



State of California – Natural Resources Agency

DEPARTMENT OF FISH AND WILDLIFE

Bay Delta Region

2825 Cordelia Road, Suite 100

Fairfield, CA 94534

(707) 428-2002

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GAVIN NEWSOM, Governor

CHARLTON H. BONHAM, Director



July 17, 2020

Mr. Scott Buenting

City of Antioch

Post Office Box 5007

Antioch, CA 94531-5007

SBuenting@ci.antioch.ca.us

Subject: Incidental Take Permit for Brackish Water Desalination Facility,
2081-2019-046-03, Contra Costa County

Dear Mr. Buenting:

Enclosed is the Incidental Take Permit for the above referenced project, which has been signed by the California Department of Fish and Wildlife (CDFW). Please read the permit carefully and sign the acknowledgement on the permit no later than 30 days from CDFW signature and prior to initiation of ground-disturbing activities. Alternatively, a signed hardcopy can be mailed to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

You are advised to keep a copy of the signed permit in a secure location and distribute copies to appropriate project staff responsible for ensuring compliance with the conditions of the permit. Note that you are required to comply with certain conditions of approval prior to continuation of ground-disturbing activities. Additionally, a copy of the permit must be maintained at the project work site and made available for inspection by CDFW staff when requested.

The permit will not take effect until the signed acknowledgment is received by CDFW. If you wish to discuss these instructions or have questions regarding the permit, please contact Ms. Melissa Farinha, Senior Environmental Scientist (Supervisory), at (707) 944-5579 or Melissa.Farinha@wildlife.ca.gov; or Mr. Jim Starr, Environmental Program Manager, at Jim.Starr@wildlife.ca.gov.

Sincerely,

DocuSigned by:
A handwritten signature in black ink that reads "Gregg Erickson".
BE74D4C93C604EA...
Gregg Erickson
Regional Manager
Bay Delta Region

Conserving California's Wildlife Since 1870



California Department of Fish and Wildlife
BAY DELTA REGION
2825 CORDELIA ROAD, SUITE 100
FAIRFIELD, CA 94534

California Endangered Species Act
 Incidental Take Permit No. 2081-2019-045-03

BRACKISH WATER DESALINATION PROJECT

Authority:

This California Endangered Species Act (CESA) Incidental Take Permit (ITP) is issued by the California Department of Fish and Wildlife (CDFW) pursuant to Fish and Game Code section 2081, subdivisions (b) and (c), and California Code of Regulations, Title 14, section 783.0 et seq. CESA prohibits the take¹ of any species of wildlife designated by the California Fish and Game Commission as an endangered, threatened, or candidate species.² CDFW may authorize the take of any such species by permit if the conditions set forth in Fish and Game Code section 2081, subdivisions (b) and (c) are met. (See Cal. Code Regs., tit. 14, § 783.4).

| | |
|---------------------------|---|
| Permittee: | City of Antioch |
| Principal Officer: | Mr. Scott Buenting, Project Manager |
| Contact Person: | Mr. Chris Fitzer, (916) 231-1254 |
| Mailing Address: | Post Office Box 5007, Antioch, CA 94531-5007 |

Effective Date and Expiration Date of this ITP:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW's Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP's authorization to take the Covered Species shall expire on **December 31, 2029**.

Notwithstanding the expiration date on the take authorization provided by this ITP, Permittee's obligations pursuant to this ITP do not end until CDFW accepts as complete the Permittee's Final Mitigation Report required by Condition of Approval 6.7 of this ITP.

¹ Pursuant to Fish and Game Code section 86, "'take' means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." (See also *Environmental Protection Information Center v. California Department of Forestry and Fire Protection* (2008) 44 Cal.4th 459, 507 [for purposes of incidental take permitting under Fish and Game Code section 2081, subdivision (b), "'take' ... means to catch, capture or kill"].)

² "The definition of an endangered, threatened, and candidate species for purposes of CESA are found in Fish and Game Code sections 2062, 2067, and 2068, respectively.

Project Location:

The Brackish Water Desalination Project (Project) is located within the cities of Antioch and Pittsburg, Contra Costa County (See Figure 1). The Project elements being permitted through this ITP are: the desalination facility located within the City of Antioch's (City) existing water treatment plant at 401 Putnam Street, the river intake pump station located at the City marina near McElheny Road and Fulton Shipyard Road, and the existing Delta Diablo Wastewater Treatment Plant (WWTP) outfall located in New York Slough in the City of Pittsburg.

Project Description:

The Project is limited to: (1) Demolition of an existing diversion intake and pump station on the San Joaquin River; (2) construction of a new diversion intake with fish screens and pump station at the same location; (3) construction of three pipeline stream under crossings by way of horizontal directional drilling (HDD) for the 12-inch diameter brine discharge pipeline between the desalination plant and the WWTP at Crossings 3, 4 and 5; (4) construction of two pipeline stream under crossings by way of jack and bore for the 12-inch diameter brine discharge pipeline at Crossings 2 and 6; (5) ongoing operation of the water diversion; and (6) ongoing brine discharge from the WWTP outfall diffuser pipe in New York Slough.

Intake Pump Station Replacement and Raw Water Pipeline Connection

The existing pump station and intake pipeline will be removed and replaced under the proposed Project. The existing pump station is in an upland parking lot area. The new pump station will be located approximately 225 feet inland from shore within the existing parking lot and will have an approximate area of 3,500 square feet. The pump station will house three 8-million gallons per day (mgd) pumps (two active and one standby) which will allow the pump station to continue operating at the existing facility capacity of 16 mgd if one of the pumps is out of service for maintenance. The pump station design, based on the anticipated sea level rise condition in 2100, prevents flooding of the mechanical or electrical room during high river flow coincident with the highest estimated tide.

The intake will be connected to the pump station by two 42-inch diameter submerged pipelines extending approximately 135 feet into the river (Figure 3 – Intake and Pump Station, Appendix B). Each of the pipelines will be equipped with a 48-inch diameter T-intake cylindrical fish screen that meets the protective criteria of CDFW and National Marine Fisheries Service (NMFS). The intake capacity of the new intake pump station for river water will remain at a firm capacity of 16 mgd.

The intake pipelines will be located within a 13-foot wide by 7.5-foot deep trench extending from the shoreline. The pipes will be surrounded by 2-inch minus sized bedding material with a 2-foot rip-rap layer on top. After extending into the river 135 feet the pipes will make a 90 degree bend up and extend 9 feet above the riverbed and be capped by the 48-inch diameter

fish screens. The intake will be supported by a 10-foot by 36-foot concrete foundation that will be 3 feet deep. The foundation slab will be supported on four 18-inch diameter steel pipe pilings that will be installed to a depth of 75 feet below the riverbed. The foundation slab will then have an additional 5 feet of riprap added on all sides. The 5 feet of riprap around the foundation slab and on top of the pipelines will be placed 12 inches below the grade of the riverbed and will be buried with clean, native earthen backfill material.

Installation of the intake pipes and foundations will involve the removal of approximately 700 cubic yards of material and the placement of 309 cubic yards of bedding material, 208 cubic yards of rip-rap, 40 cubic yards of concrete and 140 cubic yards of pipes and pile structures. Other than the intake pipe extending up to the fish screens all material will be placed so as to match the adjacent existing surface.

A cofferdam will be temporarily installed in the river by the construction contractor to facilitate installation of the intake pipelines and fish screens and minimize turbulence and sediment disturbance during construction. The cofferdam will consist of interlocking sheet piles forming a watertight corridor approximately 42 feet wide that will extend into the river approximately 143 feet from the shore corresponding to the edge of the rip-rap around the intake foundation. Once installed, the area inside the cofferdam may be dewatered to facilitate construction, to accommodate fish rescue and construction activities, as necessary. If the area inside the cofferdam is not dewatered, the pouring and/or placement of wet or uncured concrete will only occur within the cofferdam with secondary containment casing, that fully isolates the concrete being poured from the surrounding waterway. Additionally, if wet or uncured concrete is placed within the non-dewatered cofferdam with secondary containment, water within the cofferdam will not be released into and/or allowed to intermingle with San Joaquin River without water quality testing to demonstrate that pH levels and dissolved oxygen concentrations are within acceptable range, consistent with background conditions (pH between 6 and 8 [pH units]; dissolved oxygen greater than 6 mg/L). If water quality within cofferdam exceeds these ranges, water will be pumped and treated and/or disposed of consistent with State and local regulations. Installation of the cofferdam is expected to take approximately 2 weeks. The cofferdam will be removed following construction.

The new pump station will connect to and convey river water through the City's existing 30-inch-diameter raw water pipeline for the majority of the distance between the pump station and the WWTP (See Figure 2). At the intersection of Lone Tree Way and Putnam Street, a new 30-inch raw water pipeline will extend from the existing pipe approximately 3,000 feet to the location within the WWTP of the new desalination plant. This new pipeline will be located entirely within existing road rights-of-way or the WWTP property.

Brine Disposal Pipeline Stream Crossings

Crossings 3, 4 and 5 - West Antioch Creek at L Street: Crossing 3 will be under a 6-foot by 3-foot concrete culvert in the intersection of L Street and Fitzuren Road. Crossing 4 will be

under a 10-foot by 5-foot concrete culvert that crosses underneath L Street and the Highway 4 Interchange. Crossing 5 will be under two 10-foot by 8-foot concrete culverts underneath L Street. These three crossings all occur across L Street in a relatively short distance and the brine disposal pipeline alignment will go underneath all three structures in a single undercrossing that will be installed using an HDD construction method. The HDD segment of the pipe will be approximately 984 feet long and installed approximately 30 feet below existing grade. The HDD alignment will be approximately 18 feet below the Crossing 3 culvert. The HDD alignment will be approximately 18 feet below the Crossing 4 culvert and 10 feet below the larger Crossing 5 culvert. The HDD alignment is approximately 70 feet away from the joint outlet location of the Crossing 4 and 5 structure.

Crossings 2 - West Antioch Creek at Fitzuren Road: At Crossing 2 the pipe alignment will go under three 60-inch by 42-inch oval corrugated metal pipes using a jack-and-bore construction method. Jack-and-bore construction involves digging a jacking pit and receiving pit on either side of the crossing. A machine in the jacking pit then pushes a 24-inch steel casing pipe horizontally through the soil while an auger removes the material inside the casing pipe. The portion of the pipe alignment installed in this manner will be 110 feet long and located 12-14 deep. The jack-and-bore method proposed at this location will not require the use of drilling fluids.

Crossing 6 - West Antioch Creek at West 10th Street: The new pipeline will cross under four 7-foot by 14-foot concrete box culverts. This crossing will utilize a jack-and-bore construction technique similar to Crossing 2. This portion of the pipe alignment will be approximately 5 feet below the existing culvert structure and approximately 215 feet long. Several other utilities including a water and sewer main have been installed in a similar fashion at this crossing and will run parallel to the proposed pipeline. The jack-and-bore method proposed at this this under crossing will not require the use of drilling fluids.

