Design and Construction

### TABLE OF CONTENTS

1.0 Introduction.....	2
2.0 Mission, Vision, Culture and Values .....	2
3.0 Organization .....	4
A. Detailed Roles and Responsibilities.....	5
B. Program Director Reports .....	7
C. Program Manager Reports.....	9
D. Chief Engineer Reports.....	11
E. Program Controls and Contracting Reports .....	15
F. Information Technology Systems Reports .....	16
G. Property Acquisition Reports .....	18
H. Staffing and Administration Reports.....	18
I. Environmental and Planning Reports.....	19
J. QA/QC Reports .....	19
4.0 DCE Staffing Administration .....	21
A. Department Structure .....	21
I. Staffing .....	21
II. Job Descriptions (standard format TBD).....	22
III. Recruitment .....	22
IV. Selection Process for Partnering Agencies (including DWR).....	22
V. Selection Process for Contract Personnel.....	23
VI. Hiring Process .....	23
VII. On-Going HR Policies.....	24
VIII. Off-boarding (how staff will transition off program).....	24
5.0 Meeting Cadence.....	25
6.0 Mobilization.....	27

## 1.0 INTRODUCTION

The Design Construction Enterprise (DCE) for the California WaterFix program is a unique entity within the Department of Water Resources (DWR) created for the sole purpose of planning and constructing the water conveyance facilities as described in Exhibit A of the DCE Agreement. Through a series of workshops, principles and guidelines were developed to govern the DCE. This document summarizes the principles, guidelines, describes the organization, and identifies roles and responsibilities.

## 2.0 MISSION, VISION, CULTURE AND VALUES

This section establishes the DCE management characteristics of the culture that is desired for the organization and values that are expected of all individuals working within DCE.

Executive staff, responsible for managing the completion of the California WaterFix, developed and universally endorsed a Mission Statement, Vision Statement, and Culture Statement for the DCE in January 2014. The purpose of the Mission Statement is to guide management of the California WaterFix and reflects the core purpose of the DCE. The Mission Statement intends to challenge the DCE and have broad significance to motivate and stimulate the team. By agreeing to a clear Mission Statement, common goals and expectations were set for the individuals involved in the DCE. The following is the DCE Mission Statement, established and adopted by executive leadership:

***To safely design and construct the conveyance facility on time, on budget, and within specifications while prudently managing risk.***

The DCE will achieve this mission by: expertly managing risk, communicating effectively, transacting all business in an open and honest manner, providing world-class project controls (budget, schedule, reporting), making decisions that are fiscally prudent with a focus on the creation of value, setting clear and comprehensive criteria for specifications and standards, and implementing an effective QA/QC program.

The Vision Statement describes the aspiration of the DCE for achieving its Mission. The following is the DCE Vision Statement, established and adopted by executive leadership:

***To become a model organization for the delivery of water related megaprojects.***

The DCE will achieve this vision by: controlling cost, being a respectful community partner, being innovative, efficient, developing knowledgeable team members, building trust and confidence.

The following is the DCE Culture Statement, established and adopted by executive leadership:

***The DCE is a high-performing organization with world-class expertise and team members who enjoy the challenges that accompany a world-class project. It is a fun, supportive, dynamic, can-do place that***

***celebrates accomplishments. DCE staff conduct their work with passion, and exhibit persistence in moving work forward.***

The following are the DCE values, established and adopted by executive leadership, that are expected of all individuals working within DCE. The DCE values:

- Safety – Everyone goes home safe, every day.
- Accountability – We are responsible for our actions as an individual, as a team and to the community.
- Honesty – We conduct our work in a transparent manner, tell the truth, admit our mistakes, and course correct as necessary.
- Decisiveness – We operate with a sense of urgency, we get the facts, get them fast, and make the decision.
- Solutions Oriented – Every problem presented must be accompanied by multiple alternatives for solution.
- Value Driven – Our decisions are based on creating value for all stakeholders.
- Coaching – We share our strengths, have the courage to ask for help, acknowledge and celebrate individual and team success.
- Continuous Learning – We operate in an environment where continuing education and knowledge transfer is fundamental to our success.

The DCE is committed to excellence. Through the lessons learned from resources including site visits with programs throughout the country and selected case studies, the DCE will apply this knowledge to enhance operations. Governance, organization, cost estimating, communication, risk management, procurement, project controls and quality are all areas critical to success. By creating an organizational structure that assigns single points of accountability with defined roles to maintain clear lines of responsibility, the DCE will empower the program team to be effective decision-makers.

The DCE will strive for transparency on decisions and expenditures to ensure support of all involved parties focusing on setting clear processes and procedures that can be easily monitored and enforced. With clear and measurable Key Performance Indicators (KPIs), the performance management system will be built to provide the team with timely and accurate information to highlight potential risks and expedite decision-making.

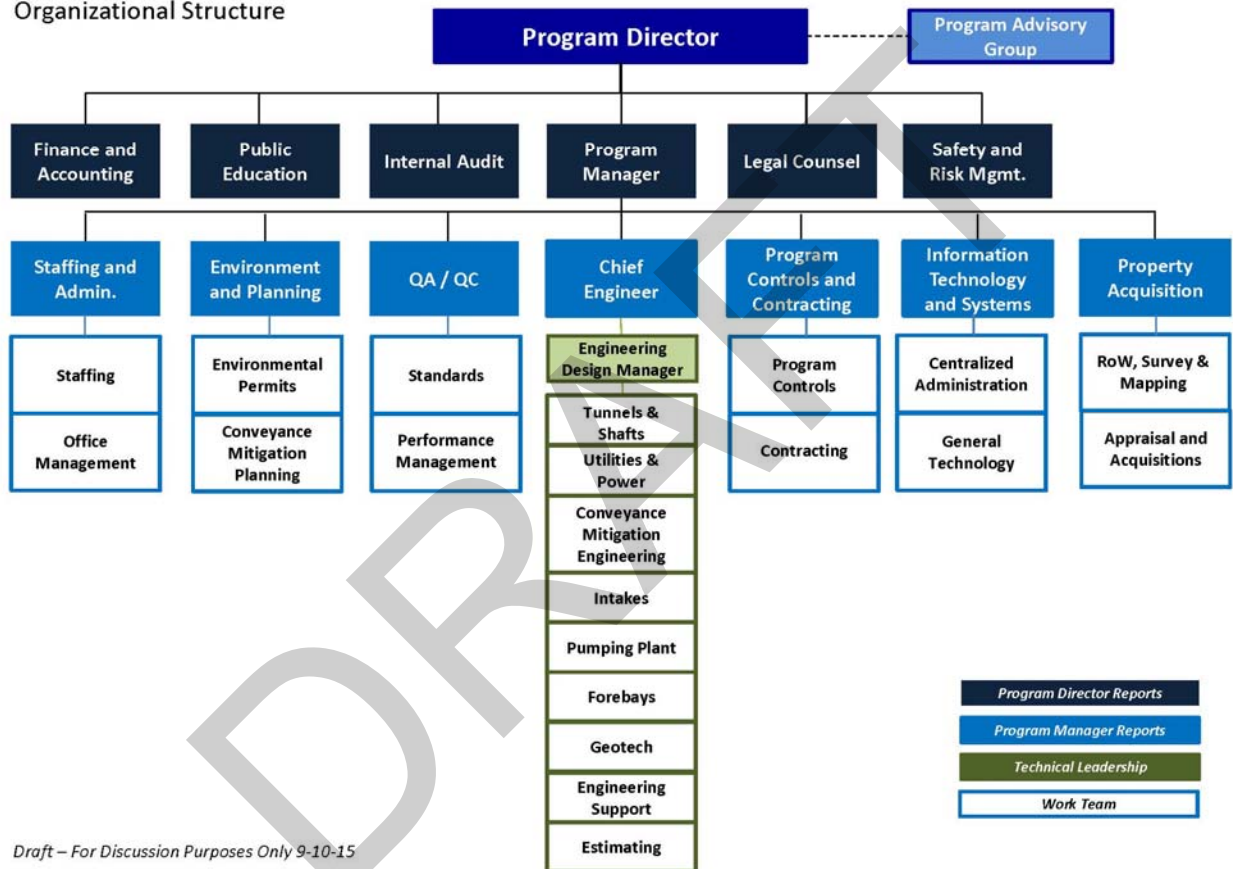
The DCE Program Controls and Contracting function will assess, implement and process systems and processes required for all program reporting. Well defined protocol and escalation will be developed providing clear delineation of decision making at the appropriate level as related to design criteria, design standards, specification changes, such as that described in detail in Section 3.C.2. The Program Controls Plan will be further defined as the program advances. The DCE will establish and maintain, in the Program Controls Plan, tools and systems to manage change; control risk; minimize cost; drive schedule; manage budget; and monitor and report progress. DWR and the Authority will be kept apprised of program progress through monthly status reports.

### 3.0 ORGANIZATION

This section describes the DCE organizational structure. The DCE will be organized generally as shown in the organizational chart below. Specific work teams will be organized at the discretion of the Program Director. A general description of each team’s role and list of responsibilities are provided in this section.

#### Design and Construction Enterprise

Organizational Structure



## A. DETAILED ROLES AND RESPONSIBILITIES

- 1) Program Director – Overall role: Single point of accountability to DWR and the Authority for delivery of the Program design and construction. Will set the overall direction of the Program and coordinate all program execution with the Program Manager and Chief Engineer, and ensure all activities are on schedule, within budget and to specifications. In addition, the Program Director will lead external interactions, administrative support functions of the program organization, and interaction with DWR and the Authority. Specific responsibilities include:
  - a. Budget & Schedule
    - Prepares draft annual budget and schedule for approval by DWR and the Authority in accordance with Section 8 of the Agreement
    - Keeping the program on budget and on schedule
    - Keeps DWR and the Authority informed on actual and forecasted expenditures against budget
    - Submits modified budget for DWR and the Authority approval if expenditures for an individual contract or a budget category exceeds amount in the annual budget
  - b. Procurement / Contracts
    - Responsible for entire contracting process including compliance of approved contracts with applicable law
    - Oversees the issuance of contracts and ensures their progress
    - Recommends contract changes to DWR and the Authority for approval in accordance with Section 3e of the Agreement, if contract expenditures exceed the budget or materiality thresholds.
  - c. Safety & Risk Management
    - Ensures development and implementation of safety procedures in accordance with DWR safety policy
    - Oversees the development of a program risk register with the identification of the high and critical priority risks
    - Ensures that high and critical priority risks have clear ownership and mitigation
    - Ensures that implementation of action plans when a particular risk crosses a threshold
  - d. Design Changes
    - Ensures that engineering decisions not requiring DWR and/or Authority approval pursuant to Sections 3(e) or 6(b) are made on a timely basis.
  - e. Performance Evaluation (DWR and the Authority, PM, and Program)
    - Directs the preparation of performance management reports on overall progress of the organization against performance indicators (e.g., cost, schedule, specs, etc.)

- Manages staff as it relates to their performance on the program (their partnering agency will continue to evaluate their performance independently)
- f. Human Resources
    - Mobilizes and returns staff to and from partnering agency(ies) as needed
  - g. Financing
    - Works with DWR and the Authority to determine the amount of funding and timing of funding needed by the entity
    - Ensures coordination with financing entity(ies) to secure commitment dollars when needed
  - h. Audit
    - Ensures full cooperation with auditors
    - Ensures audit findings are responded to appropriately and timely
  - i. Public Affairs
    - Oversees DCE public relations/communications efforts with respect to construction activities
    - Ensures there is a liaison to public and communities impacted by construction
    - Ensures coordination of outreach efforts with DWR Public Affairs Assistant Director
  - j. Program related Environmental Compliance and Mitigation
    - Ensures contracts and activities are done in compliance with environmental and permit requirements
  - k. Legal
    - Works with legal counsel on legal advice regarding DCE program implementation and legal compliance
  - l. DWR and Authority coordination/support
    - Facilitates coordination with DWR and the Authority in accordance with Sections 3, 6, 7, 8, and 9 of the Agreement
    - Ensures that DWR and the Authority has adequate administrative support
- 2) Program Advisory Group – Overall Role: Technical resource convened by the Program Director, providing advice and expertise, to help shape the Program Director’s point of view on program issues. DWR and the Authority may recommend individuals for participation on the PAG with the consent and approval of the Program Director. Specific responsibilities include:
- a. Participates full-time
  - b. Assists the staffing function in resource interactions with partnering agencies
  - c. Facilitates communication of program information to partnering agencies
  - d. Provides technical advice
  - e. Reviews program documentation at the direction of the Program Director
  - f. Assists in selecting staff and consultants



## B. PROGRAM DIRECTOR REPORTS

- 1) Program Manager – Overall role: Ownership over all functions directly related to delivery of the facility. Provides program leadership, management, and direction to ensure the design is completed in accordance with the preferred project identified in final EIR/EIS; sets and approves program scope, schedule, and budget activities; responsible for implementing team plans, staffing levels, and setting team responsibilities; and ensures coordination and cooperation between teams. Reports to the Program Director, and where needed can represent the Program in interactions with DWR and the Authority and external stakeholders. Specific responsibilities include:
  - a. Day to day management of program-wide priorities and strategy as related to the facility
  - b. Convenes cross-functional leadership team to deliver program (including administrative, environmental, engineering, QA/QC and Program Controls and Contracting)
  - c. Directs overall scoping and managing of contracts under Program Manager’s authority
  - d. Directs contract management and review services under Program Manager’s authority
  - e. Convenes working group meetings with functional teams and direct reports
  - f. Makes recommendations to Program Director for approval on contracts, contract amendments, and budget changes
  - g. Leads or attends specific meeting forums across functions to ensure cross-functional communications and resolution of issues
  - h. Signs off on all resourcing decisions around employees and staffing (i.e. moving back to partnering agency) Reports up to Program Director on program status and issues requiring escalation to DWR and the Authority level
  - i. Drives Environmental Planning and required permits
  - j. Ensures Property Acquisition and ROW for program activities are completed timely
  - k. Oversees performance management and adherence to standards across the program delivery organization
  - l. Examines engineering designs to identify opportunities to improve value to the program
  
- 2) Legal Counsel – Overall role: Provide the program with legal direction and ensure compliance with applicable laws and regulations. Review RFQ’s, entity agreements, contracts, task orders, and scope of services to assess compliance. Hired by and reports to the Program Director. Specific responsibilities include:
  - a. Provides program timely guidance and advice on all legal matters
  - b. Monitors and ensure program is in compliance with applicable laws and regulations
  - c. Ensures that all agreements and construction contracts are in conformance with applicable standards and laws
  - d. Provides advice and guidance in contractor negotiations
  - e. Assists with finalizing contract agreements
  - f. Assists in defending the program against litigation
  - g. Advises program on legal implications contracting and other relevant decisions

- h. Coordinates with AG Counsel / DWR and the Authority
- 3) Safety and Risk Management – Overall role: The Safety and Risk Management team minimizes and controls program risks to control costs and schedule. In addition, the team identifies the program insurance requirements and enforces safety program requirements. Specific responsibilities include:
- a. Conducts risks workshops at various program stages
  - b. Prepares and organize risks and develops risk register and management plan
  - c. Monitors and reports on risk issues
  - d. Develops risk mitigation approaches
  - e. Works with engineering to find ways to minimize risks
  - f. Develops insurance recommendations for California WaterFix
  - g. Ensures that action plans are put into effect once a risk is actualized
  - h. Develops and implements safety and procedures in accordance with DWR Safety Program
- 4) Finance and Accounting – Overall role: Will manage cash flow requirement forecasts, monitors program funding and handling of payments. Specific responsibilities include:
- a. Produces cash flow requirement forecasts to be used in establishing a schedule of bond issuances
  - b. Assists partner organizations and entity staff to develop the funding requests and subsequent bonding requests for the entity, as needed
  - c. Assists partner organizations and entity staff with preparing applications to obtain grants, loans, and other financing, as well as tax waivers and governmental incentives, as needed
  - d. Oversees vendor payment processes
  - e. Establishes appropriate financial review process
  - f. Establishes financial controls and reporting procedures
  - g. Coordinates with program controls function to ensure appropriate payments are made only after work has been completed as specified in contracts
  - h. Provides routine funding and financial review reports to Program Director
  - i. Receives, reviews and pays invoices in accordance with contractual requirements
  - j. Works with entity management to manage funds
  - k. Monitors and tracks costs, including current budgets, current commitments, actual expenditures, estimates-to-complete, and estimates-at-complete forecasts
- 5) Public Education – Overall role: Will initiate, coordinate, monitor, and report on local public outreach and support DWR Public Affairs Office on program related matters. Specific responsibilities include:
- a. Establishes a local public outreach communications plan
  - b. Supports DWR in preparing outreach materials across channels and user groups
  - c. Supports design engineering and construction efforts as needed
  - d. Coordinates with Program Director to prioritize near-term activities

- e. Coordinates communications plans and activities with DWR Public Affairs Assistant Director
  - f. Maintains web site content and news
- 6) Internal Audit – Overall role: Will assure conformance with approved processes and procedures. Will review the various team actions / documents, develop monitoring and audit reports, review corrective action plans, and verify corrections. Specific responsibilities include:
- a. Prepares audit plan
  - b. Audits financial processes and procedures
  - c. Audits compliance with established process and procedures
  - d. Provides audit reports to Program Director and DWR and the Authority
  - e. Coordinates with QA/QC where necessary

### C. PROGRAM MANAGER REPORTS

- 1) Chief Engineer – Overall role: Responsible for delivery of the design phase of all key work packages and support functions. Directs project management, coordination, planning and oversight of design engineering and construction. Specific responsibilities include:
- a. Determines appropriate engineering packages for procurement
  - b. Establishes scoping/management of feature design engineering contracts
  - c. Provides leadership of QA/QC, constructability reviews, program controls, and engineering support for feature design engineering contracts
  - d. Assists in the contracts team in managing and reviewing engineering contracts activities
  - e. Delivers appropriate engineering analysis to establish final system configuration
  - f. Responsible for preparation of cost estimates and contract specifications
  - g. Directs CAD , GIS and IT and other engineering support
  - h. Manages and convenes technical expert review teams (value engineering, tunneling, intake and pumping plant) as needed
  - i. Prepares status reports and updates for Program Manager and work with PM to consolidate materials for Program Director and DWR and the Authority
  - j. Convenes forums with Safety and Risk Management, Internal Audit, Legal, and QA/QC to ensure compliance with program requirements and actions resulting from forums
  - k. Evaluates the feasibility and practicality of the Program designs
  - l. Oversees studies to analyze whether risks are properly managed, work expectations are achievable and potential bottlenecks and areas of uncertainty in the design phase are identified
  - m. Examines engineering designs to identify opportunities to improve value or reduce costs
  - n. Oversees Construction Manager and Construction Phase
- 2) Program Controls and Contracting – Overall role: The team will issue consultant proposals, assist in the selecting, negotiating, and award Engineering Design agreements. Once contracts are awarded, contracting function will be responsible for handling claims and change-orders. In addition to this core function, the team will develop, implement, monitor, and report on the

Program's scope, schedule and budget. Program controls will implement and maintain processes and procedures that monitor and track staffing, costs and budgets, schedules, current commitments, percent complete, actual expenditures, estimates-to-complete, and estimates-at-complete forecasts.

