

## 25.0 Environmental Commitment List

### 25.1 Aesthetics, Light, and Glare

- Running lights will be directed downward to limit intensity.
- Screening vegetation will be placed in the areas surrounding the proposed structure.
- The placement of screening vegetation in the areas surrounding the proposed Old River Flow Control Structure will substantially reduce the visibility of the structure.

### 25.2 Air Quality

- Control traffic speeds on unpaved roads to 15mph or less; broom sweep materials near construction site access points; use water trucks or other dust palliatives during construction to control dust; trucks hauling sand, dirt or soil will be covered or will maintain at least two feet of freeboard.
- Attention to equipment condition including equipment tune-ups; catalytic converters; and engine timing retard; prevention of excessive truck idling.

### 25.3 Aquatic Resources

- Restore an area of wetland habitat in the western, central, or northern Delta equal to or greater than the acreage of the habitat adversely affected by dredging and construction.
- Link operation of the spring barrier at the head of Old River to daily monitoring reports of San Joaquin River chinook salmon smolt abundance at a site upstream of Old River.
- Direct losses of chinook salmon and striped bass at the SWP are mitigated under the Four Pumps Agreement.
- One or more of the following measures would be implemented to mitigate impacts to spring-run chinook salmon:
  - ⇒ Reduce SWP exports during October through January under certain conditions (levels of and conditions for reductions to be determined in the future - e.g., link to Sacramento River flow or X2).
  - ⇒ Close Delta Cross Channel gates during October through January under certain conditions to protect outmigrating smolts (conditions for closure to be determined in the future).
  - ⇒ Install or improve fish screens on diversions in upper Sacramento River to protect juveniles.
  - ⇒ Modify Feather River Fish Hatchery operations to protect naturally spawning stocks and/or increase genetic diversity in hatchery stocks.
  - ⇒ Remedy fish passage problems in reaches of streams and rivers currently or historically used by upmigrating adults (e.g., Mill Creek).
  - ⇒ Improve spawning habitat in reaches of streams and rivers with currently unused spawning habitat (e.g., Big Chico Creek).
  - ⇒ Restore riparian habitat in reaches of streams and rivers with spawning and rearing habitat (e.g., Mill Creek, Deer Creek).
  - ⇒ Restore riverine corridor on upper Sacramento River to improve rearing habitat.

- ⇒ Protect summer holding areas in spawning streams (e.g., Mill Creek, Deer Creek).
- ⇒ Reduce poaching of adult fish in summer holding areas.
- ⇒ Increase transport flows during critical migration periods for upmigration of adults and outmigrations of smolts (e.g., Mill Creek, Deer Creek).
- One or more of the following measures would be implemented to mitigate impacts to late fall run chinook salmon:
  - ⇒ Reduce SWP exports during October through January under certain conditions (levels of and conditions for reductions to be determined in the future - e.g., link to Sacramento River flow or X2).
  - ⇒ Close Delta Cross Channel gates during October through January under certain conditions to protect outmigrating smolts (conditions for closure to be determined in the future). Restore an area of wetland habitat.
  - ⇒ Install or improve fish screens on diversions in upper Sacramento River and tributaries to protect juveniles.
  - ⇒ Modify Coleman National Fish Hatchery operations to protect naturally spawning stocks and/or reduce the potential for disease in hatchery stocks.
  - ⇒ Remedy fish passage problems in reaches of streams and rivers used by upmigrating adults.
  - ⇒ Improve spawning habitat in reaches of streams and rivers with potential spawning habitat.
  - ⇒ Reduce fishing on spawning grounds during peak spawning period.
  - ⇒ Restore riparian habitat in reaches of streams and rivers with spawning and rearing habitat.
  - ⇒ Restore riverine corridor on upper Sacramento River to improve spawning and rearing habitat.
  - ⇒ Increase attraction and transport flows during critical migration periods for upmigration of adults and outmigration of smolts.
- One or more of the following measures would be implemented to mitigate impacts to striped bass:
  - ⇒ Reduce SWP exports during September through January under certain conditions (levels of and conditions for reductions to be determined in the future - e.g., link to Delta outflow/X2 or real-time flows in lower Old and Middle Rivers).
  - ⇒ Modify Delta inflow to facilitate downstream dispersal of larvae and juveniles into the western estuary.
  - ⇒ Install or improve fish screens on Delta diversions to reduce entrainment of juveniles.
  - ⇒ Consolidate and relocate Delta agricultural diversions to reduce entrainment of eggs, larvae, and juveniles.
  - ⇒ Improve water quality in the south Delta to facilitate the upmigration of adults in the San Joaquin River and reduce the effects of poor water quality upon all lifestages.
  - ⇒ Restore wetland habitat in the western, central, or northern Delta.
- One or more of the following measures would be implemented to mitigate impacts to American Shad:
  - ⇒ Reduce SWP exports during September through January under certain conditions (levels of and conditions for reductions to be determined in the