Ongoing Diversion

The City's current water supply operations cease river diversions when salinity at the intake is above the City's salinity target. The timing of this varies by water year type. With the proposed Project, the City will continue to divert water from the river for conventional treatment until salinity increases and then it will begin using the brackish desalination facility. This will enable the new intake pump station to potentially operate year-round. When the desalination facility is operating, 8 mgd will be diverted to the desalination facility and the City will have the ability to divert up to an additional 8 mgd to the conventional WWTP or municipal reservoir to be used for blending depending on demands and water quality.

The desalination facility will operate at an overall recovery rate of approximately 75 percent. Approximately 8 mgd of river water will be needed to produce 6 mgd of desalinated product water. When operated, the desalination facility will operate at its full capacity. Intermittent or partial operation of desalination facilities is typically not advised and a minimum of 2 mgd flow

is needed for operations. Steady flow velocity through the membranes at its rated capacity prevents the buildup of precipitates on the membranes which can reduce treatment efficiency and capacity of the system. The desalination plant will be used to produce between roughly 2,600 – 5,500-acre feet per year (AF/Y) depending on water year type.

Ongoing Brine Discharge

The desalination process will generate approximately 2 mgd of brine. Brine from the desalination system will be conveyed through an approximately 4.3-mile long, 12-inch-diameter dedicated pipeline from the desalination facility to the existing WWTP. The brine disposal pipeline will be constructed of high-density polyethylene (HDPE) or polyvinyl chloride (PVC) and will connect to the WWTP effluent channel at the north end of the plant. The brine will then be mixed with treated wastewater from the WWTP prior to discharge through the existing WWTP outfall in New York Slough.

The WWTP outfall pipeline ends approximately 500 feet offshore and is at an elevation depth of 26 feet. The diffuser port diameter is approximately 42 inches, with 50 3-inch diameter ports spaced 8 feet apart in alternating directions. No construction or modifications to the WWTP outfall will be required.

Covered Species Subject to Take Authorization Provided by this ITP:

This ITP covers the following species:

| Name | CESA Status |
|---|-------------------------|
| 1. Longfin smelt (<i>Spirinchus thaleichthys</i>) | Threatened ³ |
| 2. Delta smelt (<i>Hypomesus transpacificus</i>) | Endangered ⁴ |

These species and only these species are the “Covered Species” for the purposes of this ITP.

Impacts of the Taking on Covered Species:

Project activities and their resulting impacts are expected to result in the incidental take of individuals of the Covered Species. The activities described above expected to result in incidental take of individuals of the Covered Species include coffer dam installation and dewatering, ongoing operations and maintenance of the diversion intakes and fish screens, and brine discharge at the Delta Diablo Outfall Diffuser (Covered Activities).

³See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(2)(E).

⁴See *Id.*, subd. (a)(2)(O).

Incidental take of individuals of the Covered Species in the form of mortality (“kill”) may occur as a result of Covered Activities such as stranding, capture, release of contaminants during construction activities, and entrainment, impingement, reduction in water quality or useable habitat from ongoing operations and maintenance of the diversion intakes and new source of brine concentration and discharge. Incidental take of individuals of the Covered Species may also occur from the Covered Activities in the form of disruption to movement and flow patterns, disruption to ecosystem processes and loss of food web resources for the Covered Species from caused by water diversion and brine discharge. The areas where authorized take of the Covered Species is expected to occur include portions of the lower San Joaquin River along the coast lines of the cities of Antioch and Pittsburg, (collectively, the Project Area; see Figure 1 and Figure 2).

The Project is expected to cause the temporary loss of 0.14 acres and permanent loss of 0.008 acres of shallow water habitat and permanent loss of 0.008 acres of floodplain mosaic habitat for the Covered Species, and ongoing take of egg and larval life stages, reduction in quality of aquatic habitat for the Covered Species. Impacts of the authorized taking also include adverse impacts to the Covered Species related to temporal losses, increased habitat fragmentation and edge effects, and the Project’s incremental contribution to cumulative impacts (indirect impacts). These impacts include: increased salinity in stress resulting from noise and vibrations from boring and capture and relocation, and long-term effects due to increased pollution, displacement from preferred habitat, increased competition for food and space, and increased vulnerability to extinction and predation.

Incidental Take Authorization of Covered Species:

This ITP authorizes incidental take of the Covered Species and only the Covered Species. With respect to incidental take of the Covered Species, CDFW authorizes the Permittee, its employees, contractors, and agents to take Covered Species incidentally in carrying out the Covered Activities, subject to the limitations described in this section and the Conditions of Approval identified below. This ITP does not authorize take of Covered Species from activities outside the scope of the Covered Activities, take of Covered Species outside of the Project Area, take of Covered Species resulting from violation of this ITP, or intentional take of Covered Species except for salvage through the capture and relocation of Covered Species as authorized by this ITP.

Conditions of Approval:

Unless specified otherwise, the following measures apply to all Covered Activities within the Project Area, including areas used for barge ingress and egress, staging and parking, and noise and vibration generating activities that may/will cause take. CDFW’s issuance of this ITP and Permittee’s authorization to take the Covered Species are subject to Permittee’s compliance with and implementation of the following Conditions of Approval:

Incidental Take Permit
No. 2081-2019-046-03
CITY OF ANTIOCH
BRACKISH WATER DESALINATION PROJECT

1. **Legal Compliance:** Permittee shall comply with all applicable federal, state, and local laws in existence on the effective date of this ITP or adopted thereafter.
2. **CEQA Compliance:** Permittee shall implement and adhere to the mitigation measures related to the Covered Species in the Biological Resources section of the Environmental Impact Report (SCH No.: 2017082044) certified by City of Antioch on January 22, 2020 as lead agency for the Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.).
3. **LSA Agreement Compliance:** Permittee shall implement and adhere to the mitigation measures and conditions related to the Covered Species in the Lake and Streambed Alteration Agreement (LSAA) (Notification No. 1600-2019-0247-R3 for the Project executed by CDFW pursuant to Fish and Game Code section 1600 et seq.
4. **ITP Time Frame Compliance:** Permittee shall fully implement and adhere to the conditions of this ITP within the time frames set forth below and as set forth in the Mitigation Monitoring and Reporting Program (MMRP), which is included as Attachment 1 to this ITP.

5. General Provisions:

- 5.1 Designated Representative. Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP.
- 5.2 Designated Biologist. Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered Activities and shall also obtain approval in advance in writing if the Designated Biologist must be changed.
- 5.3 Designated Biologist Authority. To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any

activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.

- 5.4 Education Program. Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area.
- 5.5 Construction Monitoring Notebook. The Designated Biologist shall maintain a construction-monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring notebook is available for review at the Project Area upon request by CDFW.
- 5.6 Trash Abatement. Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs.
- 5.7 Hazardous Waste. Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.
- 5.8 CDFW Access. Permittee shall provide CDFW staff with reasonable access to the Project and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP.

- 5.9 Refuse Removal. Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, sheetpile walls, excess concrete on the riverbed that will result in more than 0.008 acres of permanent impact.
- 5.10 Conduct Project Activities and Construct Project According to Accepted Plans. Permittee and their consultants, contractors, and subcontractors shall adhere to and implement CDFW-accepted or approved plans and project designs.

6. Monitoring, Notification and Reporting Provisions:

- 6.1 Notification Before Commencement. The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities.
- 6.2 Notification of Non-compliance. The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours.
- 6.3 Compliance Monitoring. The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; (5) document and photograph site conditions and (6) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP. The Designated Biologist shall conduct compliance inspections a minimum of once a day during periods of inactivity.
- 6.4 Monthly Compliance Report. The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition of Approval 6.3 into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval,

the CDFW Regional Representative is James Starr (Jim.Starr@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov. CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule.

- 6.5 Annual Status Report. Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species.
- 6.6 CNDDDB Observations. The Designated Biologist shall submit all observations of Covered Species to CDFW's California Natural Diversity Database (CNDDDB) within 60 calendar days of the observation and the Designated Biologist shall include copies of the submitted forms with the next Monthly Compliance Report or ASR, whichever is submitted first relative to the observation.
- 6.7 Final Mitigation Report. No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information.

- 6.8 Notification of Take or Injury. Permittee shall immediately notify the Designated Biologist if a Covered Species is taken or injured by a Project-related activity, or if a Covered Species is otherwise found dead or injured within the vicinity of the Project. The Designated Biologist or Designated Representative shall provide initial notification to CDFW by calling the Regional Office at (707) 428-2002. The initial notification to CDFW shall include information regarding the location, species, and number of animals taken or injured and the ITP Number. Following initial notification, Permittee shall send CDFW a written report within two calendar days. The report shall include the date and time of the finding or incident, location of the animal or carcass, and if possible provide a photograph, explanation as to cause of take or injury, and any other pertinent information.
- 6.9 Acceptance of Outstanding Fish Screen Design Evaluation Requirements. Prior to screen fabrication, Permittee shall submit:
- 6.9.1 Shop fabrication drawings with design details.
 - 6.9.2 Preliminary operation and maintenance plan which includes preventive and corrective maintenance procedures, inspection and reporting requirements, maintenance logs, etc.
 - 6.9.3 Post-construction evaluation and monitoring plan with allocated funds in the construction budget to make need corrections to bring the fish screen within operational compliance.
- 6.10 Annual Fish Screen Maintenance and Effectiveness Monitoring. Permittee shall submit an annual report by December 31 in each year for the term of this ITP. The report shall include all monitoring elements identified in the CDFW approved plans required under Conditions of Approval 6.9.2 and 6.9.3.

7. Take Minimization Measures:

The following requirements are intended to ensure the minimization of incidental take of Covered Species in the Project Area during Covered Activities. Permittee shall implement and adhere to the following conditions to minimize take of Covered Species:

- 7.1 Conduct Project Activities and Construct Project According to Accepted Plans. Permittee and their consultants, contractors, and subcontractors shall adhere to and implement CDFW-accepted or approved plans and project designs.
- 7.2 Maximum Diversion Rate from the San Joaquin River. Instantaneous rate of diversion from the new intakes shall not exceed 11,111 gallons per minute at any time and shall be limited to the minimum magnitude and duration to meet water demands.

