UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

MID-PACIFIC REGION

SOUTH-CENTRAL CALIFORNIA AREA OFFICE
FRESNO, CALIFORNIA

DRAFT FINDING OF NO SIGNIFICANT IMPACT

2-GATES FISH PROTECTION DEMONSTRATION PROJECT

FONSI-09-154

Recommended by:

_____ Date: _____

Concurred by:

_____ Date: _____

Approved by:

_____ Date: _____

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Draft Finding of No Significant Impact

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the United States Bureau of Reclamation (Reclamation) finds that the construction and operation of the 2-Gates Fish Protection Demonstration Project (Proposed Action) is not a major federal action that will significantly affect the quality of the human environment and an environmental impact statement is not required. This Draft Finding of No Significant Impact (FONSI) is supported by Reclamation's Draft Environmental Assessment (EA) Number EA-09-154, *2-Gates Fish Protection Demonstration Project,* and is hereby incorporated by reference.

Background

The Proposed Action will be located in the Sacramento-San Joaquin River Delta (Delta), which is a vital source of drinking water for over 25 million Californians and supports more than 1.3 million acres of irrigated agricultural lands. The combination of tidal flows, channel geometry, connections of Franks Tract, Old River and Middle River (OMR), export pumping at the Central Valley Project (CVP) and State Water Project (SWP) facilities near the City of Tracy, along with salinity, temperature, and turbidity gradients conducive to delta smelt movement, influence the movement of delta smelt (*Hypomesus transpacificus*), a federally and state-listed threatened species, into the south Delta toward the CVP and SWP export facilities. Such movement makes the delta smelt more vulnerable to entrainment by these facilities. The Proposed Action is an experimental project intended to evaluate the ability to provide temporary protection to delta smelt from entrainment at the CVP and SWP export facilities by controlling water movement in the central Delta channels. It includes constructing, operating, and maintaining "butterfly gates" in Old River and Connection Slough for up to a 5-year period to affect water movement when turbidity and salinity conditions are expected to support migration of delta smelt. Currently, entrainment of delta smelt is managed by controlling negative net flows in Old and Middle Rivers (OMR) within parameters set forth in the CVP/SWP Operations BOs (USFWS 2008b, NMFS 2009a).

Findings

An EA with a FONSI has been prepared to disclose potential environmental impacts. A number of features have been incorporated into the project design that will minimize environmental impacts, and additional environmental commitments have been developed, as discussed below, to avoid impacts or further reduce impacts to the extent possible. The commitments will be implemented for construction and operation, unless otherwise specified.

Aesthetics. Old River is identified as a scenic waterway by Contra Costa County, and Connection Slough is near the terminus of the portion of Bacon Island Road, which is designated as a scenic route by San Joaquin County. The project components at the Old River site will not be visible from Bacon Island Road. The Connection Slough site will be visible from Bacon Island Road, but this area is quite remote, and there is limited public use because land on either

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side of Connection Slough is private and in agricultural use. The project components at both sites will be visible to boaters, but they will not restrict views of the surrounding areas because the levees already block the views. The gate structures will affect views only of the river channels in the immediate vicinity; however, these already have been modified with riprap-lined levees. All visible components of the Proposed Action will be removed after the five-year demonstration period, and disturbed areas will be restored. The proposed lighting will not significantly affect nighttime views in the area. Moreover, the flood lights will be directed downward toward gates and boat ramps and shielded to reduce visibility from neighboring properties. Therefore, there are no significant impacts on Aesthetics.

Agricultural Resources. Most construction/removal activities will occur in the river channels or on the adjacent banks that are not used for agricultural purposes. Except for the dredge disposal sites, all areas will be returned to their prior condition once initial construction is complete and again after the facilities are removed at end of the five-year demonstration period. The dredged materials disposal site on northeast Bacon Island is classified as Farmland of Local Importance, but this site is not actively farmed; moreover, use of this site for storage will not remove soils, and will help offset the land subsidence that results from the decomposition of organic carbon in the peat soils. The Proposed Action will not permanently convert Important Farmland to non-agricultural use at any of the proposed sites. Information regarding the gate operations schedule will be publicly available, and farmers needing to go through the gates to access their lands by boat could schedule their trips during periods when the gates were open; moreover, the gates will be open most of the time, and at most, delays will be limited to no more than approximately 2.5 hours at any given time. Therefore, there are no significant impacts on Agricultural Resources.