- future - e.g., link to Delta outflow/X2 or real-time flows in lower Old and Middle Rivers).
- ⇒ Install or improve fish screens on Delta diversions to reduce entrainment of juveniles.
  - ⇒ Consolidate and relocate Delta agricultural diversions to reduce entrainment of eggs, larvae, and juveniles.
  - ⇒ Increase transport flows and maintain suitable water temperatures in the Feather River during critical periods to facilitate adult upmigration and the survival of eggs, larvae, and juveniles in the lower Feather and Sacramento Rivers.
  - ⇒ Close Delta Cross Channel gates during October through December under certain conditions to protect outmigrating juvenile shad (conditions for closure to be determined in the future).
  - ⇒ Reduce predation on juveniles in Clifton Court Forebay.
  - ⇒ Improve salvage operations at the SWP Skinner Fish Salvage Facility.
- One or more of the following measures would be implemented to mitigate impacts to white and green sturgeon:
    - ⇒ Reduce SWP exports during February and March of dry and critical years under certain conditions (levels of and conditions for reductions to be determined in the future - e.g., link to Delta outflow/X2 or real-time flows in lower Old and Middle Rivers).
    - ⇒ Install or improve fish screens on diversions in reaches of rivers with potential sturgeon spawning and rearing habitat to protect larvae and juveniles (e.g., Sacramento River, Feather River, Bear River, Yuba River, and San Joaquin River).
    - ⇒ Install or improve fish screens on Delta diversions to reduce entrainment of juveniles.
    - ⇒ Consolidate and relocate Delta agricultural diversions to reduce entrainment of eggs, larvae, and juveniles, and food organisms.
    - ⇒ Increase February - May Delta inflow during wet and above normal water years.
    - ⇒ Maintain suitable water temperatures for spawning and rearing during February - May of wet and above normal years in the Feather River.
    - ⇒ Reduce predation on juveniles in Clifton Court Forebay.
  - One or more of the following measures would be implemented to mitigate impacts to Delta smelt:
    - ⇒ Reduce SWP exports during February and March of dry and critical years under certain conditions (levels of and conditions for reductions to be determined in the future - e.g., link to X2 or real-time flows in lower Old and Middle Rivers).
    - ⇒ Modify Delta inflow to facilitate downstream dispersal of larvae and juveniles into the western estuary.
    - ⇒ Install or improve fish screens on Delta diversions to reduce entrainment of juveniles.
    - ⇒ Consolidate and relocate Delta agricultural diversions to reduce entrainment of eggs, larvae, and juveniles, and food organisms.

- ⇒ Restore shallow water wetland habitat in the western, central, or northern Delta (e.g., flooded islands).
- ⇒ Reduce predation on juveniles in Clifton Court Forebay.
- ⇒ Improve salvage operations at the SWP Skinner Fish Salvage Facility.