- 7.3 No Diversion without Fish Screens. Permittee shall not divert water at any time without the CDFW-approved fish screen installed and fully operational.
- 7.4 Implement Fish Screen Operations and Evaluation Plans. Permittee shall implement the operation and maintenance plan and the post-construction evaluation plan according to the plans as approved by CDFW.
- 7.5 Screen Monitoring Study Plan. By August 1, 2021, and every three years subsequently, Permittee shall submit an updated study plan to CDFW for approval. The purpose of the study plan shall be to monitor the diversion to determine its efficiency at screening screenable size fish and the potential diversion rate of all species, with an emphasis on Covered Species of fish, either adults, juveniles, and larvae at the current Permittee intake. CDFW shall provide written comments and requested changes, if any, regarding the adequacy of the submitted study plan and its elements by September 1 of each year in which an updated study plan is submitted. If CDFW has comments or requested changes, Permittee shall resubmit a revised study plan that addresses CDFW's comments and requests by October 1. This study plan must be acceptable to and must be approved by CDFW prior to November 1 of each year in which an updated study plan is submitted. Permittee shall not be in violation of this provision if CDFW does not respond in writing regarding the acceptability of the latest study plan in accordance with this schedule, provided Permittee is implementing and adhering to the latest study plan submitted to CDFW. This study shall begin by March 1 and shall continue until June 30 unless an alternative schedule is agreed to by CDFW. Permittee shall submit a summary of the results of each study to CDFW in accordance with the schedule contained within the approved study plan. Permittee shall conduct fish sampling techniques and handling procedures in a manner that minimizes mortality to the Covered Species. Permittee shall coordinate with ongoing Interagency Ecological Program (IEP) and make the Project monitoring data available to IEP upon IEP's request.
- 7.6 Altering of Screen Device. If there are any significant changes made to the fish screen device, the City of Antioch shall conduct two consecutive years of sampling data to evaluate if the proposed changes had any impact on the effectiveness of the fish screen device. This study plan shall be submitted to CDFW for our review and approval prior to implementation of the proposed monitoring. If you do not hear back from CDFW within 30 working days, you may proceed with your proposed monitoring plan as submitted.
- 7.7 Disinfect Equipment Prior to Entry into Watercourses. To prevent spread of invasive aquatics and diseases, equipment to be used in watercourses including, but not limited to, boots, waders, hand tools and nets must be decontaminated with a minimum 5 percent chlorine solution for 2 minutes prior to entry into a watercourse. In addition, if a piece of equipment has been exposed or is suspected to have been

exposed to areas harboring New Zealand mud snails then that equipment must be dried out for two weeks, frozen for 48 hours, or placed in 55 degrees Celsius water for 5 minutes.

- 7.8 Seasonal Work Restrictions on Covered Activities. All project-related in-stream work, excluding dewatered areas, shall be limited to the period between August 1 to November 30. Use of vibratory and impact (as necessary) drivers is restricted to the period between August 1 to November 30. HDD activities shall be limited to the period between June 15 through October 15. Covered activities in dewatered areas shall be done in a manner so that any hazardous substances or equipment and loose construction materials that could be washed away in an overtopping event can be removed within a 72-hours outside of period from October 15 to May 15 period. For purposes of this measure, in-stream work does not include equipment mobilization, materials transport, and cofferdam maintenance, dewatering, discharge or leak inspection.
- 7.9 Weather Work Restriction. The Permittee shall monitor the National Weather Service (NWS) 72-hour forecast for the Project Area. If 0.10 inches or more rain is predicted in the 24-hour forecast, no ground-disturbing activities shall occur on the Project site on the day the rain is predicted to occur. Unless otherwise authorized by CDFW, no work shall occur until 24 hours after rain has ceased.
- 7.10 Time of Day Work Restriction. Permittee shall terminate all Covered Activities 30 minutes before sunset and shall not resume Covered Activities until 30 minutes after sunrise unless otherwise authorized in writing by CDFW. Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- 7.11 On-Site Specialist. Permittee shall have on-site a person professionally trained in spill containment/clean up to implement spill control devices in the event a spill occurs.
- 7.12 Wet or Uncured Concrete within a non-dewatered Cofferdam. Permittee shall not allow wet or uncured concrete to enter into rivers or stream at any time. This Measure applies to “cofferdams” that have not been completely dewatered, with the exception of within the cofferdam with secondary containment casing, that fully isolates the concrete being poured from the surrounding waterway. If wet or uncured concrete is placed within non-dewatered cofferdam with secondary containment, water within the cofferdam will not be released into and/or allowed to intermingle with San Joaquin River without water quality testing to demonstrate that pH levels and dissolved oxygen concentrations are within acceptable range, consistent with background conditions (pH between 6 and 8 [pH units]; dissolved oxygen greater than 6 mg/L). If water quality within cofferdam exceeds these ranges, water will be pumped and treated and/or disposed of consistent with federal, State, and/or local regulations.

- 7.13 Seasonal Work Period. Construction activities within a lake or stream and associated wetlands and riparian corridors shall be conducted after August 1 and before November 30. If Permittee needs more time to complete Project activities, work may be authorized outside of the work period and extended on a week-by-week basis by CDFW representative, Jim Starr, or if unavailable, through contact with the CDFW Bay Delta Regional Office by mail or phone (707) 428-2002. Authorization shall be in the form of written communication. If Permittee requests a work period variance, Permittee shall submit such a request in writing to the CDFW Bay Delta Office. The request shall: 1) describe the extent of work already completed; 2) detail the activities that remain to be completed; 3) detail the time required to complete each of the remaining activities; and 4) provide photographs of both the current work completed and the proposed site for continued work. The work period variance shall be issued at the discretion of CDFW. CDFW reserves the right to require additional measures to protect biological resources as a condition for granting the variance. CDFW shall have 10 business days to review the proposed work period variance.
- 7.14 Cofferdam Work Area. Precipitation forecasts and potential increases of river flow (i.e., San Joaquin River) shall be considered when planning construction activities within the cofferdam work area to avoid the potential for the release of materials or equipment into the river. Prior to departing the cofferdam work area each day, Contractor shall remove all non-fixed equipment and/or materials (not including pumps used for dewatering, as necessary) from the cofferdam work area and place in secured area.
- 7.15 Storm Event Inspection. After any storm event, Permittee shall inspect all sites scheduled to begin or continue construction within the next 72 hours. Corrective action for erosion and sedimentation shall be taken as needed.
- 7.16 No Equipment in Channel. With the exception of river barge, work vessels, and ancillary equipment for work in the San Joaquin River, no equipment shall be operated from within a flowing stream (including flowing or ponded water) at any time.
- 7.17 No New Project Phase without Erosion Control. No phase of the Project may be started if that phase and its associated erosion control measures cannot be completed prior to the onset of a storm event if that construction phase may cause the introduction of sediments into the stream. Erosion control measures shall be inspected frequently to minimize failure and conduct any necessary repairs. All non-structural related and non-biodegradable erosion control measures shall be removed from the Project area upon cessation of construction activities.
- 7.18 Stabilize Exposed Areas. Permittee shall stabilize all exposed/disturbed areas within the Project site to the greatest extent possible to reduce erosion potential, both during and following construction. Erosion control measures, such as, silt fences, straw hay

bales, gravel, or rock-lined ditches, water check bars, and broadcasted straw shall be used wherever silt-laden water has the potential to leave the work site and enter State waters. Erosion control measures shall be monitored during and after each storm event. Modifications, repairs, and improvements to erosion control measures shall be made whenever they are needed.

- 7.19 Staging and Storage Areas. Construction equipment, building materials, fuels, lubricants, and solvents shall not be stockpiled or stored where they may be washed into State waters or where they will cover aquatic or riparian vegetation.
- 7.20 Equipment over Drip Pans. Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream and riparian areas shall be positioned over drip-pans.
- 7.21 Check Equipment for Leaks. Any equipment or vehicles driven and/or operated adjacent to the stream and riparian corridor shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life, wildlife or riparian habitat. Vehicles shall be moved away from the stream prior to refueling and lubrication.
- 7.22 Hazardous Materials. Any hazardous or toxic materials that could be deleterious to aquatic life that could be washed into State waters or their tributaries shall be contained in watertight containers or removed from the Project site.
- 7.23 Imported Materials. Permittee shall not import, take from or move any rock, gravel, and/or other materials within the San Joaquin River, its streambeds or banks except as otherwise addressed in this Permit.
- 7.24 Debris and Waste Disposal. Permittee shall not dump any litter or construction debris within the Project area. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. Upon completion of operations and/or onset of wet weather, all construction material and/or debris shall be removed from the Project work site to an area not subject to inundation. All removed vegetation and debris shall be disposed of according to State and local laws and ordinances.
- 7.25 Spoils. Permittee shall not place spoil where it could enter State waters or other sensitive habitat, such as riparian, or place over vegetation except as specifically noticed to and accepted by CDFW, in writing. Spoil shall be hauled off-site or stockpiled in an upland location where it shall be covered with plastic sheeting or visquine whenever it is evident that rainy conditions threaten to erode loose soils into sensitive habitats.

- 7.26 Vegetation Disturbance. No disturbance or removal of vegetation, other than that specified in the Project description shall occur because of Project activities. Vegetation outside the construction corridor shall not be removed or damaged without prior consultation and approval of CDFW. Vegetation may be disturbed only as specified in this measure.
- 7.27 Cofferdam Installation and Removal. The Qualified Biologist and a Fisheries Biologist approved by CDFW (can be the same person) shall direct the installation, removal and dewatering efforts of all cofferdam structures. A Fisheries Biologist is defined under this Permit as someone that has a 4-year degree in fish biology or closely related field, has at least 2-years of experience in the handling of at least one of the special-status fish species that may be on-site, is in possession of appropriate State and Federal permits to handle the Covered Species, and has been provided written authorization from CDFW to act as a Fisheries Biologist under this Permit. The cofferdam installation shall be limited to the period between August 1 and November 30. During the period of active dewatering, the CDFW-approved Fisheries Biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops and until active dewatering ceases. All stranded aquatic life in the dewatered areas shall be immediately relocated to habitat outside of harm's way. Cofferdams shall remain in place and functional during Covered Activities. Cofferdams that fail for any reason shall be repaired immediately. All materials used in cofferdam construction shall be removed from the project site once the coffer dams are no longer needed.
- 7.28 Daily Cofferdam Checks. The Qualified Biologist, Fisheries Biologist, or Biological Monitor shall check daily for stranded aquatic life in the dewatered areas prior to commencement of project activities each morning. If any fish is found within the dewatered area, then the biologist or monitor shall immediately stop work until the fish can be identified to species and relocated outside of harm's way by the Fisheries Biologist. Capture methods may include fish landing nets, dip nets, buckets and by hand.
- 7.29 Cofferdams and Work Area Seepage. If the area within a cofferdam requires periodic pumping of seepage, pumping will occur under direct supervision of qualified fisheries biologist approved by CDFW. Pumps will be located on barges adjacent to the areas being dewatered. Any turbid water pumped from dewatered areas will be discharged into an area protected by a turbidity curtain to prevent suspended sediment from being transported upstream or downstream. Alternatively, Permittee may place pumps in upland flat areas, away from the stream channel. Pumps placed in uplands shall be secured by tying off to a tree or staked in place to prevent movement by vibration. Pump intakes shall be fitted with fish screens meeting CDFW criteria to prevent entrainment or impingement of fish. CDFW fish screen criteria can be found online in Appendix S of the California Salmonid Stream Habitat Restoration Manual.