Air Quality. Most emissions will occur during initial construction, but no exceedence of ambient air quality standards in the vicinity of the Proposed Action will result solely from proposed activities. Maximum background levels of particulate matter (PM_{10}, $PM_{2.5}$) already exceed state or federal standards, and the Proposed Action will generate PM_{10} and $PM_{2.5}$, primarily through fugitive dust (PM_{10}) emissions during construction activities, and from PM_{10} and $PM_{2.5}$ emissions from diesel-powered construction equipment and therefore will contribute to these existing exceedences. The Bay Area Air Quality Management District (BAAQMD) and San Joaquin Valley Air Pollution Control District (SJVAPCD) developed emission control measures for construction emissions that will be implemented as part of the Proposed Action and will prevent significant contributions of emissions. The Proposed Action will be located in a largely unpopulated area, and the nearest house is approximately 600 feet south of the Old River site; however, it is unoccupied. The next nearest receptors to the proposed gate sites are a residence and bunkhouse approximately 0.42 mile northwest of the Connection Slough Site and a marina with live-aboard boat owners approximately 0.8 to 1 miles south of the Old River site.

The results of the screening risk assessment analyses show that the probability of contracting cancer from diesel particulate matter, for the Maximally Exposed Individual is about 5×10^{-8}, which is 200 times less than the 10 in one million (1×10^{-5}) BAAQMD or SJVAPCD threshold. No objectionable odors are anticipated from construction activities or normal operation of the Proposed Action. Impacts during operations will be minor and intermittent, resulting from periodic vehicle trips and the potential temporary use of portable generators until power can be obtained from PG&E. Facilities removal will result in fewer impacts than construction because the removal period will last only 4 weeks, as opposed to approximately 21 weeks, less equipment

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will be required, and less materials handling will be needed. Any required air quality permits will be received prior to initiation of construction. Therefore, there are no significant impacts on Air Quality.

Aquatic Biological Resources. Construction and demolition are planned for mid-summer through fall when special status species would not be present (i.e., delta smelt, longfin smelt, and winter-, spring-, fall, and late fall-run Chinook salmon). Green sturgeon and juvenile steelhead have the potential to occur at low densities. Other aquatic species, including largemouth bass, striped bass, sunfishes, catfishes, would be expected to occur in the Delta and could be found in the construction area during the construction period. In-water construction activities could result in direct injury or mortality, noise and disturbance, and suspension of sediments near the construction site. However, the construction effects will be localized.

Operations will modify hydrodynamic flow patterns in certain areas of the Delta during the months of December through March and June, and to a lesser degree in the other months when the gates are left open. Based on model predictions, the overall effects of altered hydrodynamics and water quality are expected to benefit delta smelt and other pelagic species due to reductions in entrainment risk from the SWP and CVP pumping facilities for fishes located north and west of the gates. Delta smelt, sturgeon and salmonids located east and south of the gates are not expected to be subject to an increased risk of entrainment because the flows at channel junctions leading toward the gate locations will not change substantially.

Construction and operation activities will not exceed the National Marine Fisheries Service (NMFS) 2008 interim thresholds for underwater sound pressure levels of 206 dB peak and 187 dB accumulated sound. The effects of noise would be transient and localized, and will not result in direct injury or harm to nearby sturgeon or other fish.

Operation of the gates during December into February or early March will reduce turbidity in Old and Middle River, which will allow a slight increase light penetration and perhaps an increase in phytoplankton primary productivity. When the gates are operated in March and June for dispersive mixing, it is expected to improve transport flows for larval and juvenile smelt toward the lower San Joaquin River. Dispersive mixing may also improve conditions for delta smelt in the Sacramento-San Joaquin confluence area by increasing westward transport of phytoplankton and nutrients.