- 3) Information Technology and Systems – Overall role: Responsible for overseeing and managing all IT functions within the DCE, in coordination with DWR IT organization. Managing infrastructure architecture and design; managing operations of voice and communication systems, data network infrastructure, web services, database management and server systems; advising on technologies to support business needs of the DCE; and aligning technology with strategic plans and business unit needs. Ensures that data security measures are established and adhered to. Specific responsibilities include:
  - a. Coordinates strategic and operational development of network, server, and voice infrastructure; coordinates database development and administration; responsible for Information Technology strategic planning process; and establishes and implements standards for network architecture, database systems, and communication systems.
  - b. Manages all activities relating to the design, installation, implementation, and administration of network, server, and communication infrastructure, database administration, and data center operations; evaluates existing technology to define standards and introduce new and enhanced technology solutions
  - c. Meets other DCE teams to discuss business and technology needs and identify technology solutions; and recommends acquisition of technology to enhance DCE needs and performance.
  - d. Develops, implements, and manages programs and services to ensure availability and reliability of databases, network, server and communications infrastructure
  - e. Plans, directs, and manages the assessment of user requirements, feasibility, technical direction, cost projections, benefit analysis, schedule, and scope of a wide variety of Information Technology infrastructure needs
  - f. Participates in selection of contractors and consultants; and manages contracts
  - g. Develops and administer the annual DCE IT budget; participates in the forecast of funds needed for staffing, equipment, materials, and supplies; monitors and approves expenditures; implements adjustments; authorizes purchases; and evaluates and approves bids for consultants and service contracts
  - h. Ensures that data security measures are established and adhered to.
- 4) Property Acquisition – Overall role: Coordinating, negotiating and securing land for temporary and permanent access and ownership, as further described in Exhibit D of the DCE Agreement.
- 5) Staffing and Admin – Overall role: The Staffing and Administration (SAM) team controls the entity's internal staffing and resourcing demands as well as other administrative functions like non-engineering IT and office management. Staffing duties are further described in Section 4.0 – DCE Staffing Administration. Specific responsibilities include:
  - a. Manages personnel-related issues such as loans, transfers, and secondments

- b. Office and management of other entity facilities
- 6) Environment and Planning – Overall role: The Environment and Planning team shall coordinate all environmental planning priorities. Their primary responsibility is to coordinate these functions to ensure no land, permit or other right of way issues delay or prevent the program construction. In addition, this function will oversee conveyance mitigation planning. Specific responsibilities include:
- a. Ensures program is in compliance with environmental permits
  - b. Develops and monitors plan for conveyance-related mitigation
  - c. Works with Conveyance Mitigation Engineering to finalize plans and oversee execution of mitigation projects
  - d. Provides leadership of conveyance-related mitigation (some directly related to mitigation efforts in the EIR and EIS)
- 7) QA/QC – Overall role: QA/QC will develop and implement an overall QA/QC plan for the design phase. The QA/QC plan as described in Exhibit B-1.1 of the DCE Agreement, will be a framework for the Engineering and Design Teams in creating individual facility QC plans. QA will be responsible for surveillance and audits of the design teams. Specific responsibilities include:
- a. Establishes QA/QC standard policies, procedures and manuals
  - b. Determines the timing of technical and administrative surveillances and audits
  - c. Clearly articulates acceptance criteria across organization
  - d. Defines method and depth of review required to meet criteria
  - e. Reviews QA/QC processes for compliance with outlined policies
  - f. Monitors and tracks compliance with policies
  - g. Conducts trend analysis of non-compliance issues
  - h. Establishes performance management processes and assess program performance against these metrics
  - i. Assures that all work performed will comply with documented plans, policies and program procedures, partner organization requirements, applicable codes, legal requirements, and industry standards
  - j. Works with value engineering to perform constructability reviews prior to scheduled submittal of design packages
  - k. Maintains quality dashboards and conduct root cause analyses

#### D. CHIEF ENGINEER REPORTS

- 1) Engineering Design Manager – Overall Role: Will provide engineering management services to assist the Chief Engineer in the implementation of the California WaterFix during the design phase, as well as providing limited engineering design and other support services. The EDM may also provide support services during the construction phase. The EDM will, perform engineering studies, as directed. The EDM will coordinate and manage the activities of other design consultant and engineering professionals to ensure that the various conveyance features are

well designed, with high quality, on schedule and on budget, and shall incorporate environmental commitment and mitigation measures identified in the EIR. The conveyance features include but not limited to: intakes, tunnels, forebays, pumping plants, canals, roads and levees, tunnels, and power transmission systems. Specific responsibilities include:

- a. Provides program management, coordination, planning and oversight of design engineering
  - b. Assists with determining appropriate engineering packages for procurement
  - c. Recommends scoping/management of feature design engineering contracts
  - d. Manages QA/QC, constructability reviews, program controls, and engineering support for feature design engineering contracts
  - e. Assists in engineering contract management & review services
  - f. Performs appropriate engineering analysis to establish final system configuration
  - g. Prepares cost estimates and contract specifications
  - h. Manages CAD, Projectwise, and other engineering support software requirements
  - i. Coordinates CAD with GIS, Accela and other IT activities required for completion of engineering design
  - j. Supports technical expert review teams (value engineering, tunneling, intake and pumping plant) as needed
  - k. Prepares status reports and updates for Chief Engineer and assist with consolidating materials for Program Manager and Program Director
  - l. Manages forums with Safety and Risk Management, Internal Audit, Legal, and QA/QC to ensure compliance with program requirements and actions resulting from forums
  - m. Evaluates the feasibility and constructability of the Program designs.
  - n. Performs engineering studies
  - o. Performs studies to analyze whether risks are properly managed, work expectations are achievable and potential bottlenecks and areas of uncertainty in the design phase are identified
  - p. Examines engineering designs to identify opportunities to optimize conveyance, improve value or reduce costs and minimize impacts
  - q. Additional responsibilities may include engineering design support services during construction
  - r. Prepares design criteria and standards
- 2) Tunnels and Shafts – Overall role: Provide management, planning, engineering and design services, permitting assistance, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for Tunnel and Shaft facilities. Will provide engineering support during construction. Specific responsibilities include:
- a. Provides project management and engineering design services
  - b. Prepares project management plan with design schedule, budget estimates and cost management practices
  - c. Collaborates with value engineering team to optimize design
  - d. Provides expertise and assistance to meet permitting requirements

- e. Performs additional geotechnical studies as directed
  - f. Prepares geotechnical baseline report
  - g. Prepares engineering reports
  - h. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete & closeout
  - i. Prepares design status, design summary reports
  - j. Prepares Engineers construction cost estimates at 30%, 65% and 100% milestones
  - k. Provides bid phase and engineering services to support construction
- 3) Utilities and Power – Overall role: Provide management, planning, engineering and design services, permitting assistance, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for Utility and Power facilities. Will provide engineering support during construction. Specific responsibilities include:
- a. Provides project management and engineering design services
  - b. Prepares project management plan with design schedule, budget estimates and cost management practices
  - c. Collaborates with value engineering team to optimize design
  - d. Provides expertise and assistance to meet permitting requirements
  - e. Performs utilities requirement studies
  - f. Performs permanent and temporary power requirements studies
  - g. Represents entity and coordinate with power providers
  - h. Prepares engineering reports
  - i. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete and closeout
  - j. Prepares design status, design summary reports
  - k. Provides bid phase and engineering services to support construction
- 4) Conveyance Mitigation Engineering – Overall role: Provide management, engineering and design services, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for conveyance-related mitigation as necessary. Specific responsibilities include:
- a. Provides project management and engineering design services
  - b. Prepares project management plan with design schedule, budget estimates and cost management practices
  - c. Coordinates with Conveyance Mitigation Planning team in developing design
  - d. Develops engineering design, construction specifications, scheduling, cost estimating and budgeting support services as needed for mitigation activities
  - e. Collaborates with value engineering team to optimize design
  - f. Prepares design criteria and preliminary engineering reports.
  - g. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete and closeout
  - h. Prepares design status, design summary reports

- i. Prepares Engineers construction cost estimates at 30%, 65% and 100% milestones
- 5) Intakes – Overall role: Provide management, planning, engineering and design services, permitting assistance, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for Intake Facilities. Will provide engineering support during construction. Specific responsibilities include:
- a. Provides project management and engineering design services.
  - b. Prepares project management plan with design schedule, budget estimates and cost management practices
  - c. Collaborates with value engineering team to optimize design
  - d. Provides expertise and assistance to meet permitting requirements.
  - e. Performs hydraulic model studies
  - f. Prepares engineering reports
  - g. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete and closeout
  - h. Prepares design status, design summary reports
  - i. Provides bid phase and engineering services to support construction
  - j. Provides engineering support for the intake performance studies
- 6) Pumping Plant – Overall role: Provide management, planning, engineering and design services, permitting assistance, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for Pumping Plant and Pipeline Facilities. Will provide engineering support during construction. Specific responsibilities include:
- a. Prepares project management plan with design schedule, budget estimates and cost management practices
  - b. Collaborates with value engineering team to optimize design
  - c. Provides expertise/assistance to meet permitting requirements
  - d. Performs hydraulic model studies
  - e. Prepares engineering reports
  - f. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete & closeout
  - g. Prepares design status, design summary reports
  - h. Provides bid phase/engineering services to support construction
  - i. Provides engineering support during construction
  - j. Develops view on equipment procurement options and analyze options
- 7) Forebays – Overall role: Provide management, planning, engineering and design services, permitting assistance, engineering studies and reports, preliminary / final construction documents, and construction estimates and schedules for Forebay facilities. Will provide engineering support during construction. Specific responsibilities include:
- a. Provides project management and engineering design services



- b. Prepares project management plan with design schedule, budget estimates and cost management practices
  - c. Collaborates with value engineering team to optimize design
  - d. Provides expertise and assistance to meet permitting requirements
  - e. Prepares engineering reports
  - f. Prepares drawings and technical specifications at milestones 30%, 65%, 90%, 100% complete & closeout
  - g. Prepares design status, design summary reports
  - h. Provides bid phase and engineering services to support construction
  - i. Coordinates with Division of Safety of Dams
- 8) Geotech – Overall role: Develop and implement a geotechnical program which includes field exploration, laboratory testing, and data reports. Specific responsibilities include:
- a. Prepares a geotechnical services plan that will include specific scope of work, budgets, needed resources, schedule, QA/QC standards, and an organization chart
  - b. Provides geotechnical field exploration and laboratory testing services
  - c. Prepares geotechnical reports
  - d. Provides coordination with engineering management and feature design engineering staff
  - e. Provides construction support services
  - f. Provides other design services as needed
  - g. Ensures consistency between geotechnical programs, evaluations, and deliverables
- 9) Engineering Support – Overall role: The Engineering Support team will provide a number of required support services such as Information Technology, CAD support services, document control and GIS services. Specific responsibilities include:
- a. Provides support services to key work packages
  - b. Develops systems to connect and link important functions
  - c. Develops standards, platforms and protocols to create a cross-functional standard
- 10) Estimating – Overall role: The Estimating team will assist in the development of the program schedule and then use the program schedule to estimate expected costs of work packages and activities / contracts associated with work. Specific responsibilities include:
- a. Quantifying the likely time and cost associated with contracts and work packages
  - b. Revising these estimates where needed

## E. PROGRAM CONTROLS AND CONTRACTING REPORTS

- 1) Program Controls – Overall role: The team will develop and implement controls and processes to monitor key metrics around budget, schedule, quality, contracting and risk. The Program Controls team should be established as an independent function to track and monitor ongoing program activities. Specific responsibilities include:
- a. Develops processes and controls to track program performance

- b. Use processes to identify places where corrective action should be taken and resources dedicated
  - c. Acts as a reference point for budget, schedule and design changes
  - d. Ensures oversight of cross-functional documents and reports
  - e. Program controls will review and make suggestions on the Work Breakdown Structure
  - f. Establishes program and task durations, milestones and schedule requirements based on design team input
  - g. Reviews, performs critical path analysis, and approves schedule submissions (baseline and monthly updates) by Designers, Program Subcontractors, Providers and others
  - h. Develops and maintains critical path method schedules for environmental documentation and engineering design performed by contractors
  - i. Provides a systematic process for tracking agreements and their associated task orders/ change orders
  - j. Develops basis for schedule development and schedule controls and maintain overall program schedule
  - k. Develops basis for budgeting and maintains overall budget
  - l. Maintains control of all drawings and documentations for program including oversight of the management of reports
  - m. Communicates program status throughout the organization
- 2) Contracting – Overall role: The Contracting team will develop initial contract agreements and monitor those already secured. The team will manage contracts made with vendors, partners and employees. Specific responsibilities include:
- a. Coordinates procurement activities across the organization
  - b. Ensures a competitive dynamic exists for all contracted services across the entity
  - c. Adheres to state and federal legislation and regulations
  - d. Adheres to surety bonds and associated statutory requirements
  - e. Analysis of equipment supply options (if needed) and negotiations to identify and capture savings
  - f. Works with engineering teams to optimize cost of designs
  - g. Ensures compliance and legal standards are upheld in contracts
  - h. Maintains contract visibility and awareness across the program
  - i. Oversees change management when required

## F. INFORMATION TECHNOLOGY SYSTEMS REPORTS

- 1) Centralized Administration – Overall role: Responsible for managing and supervising the design, integration, implementation, and administration of information technology security systems and policies in coordination with DWR IT organization. Areas of responsibility include developing and implementing security standards, systems and policies for all aspects of information technology and for coordinating efforts with on board consultants and PWA agencies. Administration of DCE Enterprise databases, web services, other enterprise wide software and business systems and ensures enterprise-wide backup and recovery. Specific responsibilities:

- a. Manages the design, integration, implementation, and administration of information technology security processes; ensures that process analysis, checkpoints, and testing are complete as designed; evaluates results and assists in resolving technical problems; and develops and manages a security awareness program.
  - b. Reviews existing security processes and identifies vulnerabilities; develops policies and procedures for the DCE implementation to ensure security of computing environment; monitors existing and new security threats, ensures that critical patches and antiviral applications are current and deployed; investigates security breaches and threats and recommends changes to address security issues; manages process for operating system hardening, patch management, and intrusion detection; and manages security configurations for server, database, and application systems.
  - c. Coordinates team activities with other information technology teams and with managers and staff in DCE teams and consultants;
  - d. Provides general administration of the team including establishing and tracking team goals and objectives; analyzes team activities and prepares, develops, and monitors team budget; evaluates resource needs; assists in the development of the annual budget plan; and provides quarterly updates.
  - e. Estimates costs and staffing requirements for requested projects; assists in preparation of capital.
  - f. Ensures security systems are available and functioning at optimal levels; establishes standards and practices; monitors security; and purchases, installs, and manages system licenses.
  - g. Serves as technical advisor in the analysis, diagnosis, and resolution of applications and general information technology problems; and researches and evaluates new technologies.
  - h. Assists in developing team, methods, and procedures; and reviews and makes recommendations regarding the development of procedures and documentation.
  - i. Provides direction, guidance, and technical support to computer operators, technicians, and professional staff;
  - j. Assists in development of space planning, defining environmental controls, and services (e.g., power, air conditioning, fire suppression), and provides access control requirements ensuring facilities remain within environmental specifications, ensuring only authorized staff are accessing the facilities, also duties include analyzing and resolving issues and assists in planning upgrades to maximize availability and minimize disruptions
- 2) General Technology – Overall role: The General technology team is responsible for running, supporting, and maintaining general IT systems and network infrastructure. Specific responsibilities include:
- a. Maintains and monitors system hardware and peripherals for enterprise-wide systems. Monitors operating system software for enterprise and network server platforms

- b. Administers contracts for server hardware and software, equipment, and services for DCE's data centers and database team; establishes and implements preventative maintenance programs; and develops and revises operational policies and procedures for data center and database areas
- c. Provides direction, guidance, and technical expertise in data center operations. Serves as technical liaison for teams that support client and server hardware and software; applications hardware, software, and databases; local and wide area networks; and voice and data systems and user support
- d. Administers contracts for server hardware and software, equipment, and services for DCE data centers and database team; establishes and implements preventative maintenance programs; and develops and revises operational policies and procedures for data center and database areas.
- e. Provides assistance to other DCE teams and consultants on IT issues
- f. Provides training as needed
- g. Works closely with DWR IT organization
- h. Defines, maintains and enforces IT system policies
- i. Leads periodic IT audits
- j. Maintains desktop systems and software
- k. Monitors availability and performance of all IT infrastructure

#### G. PROPERTY ACQUISITION REPORTS

- 1) RoW, Survey & Mapping – Overall role: The Right of Way / Survey / Mapping team will map and develop the Right of Way (ROW) survey for the design phase, and provide support services for property acquisition, as further described in Exhibit D of the DCE Agreement.
- 2) Appraisal and Acquisitions – Overall role: Responsible for the appraisal of real property interests, and acquisition of real property for the California WaterFix. Areas of responsibility include the creation, monitoring and managing of deeds, purchase agreements, leases, licenses, encroachment permits, appraisal reports, cost studies, and researching and obtaining title reports, as further described in Exhibit D of the DCE Agreement.