## 25.4 Cultural Resources

Potential impacts to vertebrate fossils and cultural resources would be mitigated with the implementation of the following measures:

- Implementation of an Environmental Awareness Program (EAP) wherein construction personnel would be educated regarding known and potential sensitivities.
- Shutting down of construction activities in the immediate area of a find and notifying a professional archaeologist.
- Continuing work cessation for a reasonable period of time to allow professional evaluation of finds.
- Providing time and funding for professional recovery and analysis of significant archaeological finds.
- Significant properties affected would require consultation with the Advisory Council on Historic Preservation (ACHP) and the Native American Heritage Commission (NAHC).

## 25.5 Geological Conditions

- All new structures will be designed and constructed to resist seismic effects as provided by the Uniform Building Code and to meet the implementation standards of the San Joaquin and Contra Costa County General Plans.
- Impacts will be avoided by investigating subsurface conditions and evaluating soil samples according to ASTM standards. The design of settling ponds will take into account the type and depth of materials present below Victoria Island and Byron Tract to reduce the risk of settlement and eliminate the possibility of subsidence.
- Implementation of a Seepage Monitoring Program including compensation to local farmers for increased pumping costs and losses if seepage is determined to increase due to ISDP.
- Implementation of numerous erosion, sedimentation, and storm water control measures, including wet season erosion and sediment control measures, stabilization of exposed slopes and drainage ways, and revegetation.
- A Storm Water Pollution Prevention Plan (SWPPP) shall be developed and implemented.
- The construction-related excavations shall be shored or otherwise stabilized

## 25.6 Hazards

- The San Joaquin County Sheriff's Department Boating Safety Division shall be provided training in the use of crane controls and access to the crane controls.
- THMFP of export water shall be monitored both during construction and until levels have dropped to background levels.

## 25.7 Land Use Planning

- Impacts resulting from the Grant Line flow control structure can be mitigated through the relocation of the Grant Line barrier site.

## 25.8 Navigation and Transportation

- Regular inspections of the bike path and traveled way throughout the duration of construction activity. Loaded trucks will be covered.
- The contractor shall maintain the bike path and traveled way in a clear condition with a scraper or street sweeper, or equivalent method to assure safety.
- "TRUCK CROSSING" signs shall be posted at each access route to alert drivers to the presence of slow moving trucks.

## 25.9 Noise

- Operation of heavy equipment at sensitive sites will be limited to daytime working hours, 7:00am to 5:00pm Monday-Friday.

## 25.10 Public Services and Utilities

- Assurance of design, siting, and construction of septic systems on the proposed site should be completed in accordance with all applicable regulatory requirements.

## 25.11 Recreation

- Old River Fish Control Structure Site:
  - ⇒ DWR should avoid construction work on the Old River fish control structure during major summer holiday periods.
  - ⇒ During construction of the barrier, DWR should post warning signs and buoys in the channels of the San Joaquin River and Old River in the vicinity of construction equipment and operations.
  - ⇒ DWR shall educate boaters about procedures for use of the jib crane portage facility through a variety of methods, including, but not limited to: posting of clearly readable instructional signs on the banks and waterway at all approaches to the barrier site; distribution of educational flyers containing maps, operation schedules, portage procedures and alternate routes at marinas and public launching facilities; and classes at local marinas on the use of the portage device.
  - ⇒ Adequate warning about activities and equipment should be provided to minimize disruption of boating movement during the barrier construction process. Education in the use of the jib crane should make boaters less hesitant to use the facilities, thereby reducing travel restrictions during periods of barrier operation.