The Proposed Action will include evaluating modeling predictions from the delta smelt adult behavioral and larval model simulations that indicate a benefit to adult, larval, and juvenile delta smelt, if present in the area in and around Franks Tract, by reducing the risk of entrainment at the CVP and SWP export facilities. Monitoring for predators will occur, and if predator populations become established, attempts will be made to reduce populations through selective removal methods.

The project area is not used for spawning by sensitive fish species. Most sensitive aquatic species do not rear in the project area. Gate operations are expected to have a beneficial impact on larvae and juvenile delta smelt and longfin smelt.

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Impacts from facilities removal will be similar to those of construction. No impacts to aquatic resources will occur once the facilities are removed. The bottom will be restored to grade with clean sand, replicating original conditions. Reclamation will complete all required Endangered Species Act (ESA) compliance prior to approving this FONSI. Therefore, there are no significant impacts on Aquatic Biological Resources.

Terrestrial Biological Resources. Land-based disturbances during construction will be limited to a relatively small area and will be confined to the period between June and November. Short-term effects on habitat used by reptiles and burrowing mammals are expected to recolonize the areas disturbed during construction. Proposed activities are also unlikely to affect commonly occurring birds because construction will occur outside of the nesting season of most birds. Gate operations will not affect nesting and foraging habitat, since operations are not expected to disturb habitat.

Proposed activities could have temporary effects on aquatic mammals, including river otter, common muskrat, and beaver at both the facilities construction and removal stages of the Proposed Action. However, installation and removal activities will have a minor impact on these animals since they will not involve actions that could pose a direct or indirect threat to these mobile animals. Additionally, the Proposed Action will not have permanent impacts on their aquatic habitat and will affect only a limited area.

Special-status animal species that could be affected by the Proposed Action during construction include giant garter snake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), northwestern pond turtle (*Actinemys marmorata marmorata*), Swainson's hawk (*Buteo swainsoni*), black rail (*Laterallus jamaicensis coturniculus*), western burrowing owl (*Athene cunicularia*), and other raptors and migratory nesting birds. Impacts will be short-term and minor given the implementation of environmental commitments that have been included as part of the Proposed Action. Reclamation will consult with the U.S. Fish and Wildlife Service (USFWS) on impacts to species listed under ESA.

Construction activities could affect nesting behavior of raptors, as well as other bird species protected by the Migratory Bird Treaty Act, because land-based construction activities will occur during the nesting season. Removal of the gates and boat ramps between July and November will occur towards the end of or after the nesting season. Impacts will be short-term or minor given the implementation of environmental commitments that have been included as part of the Proposed Action. Proposed operations will not affect these species.

Three rare plants were observed within the study area: brown fox sedge, woolly rose-mallow, and Suisun Marsh aster. Individual special-status plants present within the construction area could be negatively impacted by work. Impacts will be short-term or minor given the implementation of environmental commitments that have been included as part of the Proposed Action. No impacts will occur during operations.

Construction will occur within upland ruderal herbaceous and Coastal and Valley Freshwater Marsh wetland, and open water habitats only. Project designs specifically avoid mixed riparian woodland and seasonal wetland habitats. Impacts to freshwater marsh wetland habitats on both sites will be limited to the area of fill from the boat ramps, and the installation of sheet piles

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perpendicular to the levees. Construction of the Proposed Action will result in the temporal loss of 0.16 acre of freshwater marsh habitat due to the construction of the boat ramps and in-river sheet piles. Wetland habitat will be restored following the removal of the gate structures and boat ramps. The Proposed Action includes environmental commitments that will require the protection of sensitive wetland and riparian habitats, restoration of wetland habitats, and compensatory mitigation for the temporal loss of wetland functions and values. Given the implementation of these commitments, impacts to riparian and wetland habitats from construction will be short-term or minor.