#### H. STAFFING AND ADMINISTRATION REPORTS

- 1) Staffing – Overall role: The Staffing team supports the SAM in managing the entity's internal staffing and resourcing demands. Specific responsibilities include:
  - a. Manages personnel-related issues such as loans, transfers, and secondments
  - b. Interfaces with secondment organizations as resource needs change
  - c. Works with the partner organization's advisory group (to the PM) to ensure adequate resources are identified from partner organizations

- 2) Office Management – Overall role: The Office Management Team is responsible for all facilities management such as office rental agreements, building cleaning and security. Specific responsibilities include:
  - a. Identifies and selects office furniture
  - b. Manages maintenance of office supplies
  - c. Identifies and recommends office location
  - d. Space planning for DCE

## I. ENVIRONMENTAL AND PLANNING REPORTS

- 1) Environmental Permits – Overall role: Direct and coordinate the transition from the completion of the environmental process of the planning phase into the design phase. Ensure that environmental design requirements are conveyed and incorporated into the preliminary and final design documents. Develop, submit, and coordinate program permits and their requirements. Specific responsibilities include:
  - a. Develops a summary level environmental and compliance matrix to guide the Chief Engineer and the individual Engineering and Design Contractors
  - b. Reviews design documents to ensure program is in compliance with environmental permits and work with relevant Federal and State agencies to ensure due process is followed for permits
  - c. Coordinates with regulators and the conveyance mitigation team on mitigation activities
  - d. Provides updated information to the Engineering and Design Contractors
  - e. Works with design feature managers and engineering design manager to meet environmental commitments
  - f. Works with QA/QC to establish effective compliance review process
  - g. Conducts subsequent CEQA/NEPA compliance as necessary
- 2) Conveyance Mitigation Planning – Overall role: Provide management, planning, permitting assistance and support for conveyance-related mitigation. Specific responsibilities include:
  - a. Provides expertise and assistance to meet permitting and environmental requirements
  - b. Coordinates with Environmental Permits team and regulators to identify, develop and plan mitigation activities as required in order to operate the conveyance facility
  - c. Coordinates with Engineering team to develop engineering design, construction specifications, scheduling, cost estimating and budgeting support services as needed for mitigation activities
  - d. Oversees implementation, monitoring and transition to long-term management entity

## J. QA/QC REPORTS

- 1) Standards – Overall role: The Standards team will set program wide expectations and standards in which performance and compliance will be measured on. These standards will be both management and technical focused. The team will be responsible for detailing the development

process and rationale of these standards and then enforcing them effectively. Specific responsibilities include:

- a. Develops and monitors program standards
- b. Provides detailed justification and rationale for standards (defined by political, schedule, operability, and cost risks)
- c. Conducts tests on management and technical requirements
- d. Defines proper acceptance criteria (regulatory compliance, contractual compliance, optimized design)

2) Performance Management – Overall role: The Performance Management team will work closely with the Standards team to evaluate the level of compliance with the set standards and expectations. The team will conduct thorough analysis of personnel and processes and work to ensure that goals are consistently being met in an effective and efficient manner. Specific responsibilities include:

- a. Conducts performance reviews and facilitates performance dialogues
- b. Works with Standards to set expectations and evaluates criteria
- c. Works with Staffing and leadership to monitor and manage personnel and resourcing issues
- d. Defines methods of review
  - Process review – focused on the process at the beginning of the program
  - Audit review – targeted portion of work
  - Systematic review – all produced is inspected by QA/QC function

## 4.0 DCE STAFFING ADMINISTRATION

### A. DEPARTMENT STRUCTURE

A Human Resources (HR) professional titled Staffing and Administration (SAM) will be hired to manage the day-to-day administration and coordination of HR functions for the DCE. This individual should have public sector experience and excellent communication and organizational skills as a direct report to the Program Manager. Human Resources guidance and assistance will be provided to the SAM by the partnering agencies as needed. The partnering agencies include DWR and the Public Water Agencies (PWAs) involved in the program. Each PWA will designate a representative to serve as the point of contact to the SAM.

HR support provided to the DCE includes assistance in hiring/staffing, job description creation, administering inter-agency agreements, assisting with employee issues for agencies “sharing” employees, HR record keeping, providing updates and reports as requested and assisting with employees transitioning back to partnering agencies. Specific HR services for individuals hired for this program will be provided by their partnering agency or consulting firm. However, these specific services will be coordinated through the SAM.

DCE will utilize matrix management practices. DCE staff will receive their day to day assignments from DCE management. Payroll, attendance, vacation, compensation, benefits and related issues will be handled by staff’s partnering agency supervisor/manager. DCE is a part of DWR, and all DCE staff will be required to know and adhere to DWR Key Employee Policies and Guidelines, as explained below.

---

#### I. STAFFING

The SAM and the Program Director will discuss staffing needs of the program. This includes how many staff are needed, when staff are needed, reporting relationships, types of positions and length of assignments. As staffing needs are determined, specific skills, knowledge and requirements will be documented. Staff shall be made up of the most qualified individuals with expertise relative to their duties from DWR, PWAs and private industry. All personnel shall be 100 percent dedicated to the DCE (no split assignments) unless otherwise approved by the Program Director, shall be housed in a physically separate, discrete office section and/or building and under the management of the Program Director.

The SAM (with assistance from the Program Director) will establish job duties, education requirements and experience preferences. Once job information is documented, the SAM will coordinate with partnering agencies HR contacts to compare to existing job descriptions, which may include California State Civil Service.

The first positions that will be filled are the managerial level positions. The SAM will work directly with the Program Director to hire these individuals. The SAM will work directly with these new managers to

fill the other key positions as needed to support the DCE. A majority of the positions will be engineering, design or construction related.

The initial staffing need is estimated at 10 to 20 key positions. These positions will be filled first and then additional staffing needs will be determined based on program timing and cost.

The total staff for the DCE is estimated to be no more than 50 individuals.

---

## II. JOB DESCRIPTIONS (STANDARD FORMAT TBD)

Job Descriptions will be drafted by the SAM as specific job needs are determined. These job descriptions will outline minimum requirements, job duties, desirable qualifications, and the DCE values and culture statement. They will not include a salary range unless it is determined that individuals outside of the partnering agencies will be needed.

If the selection is from one of the partnering agencies, the employee's official job title from the partnering agency will be added to the job description.

---

## III. RECRUITMENT

Once an employment need has been determined and the appropriate job description has been written and approved, the SAM will establish selection criteria focusing on the job requirements. A job announcement will be drafted and e-mailed to the HR contact within the partnering agencies which includes DWR asking for interested candidates to submit a resume and a specific statement of qualifications according to criteria and deadlines established in the job announcement. The HR contact at the partnering agencies will update the job announcement with necessary salary and/or job classification information before distributing/posting announcement to employees.

The candidate review and interview process will be conducted for partnering agencies, including DWR, prior to the general workforce unless there is a rare and specific skillset needed that is known not to be available within the partnering agencies. If it has been determined that employees within the partnering agencies, including DWR, are not the best qualified, the SAM will conduct outreach and advertisement for the specific position through the contracting process.

---

## IV. SELECTION PROCESS FOR PARTNERING AGENCIES (INCLUDING DWR)

- 1) Once an employment need is e-mailed to the partnering agencies, the SAM will review, screen and document applicants for best qualified.
- 2) The SAM will forward the top candidates to the Program Director, or other manager, for review and comment.



- 3) If the Program Director, or other manager, agrees that top candidates are qualified, the SAM will setup interviews.
- 4) The SAM will recommend interview questions and documentation process based on selection criteria established in the job announcement.
- 5) The Program Director or Manager will inform the SAM of the best qualified candidate after the interviews are completed.
- 6) Salaries and benefits will be determined by the SAM in consultation with partnering agency HR point of contact.
- 7) If necessary, an inter-agency agreement will be established once a hiring decision is made.
- 8) The Hiring Manager or SAM will coordinate with the HR contact at the partnering agency to contact the employee and arrange logistics and start date.

---

#### V. SELECTION PROCESS FOR CONTRACT PERSONNEL

If it is determined that employees within the partnering agencies, including DWR, are not the best qualified, the SAM will establish a salary range for the position based on a market analysis.

The Contracting process will be determined by the SAM and the Program Director in accordance with appropriate Government Code laws and rules and the advice and consultation of DWR's contracting experts.

---

#### VI. HIRING PROCESS

The hiring process will vary depending on whether the individual is coming from DWR, one of the partnering agencies or the general workforce.

Department of Water Resources:

- State of California civil service laws and rules will apply. Employees will retain their current classification or be appointed to a classification where they have obtained eligibility through the civil service examination process.

Partnering Agency:

- It is anticipated that general inter-agency, resource or similar agreements will be made between the DCE and partnering agencies to allow for long-term reassignment of staff.

Consultant staffing:

- When the skills, knowledge and qualifications are not available through DWR or one of the partnering agencies, consultant contract(s) will be used.

On-boarding process (orientation, policies, procedures, etc.) for all DCE hires:

- The first day of assignment to the DCE will include an orientation with the employee, Program Director and SAM. The purpose is to review a checklist of items that need to be addressed, such as, office rules, technical access, HR policies, conflict of interest, training, timekeeping, travel and any other additional expectations.

---

## VII. ON-GOING HR POLICIES

- 1) HR functions and processes for all DCE staff will be coordinated through the SAM. This will allow the SAM to provide updates and reports to the Program Manager on a regular basis.
- 2) Employees that are selected to work in the DCE from one of the partnering agencies will follow their partnering agency's billing/timekeeping, payroll, travel, compensation and benefits processes.
- 3) Employees that are selected to work in the DCE from a California State Agency will follow the State's billing/timekeeping, payroll, travel, compensation and benefits processes.
- 4) California State Agency and PWA staff working in the DCE will be subject to their partnering agency performance evaluation criteria. DCE management will consult as necessary with partnering agency managers on performance evaluation issues.
- 5) Employees that are hired as consultants will be evaluated according to contract agreements. State and Federal Human Resources laws such as Sexual Harassment, Discrimination, etc. will be applicable to all consultants/contractors.
- 6) Salaries, benefits, incentive/perks will be determined based on the partnering agency policies, rules and union agreements.
- 7) If performance issues arise with an employee on an inter-agency agreement, the employee's partnering agency will be contacted and the procedures outlined with that partnering agency will be followed.
- 8) All persons working in or for the DCE will receive and acknowledge receipt of DWR's Employee Policies and Guidelines, or Key Employee Policies and Guidelines for Consultants and Contractors, as appropriate.

---

## VIII. OFF-BOARDING (HOW STAFF WILL TRANSITION OFF PROGRAM)

As the program or employee assignment comes to completion, the SAM will work with the HR point of contact at the partnering agencies to transition employees back to their partnering agencies to a classification no lower than the classification they were appointed to at the time they were assigned to the program.

## 5.0 MEETING CADENCE

Meetings are an important and essential element for the DCE. In order to be efficient, the Executive staff developed a series of tables to provide an example of the types of meetings and frequency with which they occur. The tables are intended as a guideline and will be modified to meet the demands of the program.

Each Level of the organization will require meeting forums at different times and cadences, as shown in the table below:

Forum	Meeting Type	Description	Frequency*	Participants
<i>DWR and the Authority</i>	Annual Review	<ul style="list-style-type: none"> <li>▪ Review staff survey</li> <li>▪ Review annual strategy</li> <li>▪ Review of forecast and budget</li> <li>▪ Approval of annual report</li> </ul>	<ul style="list-style-type: none"> <li>▪ Annually</li> </ul>	<ul style="list-style-type: none"> <li>▪ PD and direct reports with DWR and the Authority</li> </ul>
	DWR and the Authority Deep-dive	<ul style="list-style-type: none"> <li>▪ Update DWR and the Authority on changes to schedule, design or other program-wide issues that may not occur monthly</li> </ul>	<ul style="list-style-type: none"> <li>▪ Quarterly</li> </ul>	<ul style="list-style-type: none"> <li>▪ PD and direct reports if needed</li> <li>▪ DWR and the Authority</li> </ul>
	Regular Coordination Meetings	<ul style="list-style-type: none"> <li>▪ Sharing PD monthly dashboard with DWR and the Authority</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monthly</li> </ul>	<ul style="list-style-type: none"> <li>▪ PD</li> <li>▪ DWR and the Authority</li> </ul>

\* Or as needed.

The following table describes the meeting cadence across the organization:

Meetings <sup>1</sup>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>DWR and the Authority</b>												
Annual Review			•									
DWR and the Authority Deep-dive			•			•			•			•
Coordination Meetings	•	•	•	•	•	•	•	•	•	•	•	•
<b>PD Team</b>												
Quarterly Meetings			•			•			•			•
Monthly PD Meetings	•	•	•	•	•	•	•	•	•	•	•	•
Weekly PD Meetings	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••	•••••
<b>PM Team</b>												
Quarterly Meetings			•			•			•			•
Monthly Meetings	•	•	•	•	•	•	•	•	•	•	•	•
Weekly Meetings	•••••	•••••	•••••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••
<b>Functions / Work Packages</b>												
Monthly Functional Review	•	•	•	•	•	•	•	•	•	•	•	•
Operating Meetings	•••••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••	••~••

<sup>1</sup> Monthly meeting could replace weekly meetings once a month; similarly every third monthly meeting could be replaced by the quarterly meeting

DRAFT

## 6.0 MOBILIZATION

When funding becomes available, the DCE will formally organize, commence recruiting, and mobilize the resources necessary to adequately staff the organization. During this phase, staffing will undertake mission critical activities. It is anticipated that it will take 18 months to fully staff the DCE and complete the activities listed below.

During program mobilization, the DCE will:

- Create Project Management Plan
- Select and hire key staff
- Issuance of RFQs and selection of consultants
- Selection of EDM
- Development and implementation of construction contract phasing
- Initiate preliminary design phase
- Initiate property acquisition
- Initiate geotechnical program
- Ensure sufficient funding for design and construction activities
- Continue permitting efforts
- Implement Intake Performance Studies
- Create annual budget
- Establish a fully functioning office with the computing, administrative and other support needs to serve all members of the DCE
- Develop a Key Performance Indicator (KPI) plan
- Based on current design, prepare a Preliminary Program Schedule comprising design procurement and construction schedules
- Comprehensive program controls system including but not limited to business processes, engineering tracking, trending and change management, risk assessment, quantity unit rate and quantity tracking, cost and commitment, manpower and installation tracking, schedule types (engineering procurement, construction, start-up and tie-ins), and all other systems and reporting necessary to meet the needs of all program stakeholders
- Produce a complete set of standard administrative procedures, guidelines and other requirements for the efficient and consistent completion of all work within the program, including design, procurement, construction and start-up
- Develop a program team internal communication system that is fully coordinated and linked to the DCE communication operations for both internal communications within DWR and the Authority; and with safeguards and procedural compliances and protocols for outside and public communications. Such communication system shall be approved and coordinated with DWR and the Authority



CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## DESIGN AND CONSTRUCTION QUALITY PROGRAM

Exhibit B-1.1 | V.3

Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 9-23-15

**Revision Sheet**

Rev No	Description	Date	Initials
00	For inclusion in DCE Agreement (see note 1)	6/11/15	

Note:

1. The Design Construct Enterprise (DCE) is issuing this draft document to provide clear intent of committing to a quality program which uses best available practices. The Quality program will be further refined as the California WaterFix moves through various stages of development and milestones. One such milestone is hiring of the Engineering Design Manager (EDM).