Pump intakes shall be periodically checked for impingement of fish or amphibians that shall be relocated according to the approved measured outlined for each species below. Any turbid water pumped from the work site itself to maintain it in a dewatered state shall be disposed of in an upland location where it will not drain directly into any stream channel.

- 7.30 Fish Relocation Plan. A plan to relocate fishes and other sensitive aquatic organisms from the de-watering associated with the coffer dam must be developed by the Permittee and approved in writing by CDFW prior to initiation of project activities. An electronic copy of the draft plan shall be transmitted via email to Jim.Starr@wildlife.ca.gov two weeks prior to expectation of feedback.

8. Habitat Management Land Acquisition:

CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation.

To meet this requirement, the Permittee shall purchase 1.55 acres (0.02 acres for permanent impacts and 1.53 acres for operations) of Covered Species credits from a CDFW-approved mitigation or conservation bank and 0.02 acres of floodplain mosaic habitat credits (Condition of Approval 8.1)

Additional credits may be required if the CDFW-approved screen effectiveness monitoring do not support model results related to the "take" analysis submitted with the application for this ITP. Permittee shall provide CDFW with a copy of the credit purchase agreement for the required credits prior to commencing Covered Activities.

- 8.1 Covered Species and Habitat Credits. Permittee shall purchase 1.55 acres of Covered Species credits and 0.02 acres of floodplain mosaic habitat credits from a CDFW-approved mitigation or conservation bank prior to initiating Covered Activities, or no later than 18 months from the issuance of this ITP if Security is provided pursuant to Condition of Approval 9 below.
- 8.2 Cost Estimates. CDFW has estimated the cost of acquisition, protection, and perpetual management of the HM lands and the restoration of temporarily disturbed habitat as follows:

8.2.1 Purchase of 1.55 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank calculated at \$175,000 per credit is estimated to be at **\$271,250**.

8.2.2 Purchase of 0.02 acres of floodplain mosaic credits from a CDFW-approved mitigation or conservation bank calculated at \$150,000 per credit is estimated to be at **\$3,000**.

9. Performance Security

The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 8 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:

- 9.1 Security Amount. The Security shall be in the amount of **\$274,250**. This amount is based on the cost estimates identified in Condition of Approval 8.2 above.
- 9.2 Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.
- 9.3 Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.
- 9.4 Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.
- 9.5 Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 4) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.
- 9.6 Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.
- 9.7 Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:
 - Written documentation of the acquisition of the HM lands;
 - Copies of all executed and recorded conservation easements;
 - Written confirmation from the approved Endowment Manager of its receipt of

- the full Endowment; and
- Timely submission of all required reports.

Amendment:

This ITP may be amended as provided by California Code of Regulations, Title 14, section 783.6, subdivision (c), and other applicable law. This ITP may be amended without the concurrence of the Permittee as required by law, including if CDFW determines that continued implementation of the Project as authorized under this ITP would jeopardize the continued existence of the Covered Species or where Project changes or changed biological conditions necessitate an ITP amendment to ensure that all Project-related impacts of the taking to the Covered Species are minimized and fully mitigated.

Stop-Work Order:

CDFW may issue Permittee a written stop-work order requiring Permittee to suspend any Covered Activity for an initial period of up to 25 days to prevent or remedy a violation of this ITP, including but not limited to the failure to comply with reporting or monitoring obligations, or to prevent the unauthorized take of any CESA endangered, threatened, or candidate species. Permittee shall stop work immediately as directed by CDFW upon receipt of any such stop-work order. Upon written notice to Permittee, CDFW may extend any stop-work order issued to Permittee for a period not to exceed 25 additional days. Suspension and revocation of this ITP shall be governed by California Code of Regulations, Title 14, section 783.7, and any other applicable law. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred in complying with stop-work orders.

Compliance with Other Laws:

This ITP sets forth CDFW's requirements for the Permittee to implement the Project pursuant to CESA. This ITP does not necessarily create an entitlement to proceed with the Project. Permittee is responsible for complying with all other applicable federal, state, and local law.

Notices:

The Permittee shall deliver a fully executed duplicate original ITP by registered first class mail or overnight delivery to the following address:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090

Alternatively, the Permittee shall email the digitally signed ITP to CESA@wildlife.ca.gov.

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Digital signatures shall comply with Government Code section 16.5.

Written notices, reports and other communications relating to this ITP shall be delivered to CDFW by email or registered first class mail at the following address, or at addresses CDFW may subsequently provide the Permittee. Notices, reports, and other communications shall reference the Project name, Permittee, and ITP Number (2081-2019-046-03) in a cover letter and on any other associated documents.

Original cover with attachment(s) to:

Gregg Erickson, Regional Manager
California Department of Fish and Wildlife – Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

and a copy to:

Habitat Conservation Planning Branch
California Department of Fish and Wildlife
Attention: CESA Permitting Program
Post Office Box 944209
Sacramento, CA 94244-2090
CESA@wildlife.ca.gov

Unless Permittee is notified otherwise, CDFW's Regional Representative for purposes of addressing issues that arise during implementation of this ITP is:

James Starr
California Department of Fish and Wildlife – Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
Telephone (209) 234-3440
Jim.Starr@wildlife.ca.gov

Compliance with CEQA:

CDFW's issuance of this ITP is subject to CEQA. CDFW is a responsible agency pursuant to CEQA with respect to this ITP because of prior environmental review of the Project by the lead agency, City of Antioch. (See generally Pub. Resources Code, §§ 21067, 21069). The lead agency's prior environmental review of the Project is set forth in the City of Antioch Brackish Water Desalination Project Environmental Impact Report (EIR), (SCH No.: 2017082044) dated June 29, 2018 that the City of Antioch certified for City of Antioch Brackish Water Desalination Project on October 23, 2018. At the time the lead agency

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certified the EIR and approved the Project it also adopted various mitigation measures for the Covered Species as conditions of Project approval.

This ITP, along with CDFW's related CEQA findings, which are available as a separate document, provide evidence of CDFW's consideration of the lead agency's EIR for the Project and the environmental effects related to issuance of this ITP [CEQA Guidelines, § 15096, subd. (f)]. CDFW finds that issuance of this ITP will not result in any previously undisclosed potentially significant effects on the environment or a substantial increase in the severity of any potentially significant environmental effects previously disclosed by the lead agency. Furthermore, to the extent the potential for such effects exists, CDFW finds adherence to and implementation of the Conditions of Project Approval adopted by the lead agency, and that adherence to and implementation of the Conditions of Approval imposed by CDFW through the issuance of this ITP, will avoid or reduce to below a level of significance any such potential effects. CDFW consequently finds that issuance of this ITP will not result in any significant, adverse impacts on the environment.

Findings Pursuant to CESA:

These findings are intended to document CDFW's compliance with the specific findings requirements set forth in CESA and related regulations. [Fish and Game Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subsd. (a)-(b), 783.5, subd. (c)(2)].

CDFW finds based on substantial evidence in the ITP application, City of Antioch Brackish Water Desalination Project Environmental Impact Report, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

- (1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;
- (2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP and as described in the MMRP. Measures include: (1) permanent habitat protection; (2) establishment of avoidance zones; (3) worker education; and (4) Monthly Compliance Reports. CDFW evaluated factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation. Based on this evaluation, CDFW determined that the protection and management in perpetuity of 1.55 acres of compensatory habitat that is contiguous with other protected Covered Species habitat and/or is of higher quality than the habitat being destroyed by the Project, along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;

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- (3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;
- (4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;
- (5) All required measures are capable of successful implementation;
- (6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;
- (7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and
- (8) Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of this ITP without concurrence of the Permittee as necessary to avoid jeopardy and as required by law.

Attachments:

| | |
|-----------------------------------|--|
| FIGURE 1 | Figure 1-1, Action Area, Antioch Brackish Water Desalination Project Biological Assessment, EFH Assessment, and ITP Application, Environmental Science Associates, September 2019 |
| FIGURE 2 | Figure 3-4a, River Intake Pump Station, Antioch Brackish Water Desalination Project Biological Assessment, EFH Assessment, and ITP Application, Environmental Science Associates, September 2019 |
| ATTACHMENT 1 ATTACHMENT 2A, 2B | Mitigation Monitoring and Reporting Program Habitat Management Lands Checklist; Proposed Lands for Acquisition Form |
| ATTACHMENT 3 ATTACHMENT 4 | Letter of Credit Form Mitigation Payment Transmittal Form |

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ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 7/20/2020.

DocuSigned by:
Gregg Erickson
BE74D4C09C604EA...

Gregg Erickson, Regional Manager
Bay Delta Region

ACKNOWLEDGMENT

The undersigned: (1) warrants that he or she is acting as a duly authorized representative of the Permittee, (2) acknowledges receipt of this ITP, and (3) agrees on behalf of the Permittee to comply with all terms and conditions.

DocuSigned by:
Scott Buenting
By: 11367270F3B5427... Date: 7/29/2020

Printed Name: Scott Buenting Title: Project Manager

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SOURCE: USDA, 2018; ESRI, 2012; City of Antioch, 2019; Corollo, 2109; ESA, 2019

City of Antioch Desalination Project

Figure 1-1
Action Area



SOURCE: Sacramento County, 2018; ESRI, 2012; City of Antioch, 2019; Corollo, 2109; ESA, 2019

City of Antioch Desalination Project

Figure 3-4a
River Intake Pump Station

Attachment 1

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)
CALIFORNIA ENDANGERED SPECIES ACT**

INCIDENTAL TAKE PERMIT NO. 2081-2019-046-03

PERMITTEE: City of Antioch

PROJECT: City of Antioch Brackish Water Desalination Plant Project

PURPOSE OF THE MMRP

The purpose of the MMRP is to ensure that the impact minimization and mitigation measures required by the California Department of Fish and Wildlife (CDFW) for the above-referenced Project are properly implemented, and thereby to ensure compliance with section 2081(b) of the Fish and Game Code and section 21081.6 of the Public Resources Code. A table summarizing the mitigation measures required by CDFW is attached. This table is a tool for use in monitoring and reporting on implementation of mitigation measures, but the descriptions in the table do not supersede the mitigation measures set forth in the California Incidental Take Permit (ITP) and in attachments to the ITP, and the omission of a permit requirement from the attached table does not relieve the Permittee of the obligation to ensure the requirement is performed.

OBLIGATIONS OF PERMITTEE

Mitigation measures must be implemented within the time periods indicated in the table that appears below. Permittee has the primary responsibility for monitoring compliance with all mitigation measures and for reporting to CDFW on the progress in implementing those measures. These monitoring and reporting requirements are set forth in the ITP itself and are summarized at the front of the attached table.