Impacts to wetlands could occur due to changes in hydrodynamics resulting from installation and operation of the gates. The Proposed Action's predicted slower water velocity in certain areas, coupled with wind conditions and growth patterns of floating weeds, could enhance the opportunity for exotic aquatic vegetation to establish within obstructed flow areas. Gate operators will monitor the situation at each site and if floating weeds and debris become a problem for boat traffic, interfere with gate operations, or is determined to reduce local dissolved oxygen levels, a contractor will be called in to remove the material in an appropriate manner. Reclamation will not approve this FONSI until the U.S. Army Corps of Engineers (USACE) 404 permit has been issued for the Proposed Action.

The volume of sediment that could accumulate in the slower velocity areas with the gates in place is not known, but the likelihood that a significant amount of sediment will be deposited is low, because the system is generally sediment-starved, and the modeling shows that the effects of the gates on hydrodynamics will be small. It is highly unlikely that enough sediment will be deposited to create conditions conducive to the establishment of new areas of emergent vegetation.

Changes in hydrology will occur throughout the central and southern Delta. During March and June, the elevation of mean high water will be reduced from 1 to 13 inches upstream of the gates. The reduction in water surface elevation could temporarily expose greater areas of mudflat habitats, but the short duration of the reduction may not result in the establishment of emergent vegetation within these mudflat areas.

North of the gates, operations would produce small increases in the elevation of mean high water, resulting in an increase in March and June of about 1 inch. This increase is not expected to result in a substantive impact on wetland vegetation.

The dredged disposal area on Bacon Island will be surrounded by a berm that will prevent sedimentation and the discharge of runoff into the wetland feature from surface flows. Prior to construction, a 401 permit will be obtained from the Central Valley Regional Water Quality Control Board (CVRWQCB).

Implementation of the Proposed Action will result in the discharge of approximately 1.97 acres of fill into potentially jurisdictional waters of the U.S., including wetlands and other waters subject to USACE jurisdiction. Impacts to wetlands and other waters have been minimized by the use of sheet piles rather than rock dikes to span the channels to the barges. Additionally, environmental commitments included as part of the Proposed Action will reduce impacts to jurisdictional waters of the U.S. from construction to temporary and minor.

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The Proposed Action will not interfere with the movement of terrestrial wildlife species or movement corridors once the construction activities are completed. Reclamation will complete all required ESA compliance prior to approving this FONSI. Therefore, there are no significant impacts on Terrestrial Biological Resources.

Climate Change. During construction, which is the primary source of greenhouse gas (GHG) emissions, the Proposed Action will emit approximately 0.0014 percent of the carbon dioxide equivalents emitted per year in the Bay Area alone. Due to the very small quantities involved and the temporary nature of the construction and removal activities, the Proposed Action will not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing GHG emissions. Therefore, there are no significant impacts on Climate Change.

Cultural Resources. There are no archaeological sites or historic buildings/structures identified within the boundaries of the Old River and Connection Slough Areas of Potential Effect (APEs) or the Roberts Island #1 disposal site. The APE for the former two project sites is within the Bacon Island Rural Historic District, which appears to be eligible for inclusion in the National Register of Historic Places (NRHP), but the Proposed Action will not affect the integrity of the district or any other characteristics of the district that potentially make the district eligible for inclusion in the NRHP.

The levees in the Old River and Connection Slough APE are approximately 100 years old. The eligibility of these levees for inclusion in the NRHP has not been determined. For purposes of this analysis, however, they are conservatively assumed to be eligible. Implementation of the Proposed Action will require minor modifications to the levees that include the installation of sheet pile and boat ramps. These modifications will not alter the overall design or function of the levees. Therefore, the Proposed Action will have a minor impact on the levees under NEPA and will result in a "no adverse effect" to the levees under Section 106 of the National Historic Preservation Act (NHPA).

Pedestrian surface surveys of the entire Connection Slough and Old River APE were conducted. With the exception of the levees, no additional cultural resources were identified.