DRAFT

---

Authority Approval

---

DWR Approval

# EXHIBIT B-1.1 – DESIGN AND CONSTRUCTION QUALITY PROGRAM

## TABLE OF CONTENTS

1.0 Introduction ..... 3

2.0 Scope of the DCE Quality Program ..... 3

3.0 Quality-Related Roles and Responsibilities of DCE Participants ..... 3

    3.1 Program Director/Program Manager ..... 4

    3.2 Chief Engineer ..... 4

    3.3 Quality Manager ..... 4

    3.4 Technical Review Board ..... 4

    3.5 Engineering Design Manager ..... 4

    3.6 Design Consultant ..... 4

    3.7 Contractor ..... 5

    3.8 Construction Management (CM) ..... 5

4.0 DCE Quality Program - Administration ..... 5

    4.1 QP Revisions ..... 5

    4.2 Audits ..... 5

    4.3 Delegation of Authority ..... 5

    4.4 Documentation of Quality-Related Activities ..... 6

    4.5 Records Retention ..... 6

    4.6 Corrective Action ..... 6

5.0 Protocol for Addressing Quality Concerns ..... 6

6.0 Appendix A - Quality Program Guidance ..... 10



## 1.0 INTRODUCTION

DWR's California WaterFix program will upgrade and protect the state's aging water system. DWR has assembled a team for the implementation of the project which is comprised of individuals and organizations with the expertise sufficient to achieve the objectives. A critical element of any major engineering project is the adoption of a quality program that when adhered to, increases the confidence that the project objectives will be achieved. Complex projects such as the California WaterFix involve numerous organizations each of which will develop and incorporate a quality program into their work plans.

The engineering and construction components of the California WaterFix have been organized under the Design and Construction Enterprise (DCE). The organization chart for the DCE is provided in Figure 1-1. Figure 1-2 provides an excerpt of the flowchart focusing on the engineering. It reflects the relationship between several of the DCE entities and lists their major work activities.

This document, the DCE Quality Program (QP), serves as the umbrella quality program that covers DCE activities. It includes the minimum requirements for the separate quality programs developed by each of the design organizations (Engineering Design Manager (EDM) and other design consultants), and the construction organizations (construction managers and contractors) working under the DCE, as reflected in Figure 1-2.

## 2.0 SCOPE OF THE DCE QUALITY PROGRAM

The design activities that are within the scope of the quality programs include the development of design documents which are issued for construction or those that support construction (e.g. design calculations). This is consistent with the Professional Engineers Act (Business and Professions Code 6700-6799) which defines the responsibilities of professional engineers.

For the California WaterFix Project, design documents of this nature would be developed by either the EDM or a design consultant and the governing quality program would be the EDM or consultant quality program. It is the intent that all design reviews including Value Engineering, Technical Review Boards, and Constructability Reviews will be performed under the supervision of the DCE. Table 2-1, the DCE Review and Approval Matrix defines the review and approval requirements of engineering documents and activities.

## 3.0 QUALITY-RELATED ROLES AND RESPONSIBILITIES OF DCE PARTICIPANTS

The quality-related roles and responsibilities of DCE staff who are a part of a project design or a construction organization are defined in the organization's quality program. The quality-related roles for the remaining DCE staff are addressed below:

### **3.1 Program Manager**

The Program Manager oversees the implementation of the California WaterFix as described in Exhibit B-1 – Guidelines, the execution of the engineering and construction, and the operation of the Quality Office.

### **3.2 Chief Engineer**

The Chief Engineer approves the engineering and construction quality programs and revisions to the program. The Chief Engineer mediates unresolved quality concerns and has the authority give direction on areas of conflict, and to override Quality Program requirements (except if mandated by law). The Chief Engineer determines the need for corrective action in response to the discovery of design errors.

### **3.3 Quality Manager**

The Quality Manager is responsible for all functions identified in Exhibit B-1 Section 3.C.7 including developing and administering the DCE Quality Program. The Quality Manager assists the DCE in implementing the quality program requirements. Refer to Table 3-1 for a list of the quality program requirements. The Quality Manager develops a training plan that will ensure that the DCE project participants understand their Quality Program responsibilities. The Quality Manager coordinates the Technical Review Board project reviews and interfaces with the design consultants to ensure the proper transfer of review findings. The Quality Manager reviews individual Quality Programs and conducts audits to monitor compliance.

### **3.4 Technical Review Board**

The Technical Review Board is an ad hoc advisory committee (or individual) comprised of industry experts who have expertise in the design and construction of key features of the California WaterFix. The individuals are not part of the DCE team but are brought on board for specific reviews. The findings of the Technical Review Board are to be documented in writing and forwarded to the EDM for follow-up.

### **3.5 Engineering Design Manager**

The EDM has responsibility for managing design activities as described in Exhibit B-1 Section 3.D.1. For designs that are developed by consultants, the EDM defines the consultant's scope of work and reviews the technical aspects of the designs. For designs that are developed by the EDM, EDM develops the designs and performs the quality review of their own work. The EDM is responsible for managing the design document review process and the processing of review comments. The EDM develops its own QP covering its scope of work. The QP shall meet the minimum requirements as stated in Table 3-1. The EDM QP is approved by the Quality Manager.

### **3.6 Design Consultant**

The design consultant is assigned a specific scope of design defined by the EDM. The consultant develops the design, issues the design for review, addresses review comments, and prepares the design for bid. The review comments may originate from within the consultant's team, from the EDM's staff, or other entities such as the Technical Review Board. If included in the consultant's

scope of work, the consultant may also assist in resolving technical issues that arise during construction. The design consultant develops its own QP covering its scope of work. The QP shall meet the minimum requirements as stated in Table 3-1. The consultant's QP is reviewed by the Quality Manager and approved by the Chief Engineer.

### **3.7 Contractor**

The contractor is responsible constructing the facilities as defined in the plans and specifications. This involves procuring construction materials, issuing equipment data for review, erecting structures, installing equipment, and testing the facility. The contractor develops its own QP covering its scope of work including specific quality measures called out in the plans and specification. The QP shall meet the minimum requirements as stated in Table 3-1. The contractor's QP is reviewed by the Quality Manager and approved by the Chief Engineer.

### **3.8 Construction Management (CM)**

The CM is responsible for monitoring the contractor's compliance with the plans and specifications. In addition, where specified in the plans and specifications the CM may actually perform inspections. The CM develops its own QP covering its scope of work including specific quality measures called out in the plans and specification. The CM's QP is reviewed by the Quality Manager and approved by the Chief Engineer.

## **4.0 DCE QUALITY PROGRAM - ADMINISTRATION**

### **4.1 QP Revisions**

If through the application of the DCE Quality Program, enhancements are desired, the Quality Manager shall initiate the change. The revision is subject to the approval of the Program Manager.

### **4.2 Audits**

The Quality Manager shall periodically audit conformance of the work with the project quality programs. A written report of the audit findings shall be presented to the organization managers. The Quality Manager shall make a determination of the acceptability of the audit findings and make recommendations regarding the need for corrective action to the responsible manager. Concerns identified regarding lapses in the program shall be addressed to the Program Manager. The Quality Manager shall coordinate with the Program Manager to set the frequency of audits.

### **4.3 Delegation of Authority**

Individuals responsible for actions conducted in accordance with the DCE Quality Program may delegate responsibility to another individual. Documentation of the delegation shall be in writing and transmitted to the appropriate project participants. It is the responsibility of the individual delegating to select an individual with sufficient expertise to carry out the delegated role.

#### **4.4 Documentation of Quality-Related Activities**

The completion of quality-related activities such as: testing, inspection reports, specifications, Summary Reports, Constructability Reviews, Technical Memorandums, etc. shall be documented and stored in the DCE files (see Records Retention). If the completion of the task is documented in the files of another organization (e.g. EDM), a separate filing is not required.

#### **4.5 Records Retention**

Documents which provide evidence of compliance with the DCE Quality Program shall be stored for future reference. The DCE shall integrate the records storage process with DWRs records management. The consultants and contractors shall similarly coordinate storage of drawing and other quality related documents with DWR.

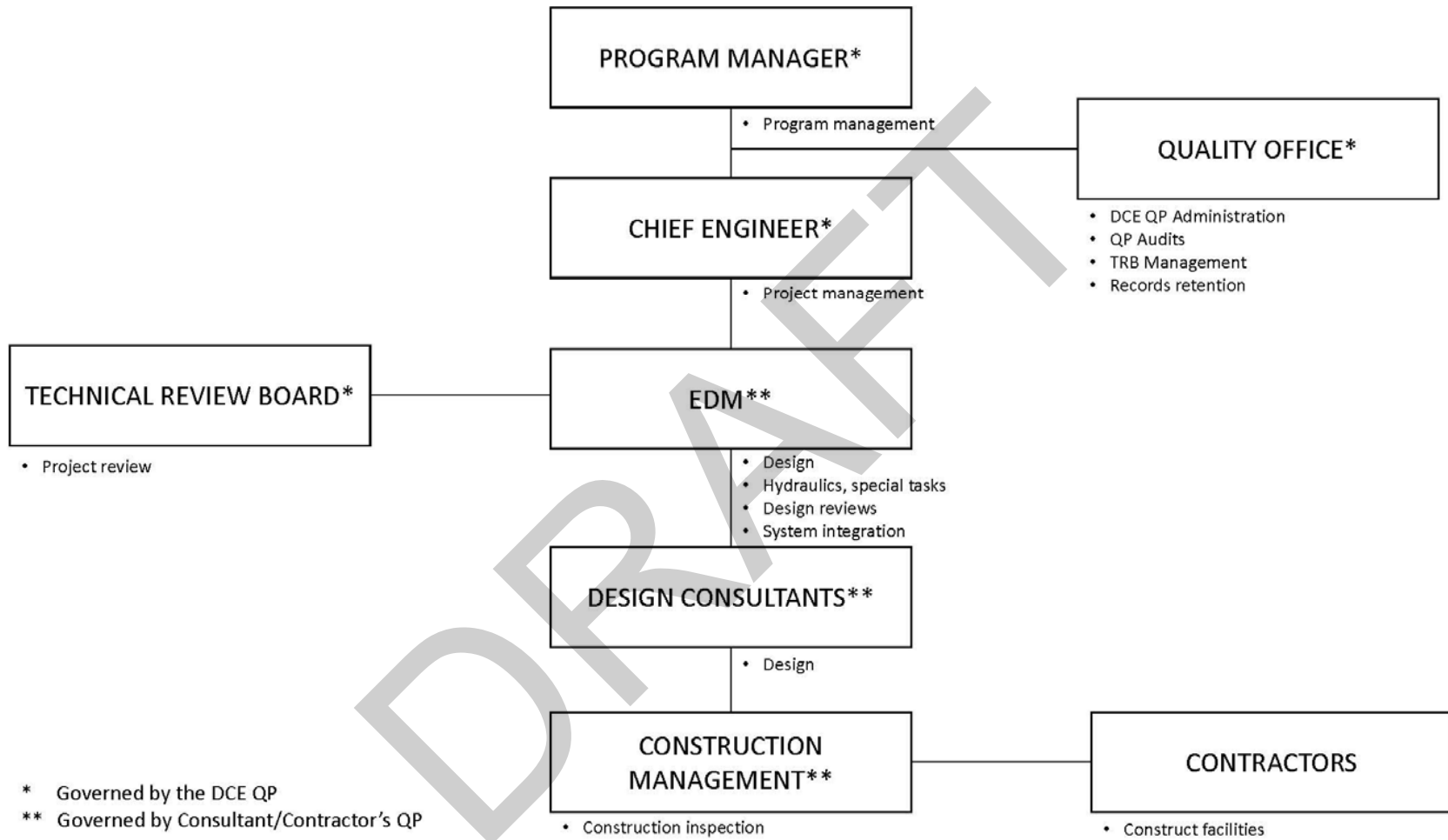
#### **4.6 Corrective Action**

As design and construction changes occur during the course of a project, project and construction management informally assess the root causes. If it appears that the changes are not random, but point to a common cause, these issues are candidates for further analysis to determine if there is a breakdown in the design process. These instances would be brought to the attention of Program Manager to determine if a corrective action is required.

### **5.0 PROTOCOL FOR ADDRESSING QUALITY CONCERNS**

On occasion, a member of the project team may perceive that due to the pressures of meeting budgets and schedules, steps are being taken that circumvent the objective of delivering a quality product. This situation should be addressed by bringing the concerns to the attention of the cognizant project manager. If this step is not successful in resolving the issue, the individual should approach the supervisor for assistance. The supervisor may request the Quality Manager to facilitate the resolution by bringing the parties together. If resolution is not achieved at lower levels, that matter shall be elevated with the ultimate disposition being provided by the Program Manager.

FIGURE 1-2 DESIGN & CONSTRUCTION ENTERPRISE QUALITY PROGRAM ASSIGNMENTS



**Table 2-1 DCE Technical Review and Approval Matrix**

	TRB	Quality Manager	Chief Engineer	Program Manager
Plans and Specs <sup>1)</sup>	RVW		APP	
Technical Reviews	RVW <sup>2)</sup>			
DCE Design Consultant and Contractors QPs		RVW <sup>3)</sup>	APP	
DCE QP			RVW <sup>4)</sup>	APP
Quality Audits				RVW <sup>5)</sup>

**Notes**

- 1) Review and approval of plans and specs prior to bid
- 2) Comments from technical reviews forwarded to EDM for action
- 3) QPs originated by Design Consultants/Contractors
- 4) DCE QP developed by the Quality Manager
- 5) Quality audits conducted by Quality Manager

QP=Quality Program; RVW=Review; APP=approve

### **Table 3-1 Minimum Requirements for Quality Programs**

Quality programs will meet the following requirements:

#### **Design Phase**

1. Define documents within the scope of the quality program.
2. Define the “quality” roles of design phase project participants.
3. Define the review and approval requirements of documents within the scope of the quality program.
  - a. Documents within the scope of the quality program shall be approved by the appropriate registered or licensed professional
  - b. At least one of the reviewers of a document within the scope of the quality program must be different than the document originator
  - c. A single Approver (not multiple approvers) shall be designated for engineering tasks that result in the production of a document that is within the scope of the quality program
  - d. The process for DCE staff reviews and acceptance will be developed and administered.
4. Senior staff shall assess the adequacy of technical review.
5. Review comments shall be resolved and documentation shall be maintained in the project file.
  - a. A resolution ladder shall define the process for addressing unresolved comments
6. Incorporate in the design documents the quality measures to be performed by the contractor and the CM.
7. Changes during Design shall be reviewed and approved by the appropriate parties within the DCE, DWR and the Authority, commensurate with the approved Change Order authorities

#### **Construction Phase**

1. During the construction, the quality is achieved by following a “defense-in-depth” approach that combines the inspection and testing efforts of the contractor and the contractor’s subs and suppliers, inspection by CM staff, material testing by 3<sup>rd</sup> party labs, and by operational testing by the contractor, and t engineering staff.
2. Prior to commencement of construction define the “quality” roles of construction phase project participants.
3. Equipment and material submittals shall be reviewed for conformance with project requirements.
4. Documentation of quality processes during construction shall be developed and forwarded to the Quality Office for retention.
5. Equipment tagging and or other identification shall be provided to ensure proper control upon receipt at the jobsite and subsequent handling.
6. Equipment and construction materials shall be handled, stored, and installed in accordance with the supplier’s/manufacturer’s instructions and project requirements.
7. Non-conforming materials shall be identified to prevent their use.
8. Design changes during construction shall be reviewed and approved by the appropriate parties within the DCE, DWR and the Authority, commensurate with the approved Change Order authorities.
9. The contractor’s QP shall include quality measures specified in the design documents.

### **Post-Construction Phase**

1. Record drawings shall be prepared to reflect the as-constructed conditions

### **Quality Program Administration**

1. Audits shall be conducted periodically
2. The completion of quality related activities shall be documented
3. Documents which provide evidence of compliance with the DCE Quality Program shall be stored for future reference
4. Failures or deficiencies shall be evaluated for the need of corrective action
5. Provide a protocol for addressing quality concerns

DRAFT





CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE PERMITS AND REGULATORY APPROVAL TABLE

Exhibit C | V.3

**NOTE** – Listed in the Permits and Regulatory Approval Table are the significant permits that are anticipated to be needed for the design and construction of the California WaterFix. Items marked with “X” will be managed by the DCE. Although this list is not intended to be an exhaustive list, the DCE will be responsible for obtaining all discretionary approvals except as set forth in the table.