VERIFICATION OF COMPLIANCE, EFFECTIVENESS

CDFW may, at its sole discretion, verify compliance with any mitigation measure or independently assess the effectiveness of any mitigation measure.

TABLE OF MITIGATION MEASURES

The following items are identified for each mitigation measure: Mitigation Measure, Source, Implementation Schedule, Responsible Party, and Status/Date/Initials. The Mitigation Measure column summarizes the mitigation requirements of the ITP. The Source column identifies the ITP condition that sets forth the mitigation measure. The Implementation Schedule column shows the date or phase when each mitigation measure will be implemented. The Responsible Party column identifies the person or agency that is primarily responsible for implementing the mitigation measure. The Status/Date/Initials column shall be completed by the Permittee during preparation of each Status Report and the Final Mitigation Report, and must identify the implementation status of each mitigation measure, the date that status was determined, and the initials of the person determining the status.

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|---|---|----------------------|---|-------------------|--------------------------|
| BEFORE DISTURBING SOIL OR VEGETATION | | | | | |
| 1 | <u>Designated Representative</u> . Before starting Covered Activities, Permittee shall designate a representative (Designated Representative) responsible for communications with CDFW and overseeing compliance with this ITP. Permittee shall notify CDFW in writing before starting Covered Activities of the Designated Representative's name, business address, and contact information, and shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this ITP. | ITP Condition # 5.1 | Before commencing ground- or vegetation-disturbing activities/ Entire Project | Permittee | |
| 2 | <u>Designated Biologist</u> . Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information of a biological monitor (Designated Biologist) at least 30 days before starting Covered Activities. Permittee shall ensure that the Designated Biologist is knowledgeable and experienced in the biology, natural history, collecting and handling of the Covered Species. The Designated Biologist shall be responsible for monitoring Covered Activities to help minimize and fully mitigate or avoid the incidental take of individual Covered Species and to minimize disturbance of Covered Species' habitat. Permittee shall obtain CDFW approval of the Designated Biologist in writing before starting Covered Activities and shall also obtain approval in advance in writing if the Designated Biologist must be changed. | ITP Condition # 5.2 | Before commencing ground- or vegetation-disturbing activities | Permittee | |
| 3 | <u>Education Program</u> . Permittee shall conduct an education program for all persons employed or otherwise working in the Project Area before performing any work. The program shall consist of a presentation from the Designated Biologist that includes a discussion of the biology and general behavior of the Covered Species, information about the distribution and habitat needs of the Covered Species, sensitivity of the Covered Species to human activities, its status pursuant to CESA including legal protection, recovery efforts, penalties for violations and Project-specific protective measures described in this ITP. Permittee shall provide interpretation for non-English speaking workers, and the same instruction shall be provided to any new workers before they are authorized to perform work in the Project Area. Permittee shall prepare and distribute wallet-sized cards or a fact sheet handout containing this information for workers to carry in the Project Area. Upon completion of the program, employees shall sign a form stating they attended the program and understand all protection measures. This training shall be repeated at least once annually for long-term and/or permanent employees that will be conducting work in the Project Area. | ITP Condition # 5.4 | Before commencing ground- or vegetation-disturbing activities/ Entire Project | Permittee | |
| 4 | <u>Trash Abatement</u> . Permittee shall initiate a trash abatement program before starting Covered Activities and shall continue the program for the duration of the Project. Permittee shall ensure that trash and food items are contained in animal-proof containers and removed at least once a week to avoid attracting opportunistic predators such as ravens, coyotes, and feral dogs. | ITP Condition # 5.6 | Before commencing ground- or vegetation-disturbing activities/ Entire Project | Permittee | |
| 5 | <u>Notification Before Commencement</u> . The Designated Representative shall notify CDFW 14 calendar days before starting Covered Activities and shall document compliance with all pre-Project Conditions of Approval before starting Covered Activities. | ITP Condition # 6.1 | Before commencing ground- or vegetation-disturbing activities/ Entire Project | Permittee | |
| 6 | <u>Fish Relocation Plan</u> . A plan to relocate fishes and other sensitive aquatic organisms from the de-watering associated with the coffer dam must be developed by the Permittee and approved in writing by CDFW prior to initiation of project activities. An electronic copy of the draft plan shall be transmitted via email to Jim.Starr@wildlife.ca.gov two weeks prior to expectation of feedback. | ITP Condition # 7.30 | Before commencing ground- or vegetation-disturbing activities/ Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|-----------------------|--|--------------------------|---------------------------------|
| 7 | <p>CDFW has determined that permanent protection and perpetual management of compensatory habitat is necessary and required pursuant to CESA to fully mitigate Project-related impacts of the taking on the Covered Species that will result with implementation of the Covered Activities. This determination is based on factors including an assessment of the importance of the habitat in the Project Area, the extent to which the Covered Activities will impact the habitat, and CDFW's estimate of the acreage required to provide for adequate compensation.</p> <p>To meet this requirement, the Permittee shall purchase 1.55 acres (0.02 acres for permanent impacts and 1.53 acres for operations) of Covered Species credits from a CDFW-approved mitigation or conservation bank and 0.02 acres of floodplain mosaic habitat credits (Condition of Approval 8.1)</p> <p>Additional credits may be required if the CDFW-approved screen effectiveness monitoring do not support model results related to the "take" analysis submitted with the application for this ITP. Permittee shall provide CDFW with a copy of the credit purchase agreement for the required credits prior to commencing Covered Activities.</p> | ITP Condition # 8 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |
| 8 | <p><u>Covered Species and Habitat Credits.</u> Permittee shall purchase 1.55 acres of Covered Species credits and 0.02 acres of floodplain mosaic habitat credits from a CDFW-approved mitigation or conservation bank prior to initiating Covered Activities, or no later than 18 months from the issuance of this ITP if Security is provided pursuant to Condition of Approval 9 below.</p> | ITP Condition # 8.1 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |
| 9 | <p><u>Cost Estimates.</u> CDFW has estimated the cost of acquisition, protection, and perpetual management of the HM lands and the restoration of temporarily disturbed habitat as follows:</p> | ITP Condition # 8.2 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |
| 10 | <p>Purchase of 1.55 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank calculated at \$175,000 per credit is estimated to be at \$271,250.</p> | ITP Condition # 8.2.1 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |
| 11 | <p>Purchase of 0.02 acres of floodplain mosaic credits from a CDFW-approved mitigation or conservation bank calculated at \$150,000 per credit is estimated to be at \$3,000.</p> | ITP Condition # 8.2.2 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----------------------------|--|---------------------|--|--------------------------|---------------------------------|
| 12 | <p><u>Performance Security.</u> The Permittee may proceed with Covered Activities only after the Permittee has ensured funding (Security) to complete any activity required by Condition of Approval 8 that has not been completed before Covered Activities begin. Permittee shall provide Security as follows:</p> <p>Security Amount. The Security shall be in the amount of \$274,250. This amount is based on the cost estimates identified in Condition of Approval 8.2 above.</p> <p>Security Form. The Security shall be in the form of an irrevocable letter of credit (see Attachment 3) or another form of Security approved in advance in writing by CDFW's Office of the General Counsel.</p> <p>Security Timeline. The Security shall be provided to CDFW before Covered Activities begin or within 30 days after the effective date of this ITP, whichever occurs first.</p> <p>Security Holder. The Security shall be held by CDFW or in a manner approved in advance in writing by CDFW.</p> <p>Security Transmittal. If CDFW holds the Security, Permittee shall transmit it to CDFW with a completed Mitigation Payment Transmittal Form (see Attachment 4) or by way of an approved instrument such as escrow, irrevocable letter of credit, or other.</p> <p>Security Drawing. The Security shall allow CDFW to draw on the principal sum if CDFW, in its sole discretion, determines that the Permittee has failed to comply with the Conditions of Approval of this ITP.</p> <p>Security Release. The Security (or any portion of the Security then remaining) shall be released to the Permittee after CDFW has conducted an on-site inspection and received confirmation that all secured requirements have been satisfied, as evidenced by:</p> <ul style="list-style-type: none"> • Written documentation of the acquisition of the HM lands; • Copies of all executed and recorded conservation easements; • Written confirmation from the approved Endowment Manager of its receipt of the full Endowment; and <p>Timely submission of all required reports.</p> | ITP Condition # 9 | Before commencing ground- or vegetation-disturbing activities (or within 18 months of issuance of the ITP if Security is provided) | Permittee | |
| DURING CONSTRUCTION | | | | | |
| 13 | <p><u>Designated Biologist Authority.</u> To ensure compliance with the Conditions of Approval of this ITP, the Designated Biologist shall have authority to immediately stop any activity that does not comply with this ITP, and/or to order any reasonable measure to avoid the unauthorized take of an individual of the Covered Species.</p> | ITP Condition # 5.3 | Entire Project | Permittee | |
| 14 | <p><u>Construction Monitoring Notebook.</u> The Designated Biologist shall maintain a construction-monitoring notebook on-site throughout the construction period, which shall include a copy of this ITP with attachments and a list of signatures of all personnel who have successfully completed the education program. Permittee shall ensure a copy of the construction-monitoring notebook is available for review at the Project Area upon request by CDFW.</p> | ITP Condition # 5.5 | Entire Project | Permittee | |
| 15 | <p><u>Hazardous Waste.</u> Permittee shall immediately stop and, pursuant to pertinent state and federal statutes and regulations, arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills at the time of occurrence, or as soon as it is safe to do so. Permittee shall exclude the storage and handling of hazardous materials from the Project Area and shall properly contain and dispose of any unused or leftover hazardous products off-site.</p> | ITP Condition # 5.7 | Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|--|----------------------|--|--------------------------|---------------------------------|
| 16 | <u>CDFW Access.</u> Permittee shall provide CDFW staff with reasonable access to the Project and shall otherwise fully cooperate with CDFW efforts to verify compliance with or effectiveness of mitigation measures set forth in this ITP. | ITP Condition # 5.8 | Entire Project | Permittee | |
| 17 | <u>Refuse Removal.</u> Upon completion of Covered Activities, Permittee shall remove from the Project Area and properly dispose of all construction refuse, including, but not limited to, broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, sheetpile walls, excess concrete on the riverbed that will result in more than 0.008 acres of permanent impact. | ITP Condition # 5.9 | Entire Project | Permittee | |
| 18 | <u>Conduct Project Activities and Construct Project According to Accepted Plans.</u> Permittee and their consultants, contractors, and subcontractors shall adhere to and implement CDFW-accepted or approved plans and project designs. | ITP Condition # 5.10 | Entire Project | Permittee | |
| 19 | <u>Notification of Non-compliance.</u> The Designated Representative shall immediately notify CDFW in writing if it determines that the Permittee is not in compliance with any Condition of Approval of this ITP, including but not limited to any actual or anticipated failure to implement measures within the time periods indicated in this ITP and/or the MMRP. The Designated Representative shall report any non-compliance with this ITP to CDFW within 24 hours. | ITP Condition # 6.2 | Entire Project | Permittee | |
| 20 | <u>Compliance Monitoring.</u> The Designated Biologist shall be on-site daily when Covered Activities occur. The Designated Biologist shall conduct compliance inspections to (1) minimize incidental take of the Covered Species; (2) prevent unlawful take of species; (3) check for compliance with all measures of this ITP; (4) check all exclusion zones; (5) document and photograph site conditions and (6) ensure that signs, stakes, and fencing are intact, and that Covered Activities are only occurring in the Project Area. The Designated Representative or Designated Biologist shall prepare daily written observation and inspection records summarizing: oversight activities and compliance inspections, observations of Covered Species and their sign, survey results, and monitoring activities required by this ITP. The Designated Biologist shall conduct compliance inspections a minimum of once a day during periods of inactivity. | ITP Condition # 6.3 | Entire Project | Permittee | |
| 21 | <u>Monthly Compliance Report.</u> The Designated Representative or Designated Biologist shall compile the observation and inspection records identified in Condition of Approval 6.3 into a Monthly Compliance Report and submit it to CDFW along with a copy of the MMRP table with notes showing the current implementation status of each mitigation measure. Monthly Compliance Reports shall be submitted to the CDFW offices listed in the Notices section of this ITP and via e-mail to CDFW's Regional Representative and Headquarters CESA Program. At the time of this ITP's approval, the CDFW Regional Representative is James Starr (Jim.Starr@wildlife.ca.gov) and Headquarters CESA Program email is CESA@wildlife.ca.gov . CDFW may at any time increase the timing and number of compliance inspections and reports required under this provision depending upon the results of previous compliance inspections. If CDFW determines the reporting schedule must be changed, CDFW will notify Permittee in writing of the new reporting schedule. | ITP Condition # 6.4 | Monthly Until Project Construction Completed | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|--|----------------------|---|--------------------------|---------------------------------|
| 22 | <u>Annual Status Report.</u> Permittee shall provide CDFW with an Annual Status Report (ASR) no later than January 31 of every year beginning with issuance of this ITP and continuing until CDFW accepts the Final Mitigation Report identified below. Each ASR shall include, at a minimum: (1) a summary of all Monthly Compliance Reports for that year identified in Condition of Approval 6.4; (2) a general description of the status of the Project Area and Covered Activities, including actual or projected completion dates, if known; (3) a copy of the table in the MMRP with notes showing the current implementation status of each mitigation measure; (4) an assessment of the effectiveness of each completed or partially completed mitigation measure in avoiding, minimizing and mitigating Project impacts; (5) all available information about Project-related incidental take of the Covered Species; (6) an accounting of the number of acres subject to both temporary and permanent disturbance, both for the prior calendar year, and a total since ITP issuance; and (7) information about other Project impacts on the Covered Species. | ITP Condition # 6.5 | Annually Until Project Construction Completed | Permittee | |
| 23 | <u>Acceptance of Outstanding Fish Screen Design Evaluation Requirements.</u> Prior to screen fabrication, Permittee shall submit: Shop fabrication drawings with design details. Preliminary operation and maintenance plan which includes preventive and corrective maintenance procedures, inspection and reporting requirements, maintenance logs, etc. Post-construction evaluation and monitoring plan with allocated funds in the construction budget to make need corrections to bring the fish screen within operational compliance. | ITP Condition # 6.9 | Prior to Fish Screen Fabrication | Permittee | |
| 24 | <u>Annual Fish Screen Maintenance and Effectiveness Monitoring.</u> Permittee shall submit an annual report by December 31 in each year for the term of this ITP. The report shall include all monitoring elements identified in the CDFW approved plans required under Conditions of Approval 6.9.2 and 6.9.3. | ITP Condition # 6.10 | Annually | Permittee | |