The Proposed Action includes environmental commitments that address unanticipated discoveries of cultural resources or human remains during construction. Reclamation will receive concurrence with our Section 106 determination prior to approving this FONSI. Therefore, there are no significant impacts on Cultural Resources.

Environmental Justice. The Proposed Action will be located in a remote, rural area, well-removed from the nearest populated areas. The nearest communities have lower percentages of minorities and persons living below the poverty threshold than the counties as a whole. Farm workers on adjacent properties could potentially be minorities and/or considered low-income populations. However, any impacts of the Proposed Action that could potentially affect farmworkers (primarily noise and air emissions) will be temporary and will not exceed any applicable thresholds. Use of an existing dredged materials disposal site at Roberts Island will not affect low-income or minority populations. Therefore, there are no significant impacts on Environmental Justice.

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Geology and Soils. The Old River and Connection Slough sites are located near seismically active areas, and are highly susceptible to damage from ground shaking and liquefaction. The Proposed Action will be required to adhere to the building safety standards specified in the California Building Code (CBC) for Seismic Zone 4, which include measures designed to prevent significant structural damage from seismic ground acceleration. The Proposed Action will be required to implement best management practices (BMPs) as part of its Storm Water Pollution Prevention Plan, which will prevent substantial soil erosion or the loss of topsoil during construction. In addition, the implementation of remedial actions will occur should observable sediment transport be detected in the Old River and Connection Slough channels. Therefore, there are no significant impacts on Geology and Soils.

Hazards and Hazardous Materials. Commonly used hazardous materials (e.g., fuels, lubricants) will be used during construction and operations. All materials will be handled in accordance with regulatory requirements intended to prevent significant hazards to the public and the environment. Any spills will be cleaned up in accordance with permit conditions. During non-working hours, heavy equipment and vehicles in areas that could be accessed by the public will be secured in a general contractor's staging area that will not pose a safety hazard. Most construction will occur in the water, and thus will not pose a fire hazard; adherence to Contra Costa and San Joaquin County codes and requirements during construction will reduce the potential for fires from land-based construction.

Signage at the gates will comply with navigation requirements established by the U.S. Aids to Navigation System and the California Waterway Marker system. A boat safety exclusion zone will be established to keep boats clear of the closed gates in case gates begin to open, both to avoid gate swing and potential rapid changes in water velocity. Channel markers also will be installed, and the gates will be lit at night, as will the channels leading to the gates. These provisions will minimize the potential for hazards to boaters, including water skiers, wakeboarders, and those using personal watercraft. During floods, the gates will be in an open position. The catwalk and operations house will remain above water during such times, and navigational aides (buoys, markers, lights), including those marking the safety exclusion zone, will remain visible. Thus, the structures will not pose undue hazards during floods should boaters be on the water at such time. Therefore, there are no significant impacts on Hazards and Hazardous Materials.

Hydrology and Water Quality. During operations, surface water flow rates near the Old River and Connection Slough sites would be modified by the installation of the sheet piles and gates. Hydrodynamic model results indicate that effects of the Proposed Action would not exceed erosion and deposition thresholds established for the Delta by the California Department of Water Resources. Although the project operations will occasionally alter the existing hydrology of two specific stream channels in the Delta, the facilities have been designed to avoid substantial modification of hydrology. As a fundamental operational criterion, the gates will be kept open during the high-flow conditions to permit the passage of the flood flows. This will restore much of the pre-Project channel capacity of the Old River and Connection Slough.

Changes in salinity could occur at the water quality compliance station at Rock Slough specified under water right decision D-1641. Simulations of the Proposed Action operations conducted

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using Delta Simulation Model 2 (DSM2) indicate that operation of the Proposed Action will not lead to violations of the Rock Slough standard, although there were instances (winter) when salinity was increased by a small amount compared to existing conditions at Rock Slough. Installation of barriers and closure of the gates will generally improve water quality at Rock Slough by reducing salinity intrusion. During the periods of operation, gate closure will slightly reduce local flushing, which could lead to a slight degradation of water quality at Rock Slough.