**DISCLAIMER** – Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 8-10-15



# PERMIT AND REGULATORY APPROVAL TABLE

PERMIT	AGENCY	MANAGED BY DCE
<b>Section 106 of the National Historic Preservation Act</b>	USACE (NEPA lead agency)	
<b>Biological Opinion (Section 7 of ESA)</b>	U.S. Fish and Wildlife Service (NEPA lead or cooperating agency <sup>11</sup> ) National marine Fisheries Service (NEPA lead or cooperating agency <sup>12</sup> )	
<b>Clean Water Act Section 404</b>	U.S. Army Corps of Engineers (NEPA cooperating agency)	X
<b>Rivers and Harbors Act Section 10</b>	U.S. Army Corps of Engineers (NEPA cooperating agency)	X
<b>Rivers and Harbors Act Section 14, 33 USC 408</b>	U.S. Army Corps of Engineers (NEPA cooperating agency)	X
<b>Rivers and Harbors Act Section 9 Bridge Permits</b>	U.S. Coast Guard (Potential NEPA cooperating agency)	X
<b>2081(b)</b>	California Department of Fish and Wildlife (CEQA responsible agency, trustee agency)	
<b>Streambed Alteration Master Agreement (Fish &amp; Game Code Section 1602)</b>	California Department of Fish and Wildlife (CEQA responsible agency, trustee agency)	X
<b>Section 401 Water Quality Certification and Waste Discharge</b>	State Water Resources Control Board (CEQA responsible agency)	X
<b>Water Right Change Petitions</b>	State Water Resources Control Board (CEQA responsible agency)	
<b>Clean Water Act Section 402 National Pollutant Discharge Elimination System Permit Compliance and NPDES Construction Stormwater General Permit</b>	State Water Resources Control Board (CEQA responsible agency)	X
<b>Waste Discharge Requirements for Dredging Projects or Fill-Related Activities</b>	Central Valley Regional Water Quality Control Board (potential CEQA responsible agency)	X
<b>National Pollutant Discharge Elimination System (316(b) Permit)</b>	San Francisco Bay Regional Water Board (potential CEQA responsible agency)	X
<b>Delta Reform Act for Inclusion in the Delta Plan</b>	Delta Stewardship Council (CEQA responsible agency)	
<b>Encroachment Permits</b>	All agencies as required for the individual permits	X
<b>Permit to Operate an Internal Combustion Engine</b>	Regional Air Pollution Control Districts, California Air Resources Board (potential CEQA responsible agencies)	X
<b>Stationary Source Permit</b>	Regional Air Pollution Control Districts, California Air Resources Board (potential CEQA responsible agencies)	X
<b>Use of Portable Equipment During Construction</b>	Regional Air Pollution Control Districts, California Air Resources Board (potential CEQA responsible agencies)	X
<b>Water Supply Permits for Operations of Public Drinking Water System</b>	California Department of Public Health (potential CEQA responsible agency)	X
<b>California Code of Regulations Title 23, Section 310</b>	Division of Safety if Dams (potential CEQA responsible agency)	X
<b>Right of Way: Potential Relocation of Utilities</b>	California Public Utilities Commission	X
<b>Private Aids to Navigation Regulation 33 CFR 66</b>	USCG	X



PERMIT	AGENCY	MANAGED BY DCE
<b>Watercourse, Drainage, and Floodplain Encroachment Permits (if required)</b>	FEMA through counties	X
<b>Dam Construction, Enlargement or Repair Water Code Sect 6000-6004.5 and Sect 6025.5</b>	Division of Safety of Dams	X
<b>State Land Commission Authorization</b>	California State Land Commission	X
<b>Oil, Gas and Geothermal Construction Site Plan Review Public Resources Code Sect 3208.1 (if required)</b>	California Department of Conservation	X
<b>Rail Encroachment Authorization Process (if required)</b>	California Public Utilities Commission	X
<b>Surface Mining and Reclamation Act</b>	California Department of Conservation	X
<b>Williamson Act Cancellation (if required)</b>	State designation to counties	X

*11 NEPA lead agency for actions involving BDCP or other conservation plan alternatives. NEPA cooperating agency for actions involving Alternative 4A or other non-conservation plan alternatives.*

*12 NEPA lead agency for actions involving BDCP or other conservation plan alternatives. NEPA cooperating agency for actions involving Alternative 4A or other non-conservation plan alternatives.*

DRAFT



CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## PROPERTY ACQUISITION PLAN

Exhibit D | V.4

**DISCLAIMER** - Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 9-23-15

# EXHIBIT D – DCE PROPERTY ACQUISITION PLAN

## TABLE OF CONTENTS

- 1. PROJECT OVERVIEW..... 2
- 2. ACQUISITION PLANNING ..... 5
- 3. GEODETIC STUDY ..... 7
- 4. ACQUISITION..... 9
- 5. RIGHT OF WAY PROJECT CLOSE-OUT..... 10
- 6. ORGANIZATIONAL STRUCTURE..... 11
- 7. ACQUISITION SCHEDULE AND PHASING ..... 17
- 8. WORK PLAN ..... 19
- 9. FIGURES ..... 22
- 10. APPENDICES ..... 22

DRAFT

## 1. PROJECT OVERVIEW

There is, within the Department of Water Resources (DWR) a group designated as the Design and Construction Enterprise (DCE). Staff assigned to the DCE will oversee all aspects of the design and construction of the California WaterFix, including property acquisition which is a critical path function. The primary objective of this Property Acquisition Plan is to establish a framework for acquiring all property rights needed to construct the project as well as to provide a general overview of the Property Acquisition Team structure and specific property acquisition processes. All activities associated with property acquisition will be in accordance with all applicable laws using DWR's authorities and overseen by a DWR manager. This plan focuses on what needs to be done and how to accomplish it. Specific policies and procedures, as well as a detailed staffing plan, will be developed separately as the project moves forward.

---

### DCE PROPERTY ACQUISITION TEAM

The DCE Program Director is responsible for implementing all team plans, and determining staffing levels and responsibilities. The Program Director will also guide the contracting process and hire the Property Acquisition Manager. It is anticipated that the Property Acquisition Team will be comprised of experienced DWR staff with support of staff from participating public agencies and consultants.

The Property Acquisition Manager will lead the Property Acquisition Team and report to the Program Director through the Program Manager. The Property Acquisition Team staff will consist of right of way specialists, some of whom will act as functional leads to staff and consultants. All staff will work together according to their specialty and corresponding step(s) in the acquisition process. The Property Acquisition Manager will make the day-to-day decisions in conjunction with the Property Acquisition functional leads. The DCE management organizational structure is discussed in additional detail in Section 5.

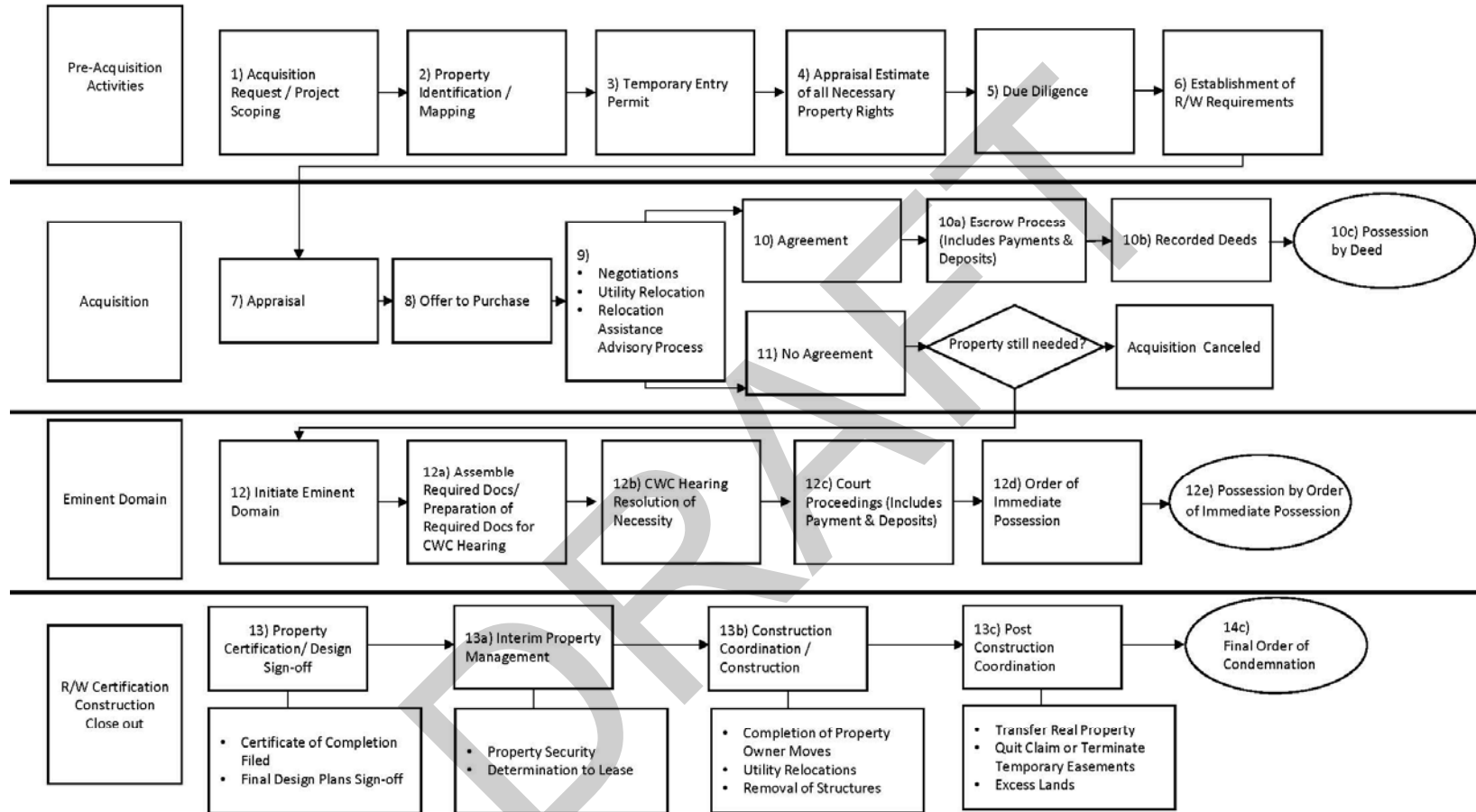
---

### PROPERTY ACQUISITION PROCESS

The property acquisition process as outlined here, involves multiple primary actions leading to possession of property rights required to construct the California WaterFix, such as easement or fee title. This is a major acquisition project with many cross-functional tasks and a strict timeline for execution. The property acquisition process involves planning and document development; geodetic study to identify and map affected properties, both surface and subsurface; site assessment to physically investigate the property and determine just compensation; negotiation or eminent domain; relocation assistance, utility relocations, power (temporary and permanent), encroachment permits, and possession or interim property management.

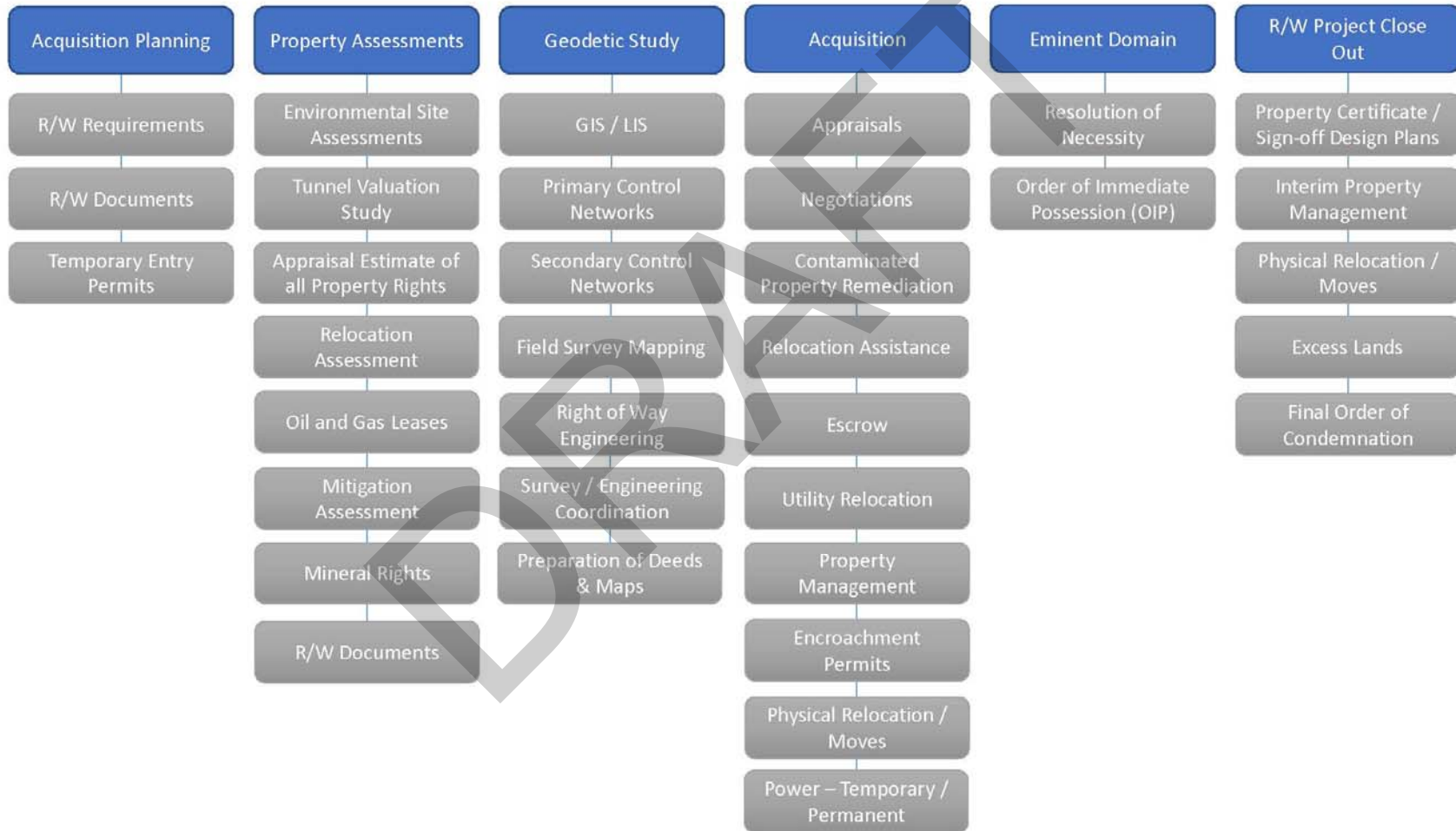
**Figures 1 and 2** below show the acquisition process at-a-glance. **Figure 1** is a detailed flow chart intended to show steps involved in a fully integrated process from beginning to end. (See also enlarged version at end of document.

Acquisition Process Flow Chart (Figure 1)



**Figure 2** rolls up the process into key categories, but still has a consistent left to right (beginning to end) flow. It also shows the order in which the acquisition process will be discussed in the following sections of this plan.

**Overview of Acquisition Process (Figure 2)**





## 2. ACQUISITION PLANNING

All actions will be carried out in accordance with the framework laid out in this plan, and in compliance with applicable acquisition and eminent domain laws. The most relevant California laws are Government Code §§ 7260-7277, Code of Civil Procedure § 1230.010-1273.050, and Water Code §§ 250 and 11575. Other statutes are cited throughout this document where applicable. These laws were designed to provide rules and guidelines to all California public agencies with authority to acquire right of way. Every effort shall be given to engage in reasonable negotiations with property owners, and to establish eligibility and provide any relocation assistance to property owners and/or their tenants. The objective shall be to work with property owners to acquire the necessary rights and open escrows through negotiated agreements. Where no agreement can be reached, the eminent domain process will be initiated to acquire the property rights necessary for design and construction.

The following documents will need to be in place prior to the start of acquisition and will be prepared during the Acquisition Planning Phase:

- **Relocation Plan** will be developed during the acquisition planning phase and implemented during the acquisition/negotiation phase. The Relocation Plan must be approved by the Department of General Services (DGS), pursuant to Government Code §§ 11005 (a), prior to the start of acquisition.
- **Project Fact Sheet** will be given to residents and businesses along the alignment as part of outreach to provide project information in non-technical and clear terms.
- **Land Acquisition Procedures** will detail land acquisition and relocation procedures and the principal rights and options available to the property owners and tenants.
- **Legal documents** such as right of way contracts, escrow instructions, deeds, Right of Entry forms, temporary entry permit statutory notices, and letters will be developed and standardized where practical.

Some of the critical path requirements which should be started as soon as possible are:

- Geodetic Services
  - Identify ownerships – surface, subsurface, oil, gas, mineral rights, and title exceptions
  - Order title reports – surface, subsurface, oil, gas, and mineral rights remainder phased to construction timeline, title exceptions, and review title report to determine existing encumbrances (affects, not affects)
  - Perform Control Surveys
- Identify preliminary acquisition areas and type
  - Prepare Temporary Entry Permits for invasive and non-invasive surveys
  - Prepare Cost Study/start evaluation of range of values
  - Identify potential relocations
  - Perform probable damages assessment for temporary entry permits.

---

### TEMPORARY ENTRY PERMITS

In order for the DCE to enter upon private property to conduct a wide array of activities including taking photographs, studies, surveys, examinations, tests, soundings, borings, samplings, appraisals, or to engage

in similar activities reasonably related to acquisition or use of the property for that use, a temporary entry permit must be obtained (CCP § 1245.010).

Land surveyors have a statutory “right of entry upon or to real property to investigate and utilize boundary evidence, and to perform surveys . . . not contingent upon the provision of prior notice to the owner or tenant.” (California Business and Professions Code § 8774, California Civil Code § 846.5) Additionally, California Penal Code § 608.2 provides for an exemption from trespass for land surveyors.

---

## PROPERTY ASSESSMENTS

**Environmental Site Assessments (ESAs):** As part of due diligence, ESAs are ordered on each property considered for permanent easements and fee acquisition and as part of the initial contamination study to determine the environmental condition of the property (CCP § 1245.020). The minimum ESA in all cases will be Phase 1 and may advance to Phase III.

**Tunnel Valuation Impact Study:** A tunnel valuation impact study will be commissioned to determine any impacts to property values as a result of the tunnel easement.

**Property Valuations:** All acquisition appraisals will be prepared to meet current regulatory requirements, including Uniform Standards of Professional Appraisal Practice (USPAP) standards and guidelines.