| 25 | <u>Conduct Project Activities and Construct Project According to Accepted Plans.</u> Permittee and their consultants, contractors, and subcontractors shall adhere to and implement CDFW-accepted or approved plans and project designs. | ITP Condition # 7.1 | Entire Project | Permittee | |
| 26 | <u>Maximum Diversion Rate from the San Joaquin River.</u> Instantaneous rate of diversion from the new intakes shall not exceed 11,111 gallons per minute at any time and shall be limited to the minimum magnitude and duration to meet water demands. | ITP Condition # 7.2 | Entire Project | Permittee | |
| 27 | <u>No Diversion without Fish Screens.</u> Permittee shall not divert water at any time without the CDFW-approved fish screen installed and fully operational. | ITP Condition # 7.3 | Entire Project | Permittee | |
| 28 | <u>Implement Fish Screen Operations and Evaluation Plans.</u> Permittee shall implement the operation and maintenance plan and the post-construction evaluation plan according to the plans as approved by CDFW. | ITP Condition # 7.4 | Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|--|---------------------|--|--------------------------|---------------------------------|
| 29 | <u>Screen Monitoring Study Plan</u> . By August 1, 2021, and every three years subsequently, Permittee shall submit an updated study plan to CDFW for approval. The purpose of the study plan shall be to monitor the diversion to determine it's efficiency at screening screenable size fish and the potential diversion rate of all species, with an emphasis on Covered Species of fish, either adults, juveniles, and larvae at the current Permittee intake. CDFW shall provide written comments and requested changes, if any, regarding the adequacy of the submitted study plan and its elements by September 1 of each year in which an updated study plan is submitted. If CDFW has comments or requested changes, Permittee shall resubmit a revised study plan that addresses CDFW's comments and requests by October 1. This study plan must be acceptable to and must be approved by CDFW prior to November 1 of each year in which an updated study plan is submitted. Permittee shall not be in violation of this provision if CDFW does not respond in writing regarding the acceptability of the latest study plan in accordance with this schedule, provided Permittee is implementing and adhering to the latest study plan submitted to CDFW. This study shall begin by March 1 and shall continue until June 30 unless an alternative schedule is agreed to by CDFW. Permittee shall submit a summary of the results of each study to CDFW in accordance with the schedule contained within the approved study plan. Permittee shall conduct fish sampling techniques and handling procedures in a manner that minimizes mortality to the Covered Species. Permittee shall coordinate with ongoing Interagency Ecological Program (IEP) and make the Project monitoring data available to IEP upon IEP's request. | ITP Condition # 7.5 | By August 1, 2021 and Every Three Years Thereafter | Permittee | |
| 30 | <u>Altering of Screen Device</u> . If there are any significant changes made to the fish screen device, the City of Antioch shall conduct two consecutive years of sampling data to evaluate if the proposed changes had any impact on the effectiveness of the fish screen device. This study plan shall be submitted to CDFW for our review and approval prior to implementation of the proposed monitoring. If you do not hear back from CDFW within 30 working days, you may proceed with your proposed monitoring plan as submitted. | ITP Condition # 7.6 | Entire Project | Permittee | |
| 31 | <u>Disinfect Equipment Prior to Entry into Watercourses</u> . To prevent spread of invasive aquatics and diseases, equipment to be used in watercourses including, but not limited to, boots, waders, hand tools and nets must be decontaminated with a minimum 5 percent chlorine solution for 2 minutes prior to entry into a watercourse. In addition, if a piece of equipment has been exposed or is suspected to have been exposed to areas harboring New Zealand mud snails then that equipment must be dried out for two weeks, frozen for 48 hours, or placed in 55 degrees Celsius water for 5 minutes. | ITP Condition # 7.7 | Entire Project | Permittee | |
| 32 | <u>Seasonal Work Restrictions on Covered Activities</u> . All project-related in-stream work, excluding dewatered areas, shall be limited to the period between August 1 to November 30. Use of vibratory and impact (as necessary) drivers is restricted to the period between August 1 to November 30. HDD activities shall be limited to the period between June 15 through October 15. Covered activities in dewatered areas shall be done in a manner so that any hazardous substances or equipment and loose construction materials that could be washed away in an overtopping event can be removed within a 72-hours outside of period from October 15 to May 15 period. For purposes of this measure, in-stream work does not include equipment mobilization, materials transport, and cofferdam maintenance, dewatering, discharge or leak inspection. | ITP Condition # 7.8 | Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|--|----------------------|--------------------------------|--------------------------|---------------------------------|
| 33 | <u>Weather Work Restriction.</u> The Permittee shall monitor the National Weather Service (NWS) 72-hour forecast for the Project Area. If 0.10 inches or more rain is predicted in the 24-hour forecast, no ground-disturbing activities shall occur on the Project site on the day the rain is predicted to occur. Unless otherwise authorized by CDFW, no work shall occur until 24 hours after rain has ceased. | ITP Condition # 7.9 | Entire Project | Permittee | |
| 34 | <u>Time of Day Work Restriction.</u> Permittee shall terminate all Covered Activities 30 minutes before sunset and shall not resume Covered Activities until 30 minutes after sunrise unless otherwise authorized in writing by CDFW. Permittee shall use sunrise and sunset times established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located. | ITP Condition # 7.10 | Entire Project | Permittee | |
| 35 | <u>On-Site Specialist.</u> Permittee shall have on-site a person professionally trained in spill containment/clean up to implement spill control devices in the event a spill occurs. | ITP Condition # 7.11 | Entire Project | Permittee | |
| 36 | <u>Wet or Uncured Concrete within a non-dewatered Cofferdam.</u> Permittee shall not allow wet or uncured concrete to enter into rivers or stream at any time. This Measure applies to "cofferdams" that have not been completely dewatered, with the exception of within the cofferdam with secondary containment casing, that fully isolates the concrete being poured from the surrounding waterway. If wet or uncured concrete is placed within non-dewatered cofferdam with secondary containment, water within the cofferdam will not be released into and/or allowed to intermingle with San Joaquin River without water quality testing to demonstrate that pH levels and dissolved oxygen concentrations are within acceptable range, consistent with background conditions (pH between 6 and 8 [pH units]; dissolved oxygen greater than 6 mg/L). If water quality within cofferdam exceeds these ranges, water will be pumped and treated and/or disposed of consistent with federal, State, and/or local regulations. | ITP Condition # 7.12 | Entire Project | Permittee | |
| 37 | <u>Seasonal Work Period.</u> Construction activities within a lake or stream and associated wetlands and riparian corridors shall be conducted after August 1 and before November 30. If Permittee needs more time to complete Project activities, work may be authorized outside of the work period and extended on a week-by-week basis by CDFW representative, Jim Starr, or if unavailable, through contact with the CDFW Bay Delta Regional Office by mail or phone (707) 428-2002. Authorization shall be in the form of written communication. If Permittee requests a work period variance, Permittee shall submit such a request in writing to the CDFW Bay Delta Office. The request shall: 1) describe the extent of work already completed; 2) detail the activities that remain to be completed; 3) detail the time required to complete each of the remaining activities; and 4) provide photographs of both the current work completed and the proposed site for continued work. The work period variance shall be issued at the discretion of CDFW. CDFW reserves the right to require additional measures to protect biological resources as a condition for granting the variance. CDFW shall have 10 business days to review the proposed work period variance. | ITP Condition # 7.13 | Entire Project | Permittee | |
| 38 | <u>Cofferdam Work Area.</u> Precipitation forecasts and potential increases of river flow (i.e., San Joaquin River) shall be considered when planning construction activities within the cofferdam work area to avoid the potential for the release of materials or equipment into the river. Prior to departing the cofferdam work area each day, Contractor shall remove all non-fixed equipment and/or materials (not including pumps used for dewatering, as necessary) from the cofferdam work area and place in secured area. | ITP Condition # 7.14 | Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|----------------------|--------------------------------|--------------------------|---------------------------------|
| 39 | <u>Storm Event Inspection.</u> After any storm event, Permittee shall inspect all sites scheduled to begin or continue construction within the next 72 hours. Corrective action for erosion and sedimentation shall be taken as needed. | ITP Condition # 7.15 | Entire Project | Permittee | |
| 40 | <u>No Equipment in Channel.</u> With the exception of river barge, work vessels, and ancillary equipment for work in the San Joaquin River, no equipment shall be operated from within a flowing stream (including flowing or ponded water) at any time. | ITP Condition # 7.16 | Entire Project | Permittee | |
| 41 | <u>No New Project Phase without Erosion Control.</u> No phase of the Project may be started if that phase and its associated erosion control measures cannot be completed prior to the onset of a storm event if that construction phase may cause the introduction of sediments into the stream. Erosion control measures shall be inspected frequently to minimize failure and conduct any necessary repairs. All non-structural related and non-biodegradable erosion control measures shall be removed from the Project area upon cessation of construction activities. | ITP Condition # 7.17 | Entire Project | Permittee | |
| 42 | <u>Stabilize Exposed Areas.</u> Permittee shall stabilize all exposed/disturbed areas within the Project site to the greatest extent possible to reduce erosion potential, both during and following construction. Erosion control measures, such as, silt fences, straw hay bales, gravel, or rock-lined ditches, water check bars, and broadcasted straw shall be used wherever silt-laden water has the potential to leave the work site and enter State waters. Erosion control measures shall be monitored during and after each storm event. Modifications, repairs, and improvements to erosion control measures shall be made whenever they are needed. | ITP Condition # 7.18 | Entire Project | Permittee | |
| 43 | <u>Staging and Storage Areas.</u> Construction equipment, building materials, fuels, lubricants, and solvents shall not be stockpiled or stored where they may be washed into State waters or where they will cover aquatic or riparian vegetation. | ITP Condition # 7.19 | Entire Project | Permittee | |
| 44 | <u>Equipment over Drip Pans.</u> Stationary equipment such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream and riparian areas shall be positioned over drip-pans. | ITP Condition # 7.20 | Entire Project | Permittee | |
| 45 | <u>Check Equipment for Leaks.</u> Any equipment or vehicles driven and/or operated adjacent to the stream and riparian corridor shall be checked and maintained daily to prevent leaks of materials that if introduced to water could be deleterious to aquatic life, wildlife or riparian habitat. Vehicles shall be moved away from the stream prior to refueling and lubrication. | ITP Condition # 7.21 | Entire Project | Permittee | |
| 46 | <u>Hazardous Materials.</u> Any hazardous or toxic materials that could be deleterious to aquatic life that could be washed into State waters or their tributaries shall be contained in watertight containers or removed from the Project site. | ITP Condition # 7.22 | Entire Project | Permittee | |
| 47 | <u>Imported Materials.</u> Permittee shall not import, take from or move any rock, gravel, and/or other materials within the San Joaquin River, its streambeds or banks except as otherwise addressed in this Permit. | ITP Condition # 7.23 | Entire Project | Permittee | |
| 48 | <u>Debris and Waste Disposal.</u> Permittee shall not dump any litter or construction debris within the Project area. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. Upon completion of operations and/or onset of wet weather, all construction material and/or debris shall be removed from the Project work site to an area not subject to inundation. All removed vegetation and debris shall be disposed of according to State and local laws and ordinances. | ITP Condition # 7.24 | Entire Project | Permittee | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|--------------------------|---|----------------------|--------------------------------|--------------------------|---------------------------------|
| 49 | <u>Spoils</u> . Permittee shall not place spoil where it could enter State waters or other sensitive habitat, such as riparian, or place over vegetation except as specifically noticed to and accepted by CDFW, in writing. Spoil shall be hauled off-site or stockpiled in an upland location where it shall be covered with plastic sheeting or visquine whenever it is evident that rainy conditions threaten to erode loose soils into sensitive habitats. | ITP Condition # 7.25 | Entire Project | Permittee | |
| 50 | <u>Vegetation Disturbance</u> . No disturbance or removal of vegetation, other than that specified in the Project description shall occur because of Project activities. Vegetation outside the construction corridor shall not be removed or damaged without prior consultation and approval of CDFW. Vegetation may be disturbed only as specified in this measure. | ITP Condition # 7.26 | Entire Project | Permittee | |
| 51 | <u>Cofferdam Installation and Removal</u> . The Qualified Biologist and a Fisheries Biologist approved by CDFW (can be the same person) shall direct the installation, removal and dewatering efforts of all cofferdam structures. A Fisheries Biologist is defined under this Permit as someone that has a 4-year degree in fish biology or closely related field, has at least 2-years of experience in the handling of at least one of the special-status fish species that may be on-site, is in possession of appropriate State and Federal permits to handle the Covered Species, and has been provided written authorization from CDFW to act as a Fisheries Biologist under this Permit. The cofferdam installation shall be limited to the period between August 1 and November 30. During the period of active dewatering, the CDFW-approved Fisheries Biologist shall check daily for stranded aquatic life as the water level in the dewatering area drops and until active dewatering ceases. All stranded aquatic life in the dewatered areas shall be immediately relocated to habitat outside of harm's way. Cofferdams shall remain in place and functional during Covered Activities. Cofferdams that fail for any reason shall be repaired immediately. All materials used in cofferdam construction shall be removed from the project site once the coffer dams are no longer needed. | ITP Condition # 7.27 | Entire Project | Permittee | |
| 52 | <u>Daily Cofferdam Checks</u> . The Qualified Biologist, Fisheries Biologist, or Biological Monitor shall check daily for stranded aquatic life in the dewatered areas prior to commencement of project activities each morning. If any fish is found within the dewatered area, then the biologist or monitor shall immediately stop work until the fish can be identified to species and relocated outside of harm's way by the Fisheries Biologist. Capture methods may include fish landing nets, dip nets, buckets and by hand. | ITP Condition # 7.28 | Entire Project | Permittee | |
| 53 | <u>Coffer Dams and Work Area Seepage</u> . If the area within a cofferdam requires periodic pumping of seepage, pumping will occur under direct supervision of qualified fisheries biologist approved by CDFW. Pumps will be located on barges adjacent to the areas being dewatered. Any turbid water pumped from dewatered areas will be discharged into an area protected by a turbidity curtain to prevent suspended sediment from being transported upstream or downstream. Alternatively, Permittee may place pumps in upland flat areas, away from the stream channel. Pumps placed in uplands shall be secured by tying off to a tree or staked in place to prevent movement by vibration. Pump intakes shall be fitted with fish screens meeting CDFW criteria to prevent entrainment or impingement of fish. CDFW fish screen criteria can be found online in Appendix S of the California Salmonid Stream Habitat Restoration Manual. Pump intakes shall be periodically checked for impingement of fish or amphibians that shall be relocated according to the approved measures outlined for each species below. Any turbid water pumped from the work site itself to maintain it in a dewatered state shall be disposed of in an upland location where it will not drain directly into any stream channel. | ITP Condition # 7.29 | Entire Project | Permittee | |
| POST-CONSTRUCTION | | | | | |