- Grant Line Canal and Old River Flow Control Structures:
  - ⇒ Avoid construction work on the Grant Line Canal barrier during major summer holiday periods.
  - ⇒ DWR should post warning signs and buoys within Grant Line Canal near all construction equipment and operations.
  - ⇒ Provide adequate warning about activities and equipment to minimize disruption of boating movement during the barrier construction process.
  - ⇒ Educate boaters about procedures for use of the lock through a variety of methods, including, but not limited to: posting of clearly readable instructional signs on the banks and waterway at all approaches to the barrier site; distribution of educational flyers containing maps, operation schedules, portage procedures and alternate routes at marinas and public launching facilities; and classes at local marinas on the use of the lock facility, setting up an information telephone hotline and a homepage on the internet to provide updates on the construction activities and operation of the barriers. Education in the use of the boat lock would make boaters less hesitant to use the facilities, thereby reducing travel restrictions during periods of barrier operation
- Vehicles shall use access road on the southern perimeter of Clifton Court Forebay and avoid the approach that passes adjacent to Eucalyptus Island.
- Avoid construction along the Old River fish control structure during major summer holiday periods.
- Post warning signs and buoys in the channels of the San Joaquin River (permits must be obtained from the U.S. Coast Guard).
- Educate boaters through the use of instructional signs, flyers, classes at local marinas, information telephone hotline and a homepage on the Internet to provide updates on construction activities; provide adequate warning signs about activities and equipment to minimize disruption to boaters.

## 25.12 Socioeconomic Impacts

- Consult local businesses when detailed construction plans and schedules are prepared.
- Implement enhancement measures listed in Chapter 15.4 Socioeconomics to support recreation in the area.
- Restore agricultural land to pre-construction conditions.

## 25.13 Terrestrial Biological Resources

- Adoption of a series of construction period protective measures and post construction-site restoration measures.
- DWR and Reclamation should plant emergent vegetation at an offsite location according to specifications set forth in Appendix 6.
- Creation of riparian scrub habitat at another location along the waterways of the Delta. The scrub habitats will be created according to specifications set forth in Appendix 6.
- Creation of valley wildrye habitat at another location in the Delta. Habitat creation will occur as specified in Appendix 6.
- Construction-period surveys and avoidance measures to protect nesting raptors.
- Pre-construction surveys of raptor-protective power line conductors, transformers, insulator configurations, and on-site biological monitoring.

- Adoption of specific construction-period protection and avoidance measures to protect the Delta tule pea and Mason's lilaeopsis. The implementation of a transplanting program and the adoption of measures to enhance or improve existing populations and/or the relocation of the Grant Line barrier site.
- Populations of rose mallow should be mapped on the plan maps of the dredging activities to avoid potential loss of rose mallow populations. Temporary structures should not be placed within 50 feet of a rose mallow population.
- Truck and construction traffic will be rerouted to avoid the degradation of bittlescale habitat.
- Pre-construction surveys, avoidance of sensitive areas during construction to mitigate the loss of 5.8 acres of foraging habitat within one mile of a nest tree, compliance with DFG Management Conditions.
- To avoid impacts to the heron rookery site there will be no hauling on embankment material along the northern access route during breeding season from February-March.
- In order to mitigate adverse impacts to giant garter snakes, placement of dredge materials in the agricultural drains of Victoria Island will be avoided. Implementation of mitigation measures set forth in Appendix 6 are expected to reduce impacts to giant garter snakes to less-than-significant.
- Potential impacts to Western pond turtles will be mitigated through the installation of pre-construction fencing on or before March 1; on site turtles will be removed from construction areas; no construction during turtle hibernation, November-February; no dredged materials will be placed in ditches and drains on Victoria Island settling ponds.
- Adoption of specific construction-period protection and avoidance measures to protect the Delta mudwort habitat and individual plants. The implementation of a transplanting program and the adoption of measures to enhance remaining populations and/or the relocation of the Grant Line Barrier.
- One or more of the following measures would be implemented to mitigate impacts to flying waterfowl: Redesign the proposed project so that powerlines are underground at the northern intake site; redesign the proposed powerline route at the proposed northern intake; or relocate the poles from the top of the levee to the base of the levee.
- Pre-construction surveys and on-site construction protocols should be implemented to remove or avail onsite construction hazards to the San Joaquin kit fox.
- DWR and Reclamation shall install dissipation structures to protect islands from erosion. The effectiveness of these structures should be monitored through remote sensing.
- Continue the Vegetation Monitoring Plan and locate restoration areas.

## 25.14 Water Quality

- Compliance with all State and Federal Water Quality regulations governing the upland disposal of materials and subsequent diffuse discharge of water that may affect groundwater.