**Appraisal Review:** All appraisals will be reviewed by the Property Acquisition Team. DGS must review and approve appraisals with fair market value greater than \$150,000. To streamline this process, DWR and DGS standards and guidelines will be used in the development of all appraisals. The DCE may pursue assignment of a DGS staff member(s) to the Property Acquisition Team for purposes of streamlining the DGS process. The goal is an integrated review structure with minimum outside reviews.

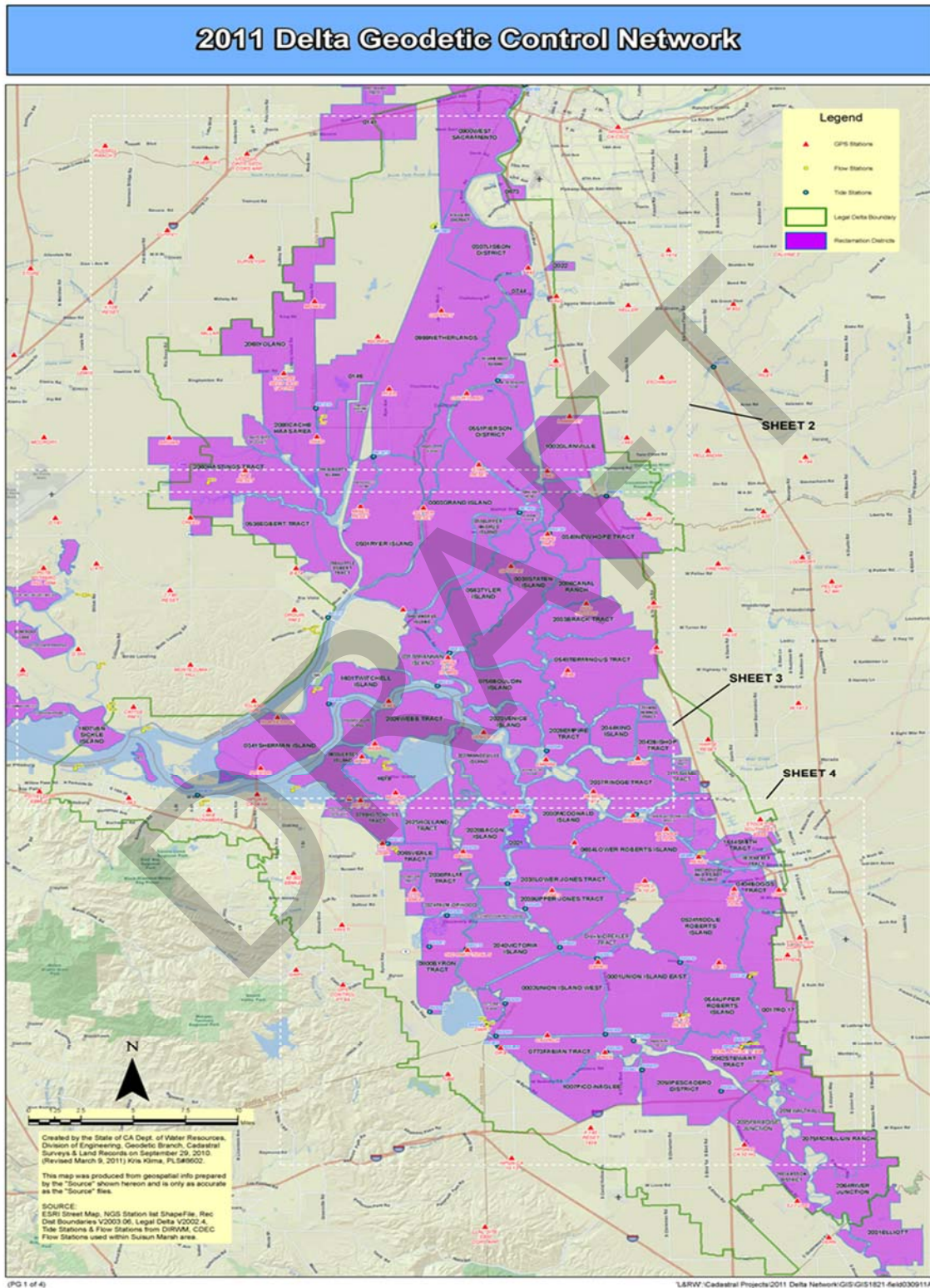
### 3. GEODETIC STUDY

#### GEODETIC SUPPORT ACTIVITIES

The following Geodetic activities are critical to ensuring the overall success of both the acquisition of real property and the construction of the California WaterFix:

- **Geographic Information System/Land Information System (GIS/LIS):** Design, implement and maintain a project GIS/LIS based on Esri's Arc platform which will eventually contain all the data generated by the property acquisition and land surveying activities. Create unique parcel numbering scheme based on contiguous ownership from north to south.
- **Primary Control Network (PCN):** Establish and utilize for the duration of the project, a series of horizontal and vertical survey control monuments surrounding the entire project area based on existing DWR control stations and densifying as required. See **Figure 3** below. (See also enlarged version at end of document.)
- **Secondary Control Networks (SCN):** Establish and utilize for the duration of the project, a series of survey control networks of horizontal and vertical survey control monuments embedded within project area based on existing DWR control stations and densifying as required. See **Figure 3**.
- **Right of Way Engineering:** Identify potential impacted properties and recommend alignment or site adjustment based on a variety of critical factors.
- **Survey/Engineering Coordination:** Create critical path timelines for key steps in the land surveying process based on project perimeter and proposed construction schedule.
- **Field Survey and Survey Mapping:** Identify, prioritize, and execute order of surveying requirements.

Figure 3



## 4. ACQUISITION

**Appraisals:** Estimate of value.

**Offer:** Pursuant to Government Code § 7267.2, government agencies shall make an offer to the owner of real property to be acquired before the agency may commence eminent domain proceedings.

**Negotiations:** The real estate negotiator will explain the basis of the offer and answer questions related to the project.

**Contaminated Property:** Properties found to contain hazardous materials during the Environmental Site Assessment will be reported to the DCE Program Manager, and appraised accordingly.

**Relocation Assistance and Advisory Services:** There are not a substantial number of permanent relocations anticipated for this project. However, relocations are a possibility with any public project and the DCE will implement payments and administer relocation assistance in accordance with the California Relocation Assistance and Real Property Acquisition Guidelines. Title 25 of the California Code of Regulations § 6002 (c) stipulates that a public entity shall not participate in or undertake a project that will displace individuals from their homes unless comparable replacement dwellings will be available within a reasonable period of time prior to displacement.” The DCE will prepare and DGS will approve a Relocation Plan based on the complexity of potential permanent and temporary residential relocations, and the availability of similar units in the local area.

**Escrow:** The executed Right of Way Contract, Deeds and Joint Escrow Instructions, together with all other related documents such as grant deeds and lease agreements, will be delivered to an independent escrow as appropriate.

### **Eminent Domain:**

- **DWR Authorization:** DWR has both general and State Water Project (SWP)-specific authorizations to condemn real property interests. (Water Code §§ 250-260, 11580-11588).
- **California Water Commission Rules for the Adoption of a Resolution of Necessity:** DWR must follow the condemnation rules and procedures set forth in Part 3, Title 7 of the Code of Civil Procedure (CCP § 1230.020). This includes the requirement that the “governing body” of the condemning entity adopt a resolution of necessity. The California Water Commission will be the governing body for condemnation purposes.
- **Resolution of Necessity:** The Commission adopted a two-meeting process for the adoption of resolutions of necessity with optional site visits or inspections in between, if desired, by the Commission.
- **Orders for Prejudgment Possession (OPP):** The OPP is the court ruling granting the condemning agency the same rights as if the property was acquired through negotiations.
- **Final Order of Condemnation (FOC):** The last step in the eminent domain process is the Final Order of Condemnation. The FOC will require time and may be granted during or after construction.

## 5. RIGHT OF WAY PROJECT CLOSE-OUT

**Possession:** Judgment or recordation signifies the end of the acquisition process. To the extent practicable, DWR should have recorded deeds, OPPs or Right of Entry for all properties identified for acquisition within the specified construction contract prior to advertisement.

**Property Certification/Sign-off of Design Plans:** The Property Team Manager may be required to sign-off on final design plans, or develop a right of way certification report to certify that all necessary properties and rights have been acquired.

**Interim Property Management:** The DCE will initiate interim property management up to and through the end of construction.

**Physical Relocations/Moves (if required):** DCE Property Acquisition Team will coordinate construction team for removal of structures and the moves of displaced owners and tenants.

**Surplus:** Excess lands procedures are one method of handling property that is determined to be excess after construction is complete. Criteria for identifying excess lands and procedures for its disposal will be established by DCE management as construction nears completion. These procedures must conform to the provisions of Government Code §§54220 - 54224. The DCE will coordinate with DWR management to make all decisions regarding the final disposition of any excess property. All temporary easements or licenses will either terminate based on the terms of the agreement or be quitclaimed to the underlying fee owner.

## 6. ORGANIZATIONAL STRUCTURE

This plan addresses a detailed structure of Property Acquisition functions under the DCE. Below are recommended staff, functional groupings, and consultants needed for this project. Staff will work together with consultants according to their specialty and corresponding step in the acquisition process. Managers and functional leads will be stationed on-site and will be empowered to make decisions that directly impact day-to-day activities.



---

## ESTIMATED NUMBER OF STAFF AND CONSULTANTS NEEDED FOR THE CONVEYANCE AND UTILITY ALIGNMENTS, MITIGATION

It takes a period of 45 months to complete the typical acquisition process. In order to complete all required acquisitions for the program within a reasonable schedule several property acquisition teams will be formed. It is expected that total staffing for all teams will peak at approximately 105 full-time equivalents (FTE's) then ramp down significantly to a limited staffing level and continue at this level during the construction phase. The FTE's will be a mix of the DCE management and consultant staff. This staff will be responsible for acquiring all property, easements and preparing necessary documentation for construction of the California WaterFix, its mitigation and acquisition of permanent and temporary power Rights-of-Way.

---

## STAFFING REQUIREMENTS

Key personnel must be sufficiently mobilized to focus on completing their specialized part of the acquisition work flow. The organizational structure has a traditional reporting structure with a manager or lead and specialized staff to carry out the various functions. All personnel and consultants will work as a cohesive matrix and understand that their deliverable is part of a whole and that others depend on them to deliver high quality information, mapping, negotiations, etc.

- **Property Acquisition Manager:** Responsible for budget, schedule and implementation of Property Acquisition Plan. Monitor progress, and set objectives to acquire all land and rights necessary to construct the conveyance and associated facilities. Take lead for managing all property access needs, field data collection, temporary entry permits, and environmental clearances.
- **Functional Leads:** Manage the day-to-day activities of staff and consultants within their functional specialty.
- **Specialist Staff:** Carry out specific activities related to their functional specialty; or perform technical reviews of consultant deliverables.
- **Administrative Support:** Track property acquisition status; prepare parcel acquisition reports; update Geospatial database (GIS database); prepare correspondence; track and report real estate related expenditures to Program Controls team.
- **Public Relations Project Liaison:** Provide project information to property owners; and stakeholder information to acquisition staff to bridge understanding and keep pre-acquisition communications open.
- **Engineering Liaison:** Assigned by Chief Engineer; responsible for coordinating changes in alignment, construction documents, etc.
- **Consultants:** Augment staff and perform specific activities related to their functional specialty.

---

## CONSULTANT SERVICES

There will be a Request for Qualifications process to find qualified firms with specialized knowledge in the various real estate disciplines required on this program.

The consultant firm Principal-in-Charge, Project Manager, and other key staff of consultant firms specifically selected to work on this assignment must have specific qualifications in their real estate



services discipline and must show experience on comparable projects of this size. The firm must have local project managers who maintain appropriate state licenses.

The following identifies consultants that may be required for the project:

### **Geodetic Services**

#### **Land Surveyors**

- Primary and Secondary Control Networks
- Boundary Surveys/Record of Surveys
- Title review and encumbrance mapping
- QA/OC Surveys

#### **Environmental Site Assessment Firm**

- Phase I Site Assessment (inspection)
- Phase II Site Assessment (testing)
- Phase III Site Assessment (remediation)

#### **Appraisal Specialists**

- Agriculture
- Business and Residential
- Utilities, Fixtures and Equipment
- Water Rights
- Mineral Rights

#### **Real Estate Services**

- Utility Relocations
- Land Strategy based on need and land use/types
- Acquisition
- Relocation Assistance
- Property Management

#### **Escrow/Title Company**

- Chain of Title
- Research surface access and other rights
- Process escrows procedures

---

## FUNCTIONAL GROUPINGS

This is a major acquisition project with many cross-functional tasks and a strict timeline for execution. Members of the organization form a matrix of managers and staff dedicated the project. This sub-section describes each work unit shown in the organization chart above.

**PUBLIC RELATIONS AND OUTREACH:** Provide project information to property owners; and stakeholder information to acquisition staff to bridge understanding and keep pre-acquisition communications open.

**ENGINEERING LIAISON:** Assigned by Chief Engineer; responsible for coordinating changes in alignment, construction documents, etc.

**PROJECT PLANNING & ADMINISTRATION:** Staff and consultants will report to a lead person or supervisor for this area. The lead person will report directly to Property Acquisition Manager. They will prepare Acquisition Strategy and Project Plan, acquisition schedules, and perform contract administration. They will also track financials, documents, correspondence and property information.

**GEODETICS:** Geodetic Services conducts and manages all land surveying, title, and GIS/LIS activities in support of the overall project goals. Paramount to this is support of the pre-planning, planning, legal, engineering, environmental, geotechnical, archeological, biological, acquisition, appraisal, and construction phases of the project. Additionally, staff will be called upon to establish and manage consultant contracts as well as establish and review critical survey specifications related to a variety of issues.

**APPRAISAL:** The DCE's appraisal staff will manage the appraisal process in the valuation of property rights, and/or determination of severance damages. Appraisals will be prepared, reviewed, and approved by the DCE according to DWR standards. Staff and/or consultants will also perform:

- **Appraisal Oversight** - Exercise reasonable diligence in obtaining cost-effective appraisals and review appraisals.
- **Cost Study** - Prepare a Cost Study of potential alignments.
- **Tunnel Study** - Prepare Valuation Impact Study for all tunnel easements.
- **Appraisal Reviews** - Coordinate review of appraisal reports.
- **QA/QC** - Ensure all appraisals meet the required standards for public acquisition (zoning, property rights to be acquired, highest and best use analysis, comparables, improvements acquired, damages, cost to cure, etc.).
- **Code Compliance** - Ensure all appraisals are completed in accordance with state law and the Uniform Standards of Professional Appraisal Practice and the Uniform Appraisal Standards for Federal Land Acquisition and as applicable.

**ACQUISITION:** Environmental Site Assessments, Property Acquisition, utility relocation and residential and business relocations and mineral rights determination and reimbursement will be managed under this grouping. Acquisition team is responsible for coordinating and implementing moves according to the

Relocation Assistance Plan. Staff and consultants will report to a lead person or supervisor for this area. The lead person will report directly to Property Acquisition Manager.

**Environmental Site Assessments:** All environmental site assessments will be conducted by environmental professionals as defined by 40 CFR § 312.10. The consultant must have specific qualifications based on education, training, and experience to assess properties of the nature, history, and setting of each site. Staff will coordinate with environmental consultant for site specific environmental site assessments (ESA).

**Fee and Easement Acquisitions** - ESAs are ordered on each property considered for fee and permanent easement acquisition as part of due diligence. They involve evaluating or investigating the property prior to signing the right of way contract or closing the escrow.

**Temporary Easements** ESAs are not usually conducted for temporary construction and lay down areas; only an inspection and photos of the property will be taken prior to the property's use to establish the condition to which the property must be returned to the owner when construction is complete.

---

#### PROPERTY ACQUISITION AND RELOCATION

**Parcels:** Property Acquisition Team will interface with property owners. They will:

**Appraisal** – Estimate of value.

**Offer** - Make first written offer to acquire the property as soon as practicable after receipt of approved appraisal. Such offer shall be based on Just Compensation in accordance with Government Code § 7267.2 (b) for the full amount of the appraisal.

**Negotiations** - Meet with each owner to inform him/her of the proposed construction project and make reasonable efforts to discuss with them the offer to Right of Way identified in the appraisal.

- Notify the DCE property acquisition manager immediately of facts discovered during property owner interviews. The DCE Property Acquisition Manager will evaluate and give full consideration to those items prior to continuing negotiations.
- If necessary, acquire additional Temporary Entry Permits to facilitate activities such as engineering investigations, surveys, and appraisals.
- Develop standard Temporary Entry Permit forms and fee schedule to achieve consistency.

**Coordination** - Work with Geodetics to prepare map to track acquisition of fee, easements, and temporary entry permits.

**Relocation Assistance and Advisory:** Provide relocation assistance and advisory services where necessary. Develop and implement the plan pursuant to state and federal law to establish what relocation assistance and benefits the property owner and/or tenants may

be entitled to receive. Perform all relocation assistance services required under the Uniform Relocation and Real Property Acquisition Policies Act; the California Relocation Assistance and Real Property Acquisition Guidelines; and DWR policies and procedures.

---

#### ESCROW & EMINENT DOMAIN

**Escrow Coordination:** A reputable, local title company will be used for escrows. The Property Acquisition Team will examine the executed Right of Way contract and Joint Escrow Instructions to determine if special instructions have been added following legal review and to determine the deadlines imposed by the Agreement. The Property Acquisition Team will verify that all parties have signed the Agreement/Contract. Additionally, all associated documentation required to complete the transaction must be reviewed for accuracy and completeness. The complete transaction including Joint Escrow Instructions, together with all other related documents such as notarized easement and grant deeds, right away contracts, lease agreements, etc. must be delivered to the escrow company either by messenger, Federal Express, or other comparable overnight or express service.