| | Mitigation Measure | Source | Implementation Schedule | Responsible Party | Status / Date / Initials |
|----|---|---------------------|--------------------------------|--------------------------|---------------------------------|
| 54 | <u>Final Mitigation Report</u> . No later than 45 days after completion of all mitigation measures, Permittee shall provide CDFW with a Final Mitigation Report. The Designated Biologist shall prepare the Final Mitigation Report which shall include, at a minimum: (1) a summary of all Monthly Compliance Reports and all ASRs; (2) a copy of the table in the MMRP with notes showing when each of the mitigation measures was implemented; (3) all available information about Project-related incidental take of the Covered Species; (4) information about other Project impacts on the Covered Species; (5) beginning and ending dates of Covered Activities; (6) an assessment of the effectiveness of this ITP's Conditions of Approval in minimizing and fully mitigating Project impacts of the taking on Covered Species; (7) recommendations on how mitigation measures might be changed to more effectively minimize take and mitigate the impacts of future projects on the Covered Species; and (8) any other pertinent information. | ITP Condition # 6.7 | Post-construction | Permittee | |

ATTACHMENT 2A
DEPARTMENT OF FISH AND WILDLIFE
HABITAT MANAGEMENT LAND ACQUISITION PACKAGE CHECKLIST FOR PROJECT APPLICANTS

The following checklist is provided to inform you of what documents are necessary to expedite the Department of Fish and Wildlife (CDFW) processing of your Habitat Management Land acquisition proposal. Any land acquisition processing requests which are incomplete when received, will be returned. The Region contact will review and approve the document package and forward it to the Habitat Conservation Planning Branch Senior Land Agent with a request to process the land acquisition for formal acceptance.

To: _____
Regional Manager, Region Name

From: _____
Project Applicant

Phone: _____

Tracking #: _____
CDFW assigned permit or agreement #

Project Name: _____

Enclosed is the complete package for the Conservation Easement OR Grant Deed

Documents in this package include:

Fully executed, approved as to form Conservation Easement Deed or Grant Deed with legal description stamped by a licensed surveyor. Date executed: _____

Proposed Lands for Acquisition Form (PLFAF)

Phase I Environmental Site Assessment Report Date on report: _____
(An existing report may be used, but it must be less than two years old.)

Preliminary Title Report(s) for subject property is enclosed and has been reviewed for Encumbrances, including severed mineral estates, and other easements. The title report must be less than six months old when final processing is conducted.