When the gates were open and extreme tidal actions occurred, increased water velocities near the gates could result in localized sediment mobilization and the potential for channel bottom erosion. This effect will be monitored and environmental commitments will result in minimal effects on channel sediments.

The Proposed Action will include local and regional water quality monitoring to support all testing and adaptive management of the facilities. Prior to construction, a 401 permit will be obtained from the CVRWQCB. Therefore, there are no significant impacts on Hydrology and Water Quality.

Indian Trust Assets. No Indian Trust Assets (ITAs) are located on or near the project sites. The nearest ITA is Lytton Rancheria, which is approximately 41 miles west of the Old River site. Therefore, there are no significant impacts on ITAs.

Land Use. The Proposed Action will primarily be constructed within river channels and will not affect the surrounding agricultural land uses. It will be consistent with the policies included in the Contra Costa County and San Joaquin County General Plans. Use of the existing Roberts Island #1 disposal site will not affect land use. Therefore, there are no significant impacts on Land Use.

Minerals and Energy. No mineral deposits are present at the proposed sites; therefore, no impacts will occur. The Proposed Action will require energy during construction and operations, but it will not use energy in a wasteful manner and will not conflict with any adopted energy conservation plans. Therefore, there are no significant impacts on Minerals and Energy.

Noise. The Proposed Action will generate noise primarily during construction and removal. The nearest known sensitive receptors are a residence and bunkhouse located approximately 0.42 mile northwest of the Connection Slough site and “liveaboards” at the marina located approximately 0.8 mile south of the Old River site. The Roberts Island #1 disposal site is located in an agricultural area. Use of the Roberts Island #1 disposal site will not appreciably change the noise environment. Construction noise at the Old River site would fall within the limits of what Contra Costa County considers acceptable in residential locations and would comply with local requirements. Additionally, construction at Connection Slough would occur during regular daytime hours and thus would comply with the requirements of the San Joaquin County Code.

Boaters near the Old River and Connection Slough sites will be exposed to increased noise during construction, but exposure will be limited because boats are not be expected to linger in the immediate project area during construction.

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The Proposed Action will not create permanent noise sources. Two small generators could be operated intermittently and as a backup source of power at the Old River and Connection Slough sites until Pacific Gas and Electric (PG&E) power is available to provide electric power to the sites. Noise emitted by the generators will attenuate to inaudible levels at the marina to the south of the Old River site and the residences on Mandeville Island. There are no noise-sensitive land uses near the Connection Slough site. Therefore, there are no significant impacts on Noise.

Public Services. The Proposed Action could result in increased demand for fire and police services during construction and operations in the event of accidents requiring emergency response. Such a demand is typical of all construction activities and will be within the capabilities of the local and regional emergency response providers. Operation of the gates does not pose a particular risk, and no increased staffing of police or fire departments will be required. The marine patrols will be granted 24-hour access through the gates. Therefore, there are no significant impacts on Public Services.

Paleontology. The results of a paleontological literature search showed no recorded sites within 2 miles of the proposed Old River and Connection Slough sites, nor were any paleontological resources identified in Quaternary deposits that are present at depths of up to 30 feet at these sites. No excavation will be required at the Roberts Island #1 disposal site, so no impacts will result from its use. Therefore, there are no significant impacts on Paleontological resources.

Recreation. Boating is the only recreational activity that will be affected by the Proposed Action. The contractor will be required to maintain vessel access, although some delays could be possible. Notices of construction will be posted at local marinas and in the Local Notice to Mariners to provide advance warning of the construction schedule. Navigational markers will be used to prevent boaters from entering the construction area, and speed limits will be posted. Safe vessel passage procedures will be coordinated with the U.S. Coast Guard (USCG) and California Department of Boating and Waterways.