Correspondence with the escrow company will be added to the acquisition parcel file as it is generated. The Property Acquisition Team will obtain a schedule of costs for escrow services for review and processing of necessary funds to close escrow.

**Eminent Domain Support:** The DCE Counsel will provide support to the Property Acquisition Team and the State Attorney General's Office if any interest is authorized to be acquired by exercise of the power of eminent domain. Upon initiation of eminent domain proceedings, the law governing such proceedings when undertaken by DWR shall control all further actions of the Property Acquisition Team.

**PROPERTY MANAGEMENT:** Upon date of possession, including OPP, DWR may be liable for any prorated taxes, penalties, and other costs associated with the transaction. If DWR is exempt, then a statement of the exemption must be sent to the county in which the property is located. It is also responsible for coordinating the removal of unnecessary improvements, upkeep, and security of the property until the start of construction. After completion of construction, property management will coordinate or manage the final disposition of all operational and excess lands.

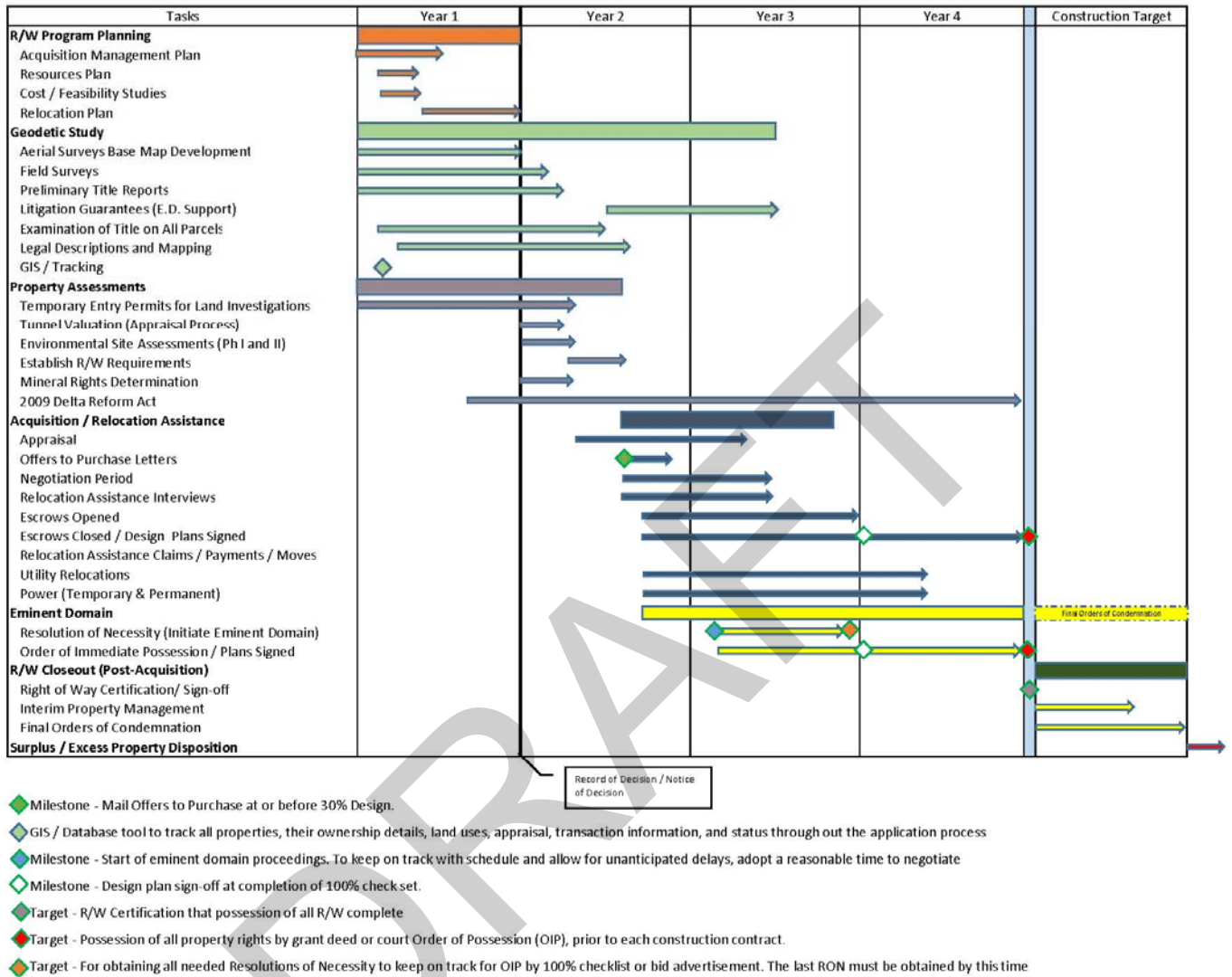
## 7. ACQUISITION SCHEDULE AND PHASING

To assure success for on-time possession of properties necessary to construct the project, it is critical to start planning and geodetic activities as soon as possible during the study and preliminary design phases for all proposed alignments. A detailed acquisition schedule with milestones is provided in **Figure 4** below and will be further developed based on the actual design and construction schedules to be provided later.

To maintain the planned critical path of the project, some activities may be "fast tracked" or performed early or in parallel with other activities. These critical path requirements should be started as soon as possible:

- Geodetic Services to:
  - Identify ownerships – surface, subsurface, oil, gas, and mineral rights
  - Order title reports – surface, subsurface, oil, gas, and mineral rights remainder phased to construction timeline
  - Conduct Control Surveys
- Identify preliminary acquisition areas and type – in conjunction with Engineering Design
- Acquisitions
  - Prepare Temporary Entry Permits for invasive and non-invasive rights
  - Prepare cost study and evaluation of ranges of property values
  - Identify potential relocations

**Figure 4 R/W Process Tied to Construction Target**



## 8. WORK PLAN

---

### CALIFORNIA WATERFIX AND UTILITY ALIGNMENT STRATEGY FOR PHASING THE WORK TO ACQUIRE ALL PROPERTY RIGHTS

The purpose of this Section is to lay out the high level tasks, staff, and consultants needed to complete work in a period of 48 months from planning (pre-acquisition) to implementation (acquisition and possession). Where eminent domain is a factor the period extends to about 60 months.

The Project, from the appraisal and acquisition consultant services perspective, is divided in two parts for discussion purposes of this plan. In many areas, these two items will overlap, but they must first be discussed separately as California WaterFix *Alignment* and *Utility Alignment*. To control the complexity of work required, the alignments will be divided into appropriate geographic areas. Staff and consultants will be organized into mini-teams and assigned a geographical area along the alignments to focus or concentrate their efforts.

---

### ASSIGNMENT OF STAFFING RESOURCES

A resource mix of staff and consultants may be grouped by specialty to perform their specialized activities associated with the acquisition of that group of property rights within appropriate geographic areas.

---

### FULLY INTEGRATED STRUCTURE/CO-LOCATED STAFF

A fully integrated structure will be implemented where all transactions are conducted, reviewed, and approved internally by the DCE staff and managers to maintain control and avoid unnecessary delays to schedule. DWR acquisition process requires DGS review and approval of all appraisals, acquisitions, or administrative settlements of \$150,000 or greater.

---

### PROJECT IMPLEMENTATION OBJECTIVES

The Property Acquisition Team within the DCE will work with property owners and stakeholders to acquire all real property rights necessary to construct the California WaterFix. The sequence of all acquisitions and anticipated completion dates for possession of all property rights directly correlates to the design and construction schedules. The target or milestone dates for completion will sync to the 100% design check set to allow the Acquisition Manager to sign-off on the plans and certify that all right of way for that component has been acquired.

---

### ACQUISITION MILESTONES/CRITICAL PATH

Milestones are expressed in time periods and the responsible party for each milestone is identified. Approximate dates will be inserted as the DCE master schedule is developed. The milestones and critical path activities will be repeated in succession from north to south until the whole alignment and ancillary property rights needed for the project are acquired.

No.	Milestone	Time Period	Responsible Party (mini-team)
1	Prepare all planning documents (prior to start of acquisitions).	Year 1	Planning/Legal/Acquisition
2	Rollout GIS/database tool to track all properties, their ownership details, land uses, appraisal for probable damages, transaction information, and status throughout the acquisition process.	Year 1	Planning/Geodetics/Acquisition
3	Begin pre-acquisition work to identify property owners both surface and subsurface, parcel types, legal descriptions and mapping, control surveys.	Year 1	Geodetics
4	Obtain Temporary Entry Permits to allow for investigations, surveys and studies.	Year 1	Acquisition
5	Begin Environmental Site Assessments	Year 1	Property Assessment
6	Begin appraisals	Year 1	Appraisals
7	Mail First Written Offer at or before 30% Design to keep on track with schedule and allow for negotiation delays and/or eminent domain actions.	Year 2	Acquisition
8	Start of eminent domain proceedings will appear on acquisition schedule. To keep on track with schedule and allow for unanticipated delays, adopt a reasonable time to negotiate	Year 2	Eminent Domain Support/Legal/ Acquisition
9	Resolutions of Necessity must be obtained a minimum 1 year prior to start construction bid target date. This will allow for court schedules and potential delays.	Year 3	Eminent Domain Support/Legal/ Acquisition
10	Possession of property rights by grant or easement deed or court Orders for Prejudgment Possession (OPP) must be secured prior to award of construction contract to reduce real property related construction delay damages.	Year 3	Eminent Domain Support/Legal/ Acquisition
11	R/W certification sign-off by Acquisition Manager prior to advertisement.	Year 3	Acquisition



12	Property management- all real property will be acquired in the name of DWR, Property Acquisition Team (AMT) will work with DWR property management section to maintain and protect all properties acquired by AMT prior to the start of construction.	Year 3	DWR Property Management
13	Upon start of construction, the DCE will take control of all real property rights that will be used to construct the facilities.	Year 4	DCE Construction Management
14	R/W Project Closeout - Upon construction closeout, AMT will terminate all temporary easements, unnecessary licenses, and joint use agreements utilized during construction. Staff and consultant contracts will be phased out or reassigned as needed.	Future	DCE/ Acquisition
15	Surplus - DWR will make all decisions regarding the final disposition of any excess lands. A typical surplus process will be included in the DCE policies and procedures manual for reference.	Future	DWR Property Management

DRAFT

## 9. FIGURES

- Figure 1** Acquisition Process Flow Chart
- Figure 2** Overview of Acquisition Process
- Figure 3** Delta Geodetic Control Network
- Figure 4** R/W Process Tied to Construction Target

## 10. APPENDICES

- Appendix A** California Water Commission Resolutions of Necessity and Eminent Domain Process
- Appendix B** DGS Appraisal Specifications

DRAFT



CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## BUDGET AND SCHEDULE

Exhibit E | V.4

**DISCLAIMER** - Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 9-23-15

# EXHIBIT E – BUDGET AND SCHEDULE

## SUMMARY

The California WaterFix's budget consists of two parts: design/construction, and mitigation. The construction budget was developed from a Class III estimate by 5RMK consultants which incorporates the Alternative 4a Conceptual Engineering Report (April 2015). 5RMK created a detailed estimate of construction costs based on the Association for the Advancement of Cost Engineers International (AACEI) standards for 10% design definition, which establishes a Class III estimate. PARO provided the cost estimate for temporary and permanent power. The PM/CM/Eng component of the Project Budget was derived from the anticipated staffing needed for program management, design, and construction management. The California WaterFix budget is in 2014 dollars with a 36% contingency. At this level of project definition, the corresponding level of accuracy is +30% to -20%.

Estimated costs for mitigation and associated environmental commitments are preliminary and will be revised when permits are granted. The process for estimating these costs are based on a summary and estimate created by ICF, which reflects the change from an HCP/NCCP to a Section 7 consultation. It also considers cost estimates for likely 404 permit requirements, and mitigation measures listed in the EIR/EIS Table 8.A-61. There are areas of mitigation where the plans are still being finalized and an estimate of cost is very preliminary, including water quality and air quality.

### **Material Impact**

Material Impacts will be measured against both the Program Budget and Schedule in Exhibit E and the approved annual budget and schedule, as described in Section 8 of the DCE Agreement. The annual budget and schedule will include an analysis of its proposed impact on the Program Budget. The Program Budget set forth in Exhibit E shall be updated annually to reflect this analysis. It is anticipated that the contingency may be allocated to individual task items across the Program Budget and the annual budgets. The intent of the DCE is to share the information developed with DWR and the Authority at quarterly meetings, so that when Material Impacts are reasonably known, the various alternatives and the DCE's recommendation will be presented to DWR and the Authority as described in Section 3.e.i and Section 6.b of the DCE Agreement. For purposes of determining Material Impacts, the task items set forth in the Program Budget in Exhibit E, not including contingency, shall control until such time as Exhibit E is updated or an annual budget and schedule is approved by DWR and the Authority.

## Design and Construction Enterprise

PROGRAM BUDGET	
CUMULATIVE COST	
2014 DOLLARS	
Item	Total
<b>PM/CM/ENG</b>	<b>\$ 1,919,910,670</b>
Program Director Office	\$ 47,893,240
Finance and Accounting	\$ 42,880,320
Public Education	\$ 33,815,180
Internal Audit	\$ 21,728,320
Legal Counsel	\$ 29,875,920
Safety and Risk Management	\$ 17,034,840
Secretary to the Board	\$ 3,467,520
Program Manager	\$ 12,616,720
Staffing and Administration	\$ 6,541,200
General Technical	\$ 14,881,440
Staffing	\$ 12,858,720
Office Management	\$ 19,360,320
Program Controls and Contracting	\$ 68,820,800
Quality	\$ 37,644,840
Environment & Planning	\$ 15,726,840
CEQA/NEPA Env. Permits	\$ 12,028,680
Conveyance Mitigation Planning	\$ 21,297,240
Right of Way, Survey and Mapping	\$ 15,975,160
Property Acquisition	\$ 11,246,440
Chief Engineer	\$ 149,827,840
Engineering Support	\$ 21,677,400
Estimating	\$ 18,202,280
Design and Development Studies (Geotech)	\$ 17,097,480
Conveyance Mitigation Engineering	\$ 31,363,200
Intakes	\$ 137,055,312
Pump Plant	\$ 93,288,240
Forebays	\$ 113,771,720
Utilities, Power and Roads	\$ 171,884,476
Tunnels and Shafts	\$ 709,616,182
Commissioning	\$ 10,432,800
<b>CONSTRUCTION</b>	<b>\$ 9,499,048,014</b>
Intake 3 Construction	\$ 347,022,726
Intake 5 Construction	\$ 364,782,660
Intake 2 Construction	\$ 371,074,920
IF Control Structures Construction	\$ 159,600,000
Clifton Court Forebay Construction	\$ 593,700,000
Utilities Power and Roads Construction	\$ 371,300,000
Reach 1, 2, 3 and IF Construction	\$ 1,218,681,286
Reach 5 Construction	\$ 899,632,548
Reach 7 Construction	\$ 1,538,450,861
Reach 6 Construction	\$ 1,559,696,529
Reach 4 Construction	\$ 1,603,406,484
Communications and Controls Construction	\$ 25,100,000
Pump Plants Construction	\$ 446,600,000
<b>CONTINGENCY</b>	<b>\$ 3,378,400,000</b>
<b>LAND ACQUISITION</b>	<b>\$ 146,100,000</b>
<b>Grand Total</b>	<b>\$ 14,943,458,684</b>