Included are additional documents:

document(s) to support title exceptions

document(s) to explain title encumbrances

a plot or map of easements/encumbrances on the property

Policy of Title Insurance (an existing title policy is not acceptable)

County Assessor Parcel Map(s) for subject property

Site Location Map (Site location with property boundaries outline on a USGS 1:24,000 scale topo)

Final Permit or Agreement (or other appropriate instrument)

Type of agreement: Bank Agreement Mitigation Agreement

Permit _____ Other: _____
(write in type of permit)

Final Management Plan (if required prior to finalizing permit or agreement or if this package is for a Grant Deed)

Biological Resources Report

Draft Summary of Transactions hard copy electronic copy (both are required)



CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
PROPOSED LANDS FOR ACQUISITION FORM ("PLFAF")

Date: _____

TO: Regional Representative

Facsimile:

FROM: _____

Applicant proposes that the following parcel(s) of land be considered for approval by the California Department of Fish and Wildlife as suitable for purposes of habitat management lands to compensate the adverse environmental impacts of the Project:

| <u>Section(s)</u> | <u>Township</u> | <u>Range</u> | <u>County</u> | <u>Acres</u> |
|-------------------|-----------------|--------------|---------------|--------------|
| _____ | _____ | _____ | _____ | _____ |

Current Legal Owner(s), of the surface and mineral estates, include Assessor's Parcel Number(s):

General Description of Location of Parcel(s):

Land Value: \$

For Region Use Only

APPROVED ___ By: _____ DATE: _____
Regional Manager's Signature

REJECTED ___ Region: _____

Explanation: _____

[Financial institution letterhead]

IRREVOCABLE STANDBY LETTER OF CREDIT
NO. **[number issued by financial institution]**

Issue Date: **[date]**

Beneficiary:

California Department of Fish and Wildlife
Habitat Conservation Planning Branch
Post Office Box 944209
Sacramento, CA 94244-2090
Attn: HCPB Contract Coordinator

Amount: U.S. \$**[dollar number]** **[(dollar amount)]**

Expiry: **[Date]** at our counters

Dear Sirs:

1. At the request and on the instruction of our customer, **[name of applicant]** ("Applicant"), we, **[name of financial institution]** ("Issuer"), hereby establish in favor of the beneficiary, the California Department of Fish and Wildlife ("CDFW"), this irrevocable standby letter of credit ("Credit") in the principal sum of U.S. \$**[dollar number]** **[(dollar amount)]** ("Principal Sum").
2. We are informed this Credit is and has been established for the benefit of CDFW pursuant to the terms of the incidental take permit for the **[name of project]** issued by CDFW to the Applicant on **[date]** (No. **[number]**) ("Permit").
3. We are further informed that pursuant to the Permit, the Applicant has agreed to complete certain mitigation requirements, as set forth in Conditions **[numbers]** in the Permit ("Mitigation Requirements").
4. We are finally informed that this Credit is intended by CDFW and the Applicant to serve as a security device for the performance by the Applicant of the Mitigation Requirements.
5. CDFW shall be entitled to draw upon this Credit only by presentation of a duly executed Certificate for Drawing ("Certificate") in the same form as Attachment A, which is attached hereto, at our office located at **[name and address of financial institution]**.

6. The Certificate shall be completed and signed by an “Authorized Representative” of CDFW as defined in paragraph 12 below. Presentation by CDFW of a completed Certificate may be made in person or by registered mail, return receipt requested, or by overnight courier.
7. Upon presentation of a duly executed Certificate as above provided, payment shall be made to CDFW, or to the account of CDFW, in immediately available funds, as CDFW shall specify.
8. If a demand for payment does not conform to the terms and conditions of this Credit, we shall give CDFW prompt notice that the demand for payment was not effected in accordance with the terms and conditions of this Credit, state the reasons therefore, and await further instruction.
9. Upon being notified that the demand for payment was not effected in conformity with the Credit, CDFW may correct any such non-conforming demand for payment under the terms and conditions stated herein.
10. All drawings under this Credit shall be paid with our funds. Each drawing honored by us hereunder shall reduce, *pro tanto*, the Principal Sum. By paying to CDFW an amount demanded in accordance herewith, we make no representations as to the correctness of the amount demanded.
11. This Credit will be cancelled upon receipt by us of Certificate of Cancellation/Reduction, which: (i) shall be in the form of Attachment B, which is attached hereto, and (ii) shall be completed and signed by an Authorized Representative of CDFW, as defined in paragraph 12 below.
12. An “Authorized Representative” shall mean the Director of CDFW; the General Counsel of CDFW; a Regional Manager of CDFW; or the Branch Chief of CDFW’s Habitat Conservation Planning Branch.
13. This Credit shall be automatically extended without amendment for additional periods of one year from the present or any future expiration date hereof, unless at least sixty (60) days prior to any such date, we notify CDFW in writing by registered mail, return receipt requested, or by overnight courier that we elect not to consider this Credit extended for any such period.
14. Communications with respect to this Credit shall be in writing and addressed to us at [***name and address of financial institution***], specifically referring upon such writing to this credit by number. The address for notices with respect to this Credit shall be: (i) for CDFW: Department of Fish and Wildlife, Habitat Conservation Planning Branch, Post Office Box 944209, Sacramento, CA 94244-2090, Attn: HCPB Contract Coordinator; and (ii) for the Applicant: [***name and address of applicant***].

15. This Credit may not be transferred.

16. This Credit is subject to the International Standby Practices 1998 ("ISP 98"). As to matters not covered by the ISP 98 and to the extent not inconsistent with the ISP 98, this credit shall be governed by and construed in accordance with the Uniform Commercial Code, Article 5 of the State of California.

17. This Credit shall, if not canceled, expire on [**expiration date**], or any extended expiration date.

18. We hereby agree with CDFW that documents presented in compliance with the terms of this Credit will be duly honored upon presentation, as specified herein.

19. This Credit sets forth in full the terms of our undertaking. Such undertaking shall not in any way be modified, amended or amplified by reference to any document or instrument referred to herein or in which this Credit is referred to or to which this Credit relates and any such reference shall not be deemed to incorporate herein by reference any document or instrument.

[Name of financial institution]

By: _____

Name: _____

Title: _____

Telephone: _____

ATTACHMENT A

IRREVOCABLE STANDBY LETTER OF CREDIT NO. [*number issued by financial institution*]
CERTIFICATE FOR DRAWING

To:

[*Name and address of financial institution*]

Re: Incidental Take Permit No. [*permit number*]

The undersigned, a duly Authorized Representative of the California Department of Fish and Wildlife ("CDFW"), as defined in paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [*Insert one of the following statements: "In the opinion of CDFW, the Applicant has failed to complete the Mitigation Requirements referenced in paragraph 3 of the Credit." or "As set forth in paragraph 13, the Issuer has informed CDFW that the Credit will not be extended and the Applicant has not provided CDFW with an equivalent security approved by CDFW to replace the Credit."*]
2. The undersigned is authorized under the terms of the Credit to present this Certificate as the sole means of demanding payment on the Credit.
3. CDFW is therefore making a drawing under the Credit in amount of U.S. \$_____.
4. The amount demanded does not exceed the Principal Sum of the Credit.

Therefore, CDFW has executed and delivered this Certificate as of the ___ day of [*month*], [*year*].

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____

[*Insert one of the following: "DIRECTOR" or "GENERAL COUNSEL" or "REGIONAL MANAGER, [NAME OF REGIONAL OFFICE]" or "BRANCH CHIEF, HABITAT CONSERVATION PLANNING BRANCH"*]

ATTACHMENT B

IRREVOCABLE LETTER OF CREDIT NO. [**number issued by financial institution**]
CERTIFICATE FOR [**insert either: "CANCELLATION" or "REDUCTION"**]

To:

[**Name of financial institution and address**]

Re: Incidental Take Permit No. [**permit number**]

The undersigned, a duly Authorized Representative of the California Department of Fish and Wildlife ("CDFW"), as defined in the paragraph 12 in the above-referenced Irrevocable Standby Letter of Credit ("Credit"), hereby certifies to the Issuer that:

1. [**Insert one of the following statements:** "The Applicant has presented documentary evidence of full compliance with the Mitigation Requirements referenced in paragraph 3 of the Credit." **or** "The Applicant has presented documentary evidence of compliance with the following Mitigation Requirement[(s)] referenced in paragraph 3 of the Credit: [**insert brief description of requirement(s) or requirement number(s) completed**]." **or** "The Applicant has provided CDFW with an equivalent security approved by CDFW to replace the Credit."]
2. [**Insert one of the following statements:** "CDFW therefore requests the cancellation of the Credit." **or** "CDFW therefore requests a reduction in the Principal Sum in the amount of \$ _____, thereby making the new Principal Sum \$ _____."]

[**Insert one of the following statements:** "Therefore, CDFW has executed and delivered this Certificate for Cancellation as of the ____ day of [**month**], [**year**]." **or** "Therefore, CDFW has executed and delivered this Certificate for Reduction as of the ____ day of [**month**], [**year**]."]

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

BY: _____

[**Insert one of the following:** "DIRECTOR" **or** "GENERAL COUNSEL" **or** "REGIONAL MANAGER, [NAME OF REGIONAL OFFICE]" **or** "BRANCH CHIEF, HABITAT CONSERVATION PLANNING BRANCH"]

State of California - Department of Fish and Wildlife
MITIGATION PAYMENT TRANSMITTAL FORM
 DFW 1057 (NEW 07/28/17)

Project Applicant Instructions: Please fill out and attach this form to payment. For conservation banks, also attach the Bill(s) of Sale for credits sold. One form may be used for multiple transactions, **BUT YOU MUST USE A SEPARATE FORM FOR EACH CHECK YOU TRANSMIT.** Make sure to include Project Name, Project Tracking Number, and ASB Mitigation Tracking Number (if available) on the attached payment type.

| | |
|---|---|
| <p>1. DATE: _____</p> <p>TO: _____ Regional Manager</p> <p>_____</p> <p>Region Office Address</p> | <p>2. FROM: _____ Name</p> <p>_____</p> <p>Mailing Address</p> <p>_____</p> <p>City, State, Zip</p> <p>_____</p> <p>Telephone Number/FAX Number</p> |
| <p>3. RE: _____ Project Name as appears on permit/agreement</p> | |

4. AGREEMENT/ACCOUNT INFORMATION: (check the applicable type)

2081 Permit
 Conservation Bank
 2835 NCCP
 1802 Agreement
 1600 Agreement
 Other _____

Project Tracking Number

5. PAYMENT TYPE (One check per form only): The following funds are being remitted in connection with the above referenced project:

Check information:

Total \$ _____ Check No. _____

Account No. _____ Bank Routing No. _____

a. Endowment: for Long-Term Management Subtotal \$ _____

b. Habitat Enhancement Subtotal \$ _____

c. Security:

1. Cash Refundable Security Deposit Subtotal \$ _____

2. Letter of Credit Subtotal \$ _____

1. Financial Institution: _____

2. Letter of Credit Number: _____

3. Date of Expiration: _____

| ACCOUNTING OFFICE USE ONLY | |
|---|----------------|
| Description | FI\$Cal Coding |
| Speedchart (Project, Program, Reference, Fund) | |
| Reporting Structure | |
| Category | |
| Date Established: _____ By: _____ | |