Both the Old River and Connection Slough sites have been designed to accommodate the largest recreational and commercial vessels that use the area. The proposed gates will impede passage when they are closed, requiring those boaters with vessels less than 24 feet/10,000 pounds to use the boat ramps; those with larger vessels or sailboats, or those who choose not to use the ramps, will have to schedule their trips during times when the gates were open or seek alternate routes. Impacts to recreational vessel passage on the Old River channel will be greater than along Connection Slough due to the higher volume of traffic. The gates will be in an open position much of time. They will be open throughout April and May and from July through November, during which time vessels could pass and be minimally impeded. During other months, boaters will experience of delays of no more than 2 to 2.5 hours if waiting for the Old River gate to open.

The USCG will be kept informed about the Proposed Action, so that relevant information regarding the gates, methods of vessel passage, expected closure schedule, and duration of barrier installation activities was included in the Local Notice to Mariners. The USCG also will update navigation charts as appropriate. Additionally, an outreach program will be implemented to inform boaters of the purpose of the Project, expected duration of gate closures, and operational characteristics of the gates. Signage will be provided at the gates showing the times

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the gates will be opened and closed; signage also will be provided along key channels leading to the gates, notifying boaters that the channels may be closed periodically, and providing contact information for the operations schedule. Boaters will be able to communicate directly with the gate operators by phone or marine radio to determine when the gates will be open and alter their routes or time their arrivals at the gates to avoid closures. The project will not affect other nearby or outlying recreation facilities. No impacts will occur once the gates are removed at the end of the five-year demonstration period. Therefore, there are no significant impacts on Recreation.

Socioeconomics. The Proposed Action will result in minor socioeconomic benefits by providing periodic jobs for construction workers. Minor adverse effects on local marinas are expected because vessel accessibility will be maintained during construction, boat owners and marina operators will be notified of the construction schedule. During operations, boat owners utilizing marina services near the proposed facilities may elect to move their vessels to other nearby marinas or seek alternative routes due to the periodic gate closures. Potential economic impacts of the Proposed Action will be minimized by the public outreach program, which will readily provide information regarding the proposed operations schedule. Overall, the net economic effect on the regional economy will be negligible. Therefore, there are no significant impacts on Socioeconomics.

Transportation/Traffic. The construction contractor will coordinate with the Contra Costa County and San Joaquin County Sheriff's and Fire Departments to notify them of the construction/removal schedule and identify alternative access methods if needed in order to ensure that emergency access is available. During operations, trips will be limited to those associated with any inspection or maintenance that was required and trips generated by the operators arriving at and departing the control house at each of the sites.

The Proposed Action will comply with navigation requirements established by the U.S. Aids to Navigation System and the California Waterway Marker system during construction and operations, and therefore will not substantially increase hazards to navigation.

The gates will restrict access to Old River and Connection Slough while they are closed, but they could be opened in about three minutes. They will be staffed by an operator 24 hours per day when the gates are operating to accommodate any potential emergency and will be opened or closed at the request of the Contra Costa and San Joaquin County Sheriffs' Departments or the USCG. The gate on Old River would be in an open position much of the time, however, and would be periodically opened for approximately 15- to 20-minute intervals during March and June when the longest periods of closure would occur. During these months, closures during the daytime would not last more than 2 to 2.5-hours at a time. Therefore, there are no significant impacts on Transportation and Traffic.

Utilities and Service Systems. The Proposed Action will not generate a need for additional wastewater treatment, nor will it require the construction of storm water drainage facilities. It also will not require water supplies, other than limited amounts needed for dust suppression during facilities construction and removal. Minimal amounts of electric power will be required during construction and gate operations and will be obtained from the nearby PG&E grid. The

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nearby landfill has sufficient capacity to accommodate solid waste generated by the Proposed Action. Therefore, there are no significant impacts on Utilities and System Services.

Cumulative Effects. Impacts to most resources will be highly localized and temporary, primarily occurring during construction, and they will not contribute to a significant cumulative impact in combination with other past, present, and reasonably foreseeable projects. The effects of the Proposed Action are individually and cumulatively limited in scope, scale and duration, and the proposed environmental commitments will offset the effects of the Proposed Action on aquatic biological resources, terrestrial biological resources, and cultural resources.

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