# DCE PROGRAM SCHEDULE



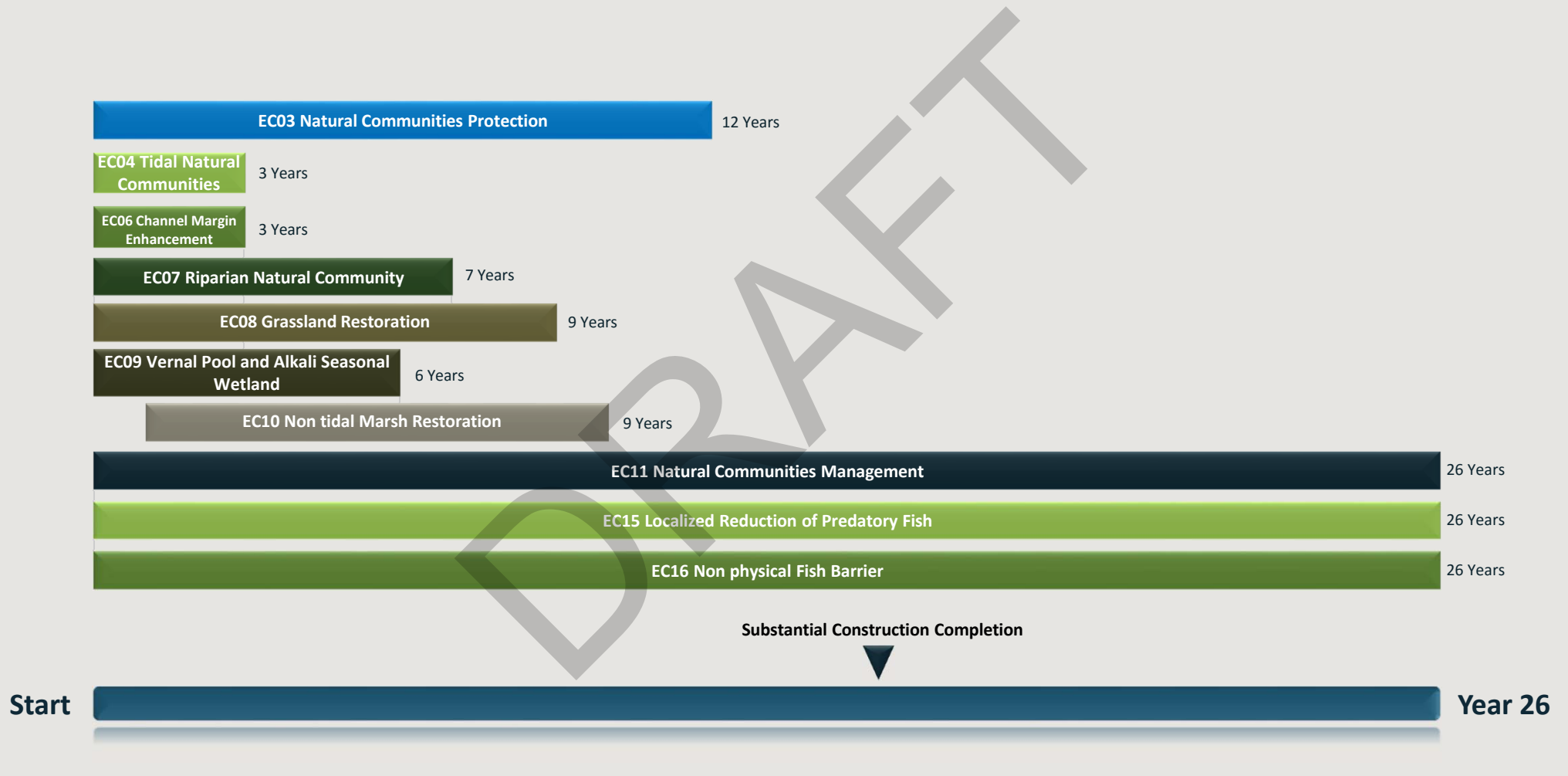
## 2081/Section 7 Mitigation Cost Estimate

CALIFORNIA WATERFIX MITIGATION COST ESTIMATE		
CUMULATIVE COST		
2014 DOLLARS		
ID	Name	Cost
EC03	Natural Communities Protection	\$ 93,178,308
EC04	Tidal Natural Communities	\$ 23,622,027
EC06	Channel Margin Enhancement	\$ 39,654,662
EC07	Riparian Natural Community	\$ 3,133,564
EC08	Grassland Restoration	\$ 32,438,868
EC09	Vernal Pool and Alkali Seasonal Wetland	\$ 75,000
EC10	Nontidal Marsh Restoration	\$ 17,028,222
EC11	Natural Communities Management	\$ 26,934,539
EC15	Localized Reduction of Predatory Fish	\$ 19,703,298
EC16	Nonphysical Fish Barrier	\$ 76,550,897
CUL	Cultural Resources	\$ 13,350,000
AQ	Air Quality	\$ 37,630,000
BIO	Biological Resources	\$ 12,000,000
<b>Subtotal</b>		<b>\$ 395,299,385</b>
<b>Other Costs</b>		
	Program Administration	\$ 12,775,000
	Monitoring (terrestrial and aquatic)	\$ 133,398,319
	Property tax revenue replacement	\$ 48,121,823
<b>Subtotal</b>		<b>\$ 194,295,142</b>
<b>Total Costs</b>		<b>\$ 589,594,527</b>
<b>Contingency 35%</b>		<b>\$ 206,358,084</b>
<b>Grand Total Cost</b>		<b>\$ 795,952,611</b>

CALIFORNIA WATERFIX TOTAL BUDGET		
CUMULATIVE COST		
2014 DOLLARS		
Name	Cost	
Total 2081/Section 7 Mitigation Costs	\$	795,952,611
Total Design/Construction Budget	\$	14,943,458,684
<b>Grand Total</b>	<b>\$</b>	<b>15,739,411,295</b>



# MITIGATION PROGRAM SCHEDULE







CALIFORNIA  
**WATER FIX**  
RELIABLE. CLEAN. WATER.

# DESIGN AND CONSTRUCTION ENTERPRISE

## STANDARD CLAUSES

Exhibit F | V.3

**DISCLAIMER** - Distribution of this document does not constitute a project approval. This document is a draft that is subject to change, as it embodies aspects of a proposed project/action that remain subject to the completion of environmental review under the California Environmental Quality Act and the National Environmental Policy Act. Under those laws, the decision-making agencies have the discretion, through continued review of the proposed project/action, to reject the proposed project/action in its entirety, to modify it, including ways to avoid or reduce the severity of its environmental effects, or to direct the approval of an alternative to the proposed project/action.

Revised Date: 10-2-15

# EXHIBIT F – STANDARD CLAUSES

## SPECIAL TERMS AND CONDITIONS

1. WORKER'S COMPENSATION CLAUSE: The Authority affirms that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and the Authority affirms that it will comply with such provisions before commencing the performance of the work under this contract.
2. ASSIGNMENT: This Agreement is not assignable by the Authority, either in whole or in part, without the consent of the State in the form of a formal written amendment.
3. INDEPENDENT AUTHORITY: The Authority, and the agents and employees of the Authority, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of the State.
4. AMERICANS WITH DISABILITIES ACT: By signing this contract, the Authority assures the State that it complies with the Americans With Disabilities Act (ADA) of 1990, (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.
5. DRUG-FREE WORKPLACE CERTIFICATION: By signing this contract, the Authority or grantee hereby certifies under penalty of perjury under the laws of the State of California that the Authority or grantee will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:
  - a. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
  - b. Establish a Drug-Free Awareness Program to inform employees about all of the following:
    1. The dangers of drug abuse in the workplace,
    2. The person's or organization's policy of maintaining a drug-free workplace,
    3. Any available counseling, rehabilitation and employee assistance programs, and
    4. Penalties that may be imposed upon employees for drug abuse violations.

- c. Every employee who works on the proposed contract or grant:
1. Will receive a copy of the company's drug-free policy statement, and
  2. Will agree to abide by terms of the company's statement as a condition of employment on the contract or grant.

This contract or grant may be subject to suspension of payments or termination, or both, and the Authority or grantee may be subject to debarment if the department determines that: (1) the Authority or grantee has made a false certification, or (2) the Authority or grantee violates the certification by failing to carry out the requirements noted above.

6. RESOLUTION: A county, city, district, or other local public body must provide the State with a copy of a resolution, order, motion, or ordinance of the local governing body which by law has authority to enter into an agreement, authorizing execution of the agreement.
7. AGENCY LIABILITY: The Authority warrants by execution of this Agreement, that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Authority for the purpose of securing business. For breach or violation of this warranty, the State shall, in addition to other remedies provided by law, have the right to annul this Agreement without liability, paying only for the value of the work actually performed, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.
8. POTENTIAL SUBCONTRACTORS: Nothing contained in this Agreement or otherwise shall create any contractual relation between the State and any subcontractors, and no subcontract shall relieve the Authority of its responsibilities and obligations hereunder. The Authority agrees to be as fully responsible to the State for the acts and omissions of its subcontractor and of persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Authority. The Authority's obligation to pay its subcontractor the Authority is an independent obligation from the State's obligation to make payments to the Authority. As a result, the State shall have no obligation to pay or enforce the payment of any moneys to any subcontractor the Authority.

9. SUBCONTRACTING: The Authority is responsible for any work it subcontracts. Subcontracts must include all applicable terms and conditions of this Agreement. Any subcontractors, outside associates, or consultants required by the Authority in connection with the services covered by this Agreement shall be limited to such individuals or firms as were specifically identified in the bid or agreed to during negotiations for this Agreement, or as are specifically authorized by the Contract Manager during the performance of this Agreement. Any substitutions in, or additions to, such subcontractors, associates or consultants shall be subject to the prior written approval of the Contract Manager. Authority warrants, represents and agrees that it and its subcontractors, employees and representatives shall at all times comply with all applicable laws, codes, rules and regulations in the performance of this Agreement. Should State determine that the work performed by a subcontractor is substantially unsatisfactory and is not in substantial accordance with the contract terms and conditions, or that the subcontractor is substantially delaying or disrupting the process of work, State may request substitution of the subcontractor.
10. COMPUTER SOFTWARE: For contracts in which software usage is an essential element of performance under this Agreement, the Authority certifies that it has appropriate systems and controls in place to ensure that state funds will not be used in the performance of this contract for the acquisition, operation or maintenance of computer software in violation of copyright laws.
11. REPORT RECYCLED CONTENT CERTIFICATION: In accordance with Public Contract Code Sections 12200-12217, et seq. and 12153-12156, et seq. the Authority must complete and return the form DWR 9557, Recycled Content Certification, for each required product to the Department at the conclusion of services specified in this contract. Form DWR 9557 is attached to this Exhibit and made part of this contract by this reference.
12. REIMBURSEMENT CLAUSE: If applicable, travel and per diem expenses to be reimbursed under this contract shall be at the same rates the State provides for unrepresented employees in accordance with the provisions of Title 2, Chapter 3, of the California Code of Regulations. The Authority's designated headquarters for the purpose of computing such expenses shall be: N/A

13. NON-DISCRIMINATION CLAUSE: During the performance of this Agreement, the Authority and its subcontractors, the Authority shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition (cancer), age (over 40), marital status, and denial of family care leave. The Authority and subcontractor the Authority shall insure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. The Authority and subcontractor the Authority shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12990 (a-f) et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations, are incorporated into this Agreement by reference and made a part hereof as if set forth in full. The Authority and its subcontractor the Authority's shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other Agreement.

The Authority shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the Agreement.

14. GOVERNING LAW: This contract is governed by and shall be interpreted in accordance with the laws of the State of California.

15. ANTITRUST CLAIMS: The Authority by signing this agreement hereby certifies that if these services or goods are obtained by means of a competitive bid, the Authority shall comply with the requirements of the Government Codes Sections set out below.

a. The Government Code Chapter on Antitrust claims contains the following definitions:

1. "Public purchase" means a purchase by means of competitive bids of goods, services, or materials by the State or any of its political subdivisions or public agencies on whose behalf the Attorney General may bring an action pursuant to subdivision (c) of Section 16750 of the Business and Professions Code.
2. "Public purchasing body" means the State or the subdivision or agency making a public purchase. Government Code Section 4550.

b. In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing

body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder. Government Code Section 4552.

- c. If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery (Government Code Section 4553).
- d. Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action (Government Code Section 4554).

16. CHILD SUPPORT COMPLIANCE ACT: "For any Agreement in excess of \$100,000, the Authority acknowledges in accordance therewith, that:

- a. The Authority recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- b. The Authority, to the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

17. UNENFORCEABLE PROVISION: In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Agreement have force and effect and shall not be effected thereby.

18. THE AUTHORITY COOPERATION DURING INVESTIGATION: The Authority agrees to cooperate fully in any investigation conducted by or for DWR regarding unsatisfactory work or allegedly unlawful conduct by DWR employees or DWR the Authority. The word "cooperate" includes but

is not limited to, in a timely manner, making the Authority staff available for interview and the Authority records and documents available for review.

19. CONFLICT OF INTEREST:

- a. Current and Former State Employees: The Authority should be aware of the following provisions regarding current or former state employees. If the Authority has any questions on the status of any person rendering services or involved with the Agreement, the awarding agency must be contacted immediately for clarification.

(1) Current State Employees: (PCC §10410)

- (a) No officer or employee shall engage in any employment, activity or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any state agency, unless the employment, activity or enterprise is required as a condition of regular state employment.
- (b) No officer or employee shall contract on his or her own behalf as an independent contractor with the Authority with any state agency to provide goods or services.

(2) Former State Employees: (PCC §10411)

- (a) For the two-year period from the date he or she left state employment, no former state officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any state agency.
- (b) For the twelve-month period from the date he or she left state employment, no former state officer or employee may enter into a contract with any state agency if he or she was employed by that state agency in a policy-making position in the same general subject area as the proposed contract within the 12-month period prior to his or her leaving state service.

b. Penalty for Violation:

- (a) If the Authority violates any provisions of above paragraphs, such action by the Authority shall render this Agreement void. (PCC §10420)

c. Members of Boards and Commissions:

- (a) Members of boards and commissions are exempt from this section if they do not receive payment other than payment of each meeting of the board or commission, payment for preparatory time and payment for per diem. (PCC §10430 (e))

d. Representational Conflicts of Interest:

- (a) The Authority must disclose to the DWR Program Manager any activities by the Authority or subcontractor the Authority personnel involving representation of parties, or provision of consultation services to parties, who are adversarial to DWR. DWR may immediately terminate this contract if the Authority fails to disclose the information required by this section. DWR may immediately terminate this contract if any conflicts of interest cannot be reconciled with the performance of services under this contract.

e. Financial Interest in Contracts: The Authority should also be aware of the following provisions of Government Code §1090:

“Members of the Legislature, state, county district, judicial district, and city officers or employees shall not be financially interested in any contract made by them in their official capacity, or by any body or board of which they are members. Nor shall state, county, district, judicial district, and city officers or employees be purchasers at any sale or vendors at any purchase made by them in their official capacity.”

f. Prohibition for Consulting Services Contracts: For consulting services contracts (see PCC §10335.5), the Authority and any subcontractor the Authority (except for subcontractor’s who provide services amounting to 10 percent or less of the contract price) may not submit a bid/SOQ, or be awarded a contract, for the provision of services, procurement of goods or supplies or any other related action which is required, suggested, or otherwise deemed appropriate in the end product of such a consulting services contract (see PCC §10365.5).

20. AUDIT: The Authority agrees that the awarding department, the Department of General Services, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Agreement. The Authority agrees to maintain such records for possible audit for a minimum



of three (3) years after final payment, unless a longer period of records retention is stipulated. The Authority agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, the Authority agrees to include a similar right of the State to audit records and interview staff in any subcontract related to performance of this Agreement. (Gov. Code §8546.7, Pub. Contract Code §10115 et seq., CCR Title 2, Section 1896).

21. EXPATRIATE CORPORATIONS: The Authority hereby declares that it is not an expatriate corporation subsidiary of an expatriate corporation within the meaning of Public Contract Code Section 10286 and 10286.1, and is eligible to contract with the State of California.
  
22. SWEATFREE CODE OF CONDUCT:
  1. The Authority contracting for the procurement or laundering of apparel, garments or corresponding accessories, or the procurement of equipment, materials, or supplies, other than procurement related to a public works contract, declare under penalty of perjury that no apparel, garments or corresponding accessories, equipment, materials, or supplies furnished to the state pursuant to the contract have been laundered or produced in whole or in part by sweatshop labor, forced labor, convict labor, indentured labor under penal sanction, abusive forms of child labor or exploitation of children in sweatshop labor, or with the benefit of sweatshop labor, forced labor, convict labor, indentured labor under penal sanction, abusive forms of child labor or exploitation of children in sweatshop labor. The Authority further declares under penalty of perjury that they adhere to the Sweatfree Code of Conduct as set forth on the California Department of Industrial Relations website located at [www.dir.ca.gov](http://www.dir.ca.gov), and Public Contract Code Section 6108.
  2. The Authority agrees to cooperate fully in providing reasonable access to the Authority's records, documents, agents or employees, or premises if reasonably required by authorized officials of the contracting agency, the Department of Industrial Relations, or the Department of Justice to determine the Authority's compliance with the requirements under paragraph (a)
  
23. DOMESTIC PARTNERS: For contracts over \$100,000 executed or amended after January 1, 2007, the Authority certifies that the Authority is in compliance with Public Contract Code section 10295.3.
  
24. LABOR CODE/WORKERS' COMPENSATION: The Authority needs to be aware of the provisions which require every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions, and the Authority affirms to comply

with such provisions before commencing the performance of the work of this Agreement. (Labor Code Section 3700).

25. AIR OR WATER POLLUTION VIOLATION: Under the State laws, the Authority shall not be: (1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district; (2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or (3) finally determined to be in violation of provisions of federal law relating to air or water pollution.
26. UNION ORGANIZING: For all contracts, except fixed price contracts of \$50,000 or less, the Authority acknowledges that:

By signing this agreement, the Authority hereby acknowledges the applicability of Government Code Section through Section 16649 to this agreement and agrees to the following:

- a. The Authority will not assist, promote or deter union organizing by employees performing work on a state service contract, including a public works contract.
- b. No state funds received under this agreement will be used to assist, promote or deter union organizing.
- c. The Authority will not, for any business conducted under this agreement, use any state property to hold meetings with employees or supervisors, if the purpose of such meetings is to assist, promote or deter union organizing, unless the state property is equally available to the general public for holding meetings.

If the Authority incurs costs, or makes expenditures to assist, promote or deter union organizing, the Authority will maintain records sufficient to show that no reimbursement from state funds has been sought for these costs, and that The Authority shall provide those records to the Attorney General upon request.

27. LOSS LEADER: If this contract involves the furnishing of equipment, materials, or supplies then the following statement is incorporated: It is unlawful for any person engaged in business within this state to sell or use any article or product as a "loss leader" as defined in Section 17030 of the Business and Professions Code. (PCC 10344(e))