



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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San Francisco, CA 94105

JAN 23 2015

Mr. William Guthrie
U.S. Army Corps of Engineers
California South Branch Regulatory Division
1325 J Street, Room 1350
Sacramento, California 95814-2933

Subject: River Islands at Lathrop Draft Environmental Impact Statement, San Joaquin County, California [CEQ# 20140306]

Dear Mr. Guthrie:

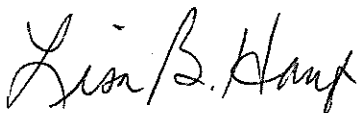
The U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement for the River Islands at Lathrop. Our review and comments are pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

River Islands at Lathrop is a residential and commercial development on Stewart Tract in the secondary zone of the Sacramento-San Joaquin River Delta (as defined by the Delta Protection Act). The project proponent is requesting a Clean Water Act 404 permit from the U.S. Army Corps of Engineers to install boat docks and fishing piers along jurisdictional waterways, conduct fill activities associated with footings for new access bridges, modify waters of the U.S., breach levees, and conduct maintenance dredging. EPA provided comments on the Notice of Intent on August 1, 2005, recommending that the Draft EIS clearly document the impacts to aquatic resources and identify appropriate mitigation. We also raised a number of water quality concerns, including pollutants from boats, disruption to salmon migration, and potential risks to the water quality of the Delta from the proposed inner lake stormwater treatment system. Several key issues that EPA raised have not been sufficiently addressed in the DEIS.

Based on our review of the DEIS, we have rated all the Action Alternatives and the document as *Environmental Objections – Insufficient Information* (EO-2). Please see the enclosed "Summary of EPA Rating Definitions." Our rating is based primarily on impacts to waters of the U.S., the opportunity to further minimize or mitigate several environmental impacts by eliminating or reducing the quantity of boat docks in each of the action alternatives, and the potential for any of the action alternatives to be selected for implementation when it is not clear that any would be the least environmentally damaging practicable alternative. Only the LEDPA can receive a CWA 404 permit. Please find our detailed comments enclosed, which provide recommendations to address these issues as well as our concerns with: water quality impacts and mitigation, stormwater treatment, fish resources, air quality, and climate change. We have also included recommendations regarding opportunities to create a more environmentally sustainable development project.

We appreciate the opportunity to review and comment on this DEIS, and are available to discuss the recommendations provided. When the FEIS is released for public review, please send one hard copy and one CD to the address above (Mail Code: ENF 4-2). Should you have any questions, please contact me at (415) 972-3854, or contact Jean Prijatel, the lead reviewer for the project. Jean can be reached at (415) 947-4167 or prijatel.jean@epa.gov.

Sincerely,



Lisa B. Hanf, Assistant Director
Enforcement Division

Enclosures: Summary of EPA Rating Definitions
EPA Detailed Comments

cc: Adam Laputz, Regional Water Quality Control Board (Central Valley Region)
Brian Hansen, U.S. Fish and Wildlife Service
Jeff Stuart, National Oceanic and Atmospheric Administration, West Coast Region

SUMMARY OF EPA RATING DEFINITIONS*

This rating system was developed as a means to summarize the U.S. Environmental Protection Agency's (EPA) level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the Environmental Impact Statement (EIS).

ENVIRONMENTAL IMPACT OF THE ACTION

"LO" (Lack of Objections)

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

"EC" (Environmental Concerns)

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

"EO" (Environmental Objections)

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

"EU" (Environmentally Unsatisfactory)

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

ADEQUACY OF THE IMPACT STATEMENT

"Category 1" (Adequate)

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

"Category 2" (Insufficient Information)

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

"Category 3" (Inadequate)

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640, Policy and Procedures for the Review of Federal Actions Impacting the Environment.

Clean Water Act, Section 404

EPA appreciates the inclusion of the 404(b)(1) Alternatives Analysis as Appendix C of the DEIS; however, we find the purpose and need statement to be internally inconsistent, which unnecessarily constrains the alternatives analysis to San Joaquin County and the south Delta region. The project purpose is “to construct a large-scale, mixed-use project consisting of residential development and a commercial complex, and which may include open space and recreational amenities, located in San Joaquin County or the south Delta area” (page 1-3). However, the needs statement specifies the housing development in this project is meant to satisfy the housing needs of people employed in southern Alameda and Contra Costa counties. EPA notes that the needs statement also cites the need to increase housing diversity in the City of Lathrop, and several alternatives are eliminated from consideration for not meeting this need; but neither the DEIS nor Appendix C provide a discussion of how the alternatives carried forward would address this stated need.

The Alternatives Analysis eliminated from further consideration an on-site “approach” that would have reduced or eliminated boat docks on jurisdictional waterways. This approach was eliminated because it was determined that the docks would have minimal direct impacts to aquatic resources (page 4-9); however, these docks would result in significant, permanent, and unmitigable indirect impacts to aquatic resources. Pursuant to the Section 404(b)(1) Guidelines, mitigation of project impacts begins with the avoidance and minimization of direct, indirect, and cumulative impacts to the aquatic ecosystem¹. A “no docks” approach would have fewer direct impacts and substantially fewer indirect impacts, and boat docks are unnecessary to meet the stated purpose and need for the proposed project. Appendix C discloses that discussions with the U.S. Fish and Wildlife Service have identified concerns with impacts of docks on listed fish species and that consultation under the federal Endangered Species Act may result in modifications to the boat dock element of the selected alternative.

The applicant has not rebutted the presumption of the availability of less-damaging alternatives to the project as proposed. The geographical screening criteria for off-site alternatives were unnecessarily constrained, thereby eliminating possible practicable alternatives that may be less environmentally damaging than the proposed action. In addition, there are other on-site alternatives that would have fewer environmental impacts than the proposed project, especially impacts to air quality as discussed in the Air Quality comment below. The DEIS and 404(b)(1) analysis do not demonstrate that the proposed action (Alternative 1), the identified Environmentally Preferred Alternative (Alternative 3), or the two other action alternatives are the Least Environmentally Damaging Practicable Alternative. Only the LEDPA can be permitted. The on-site alternatives have significant direct and indirect impacts, and measures to avoid and minimize these impacts to the extent practicable have not been considered.

Recommendation: In order to provide an alternatives analysis that is sufficiently robust to comply with the section 404(b)(1) Guidelines, the FEIS should evaluate additional off-site alternatives in a larger geographic scope, including Alameda and Contra Costa counties, and carry forward the “no docks” approach into some or all of the action alternatives. EPA recommends identifying the LEDPA in the FEIS.

¹ water.epa.gov/lawsregs/guidance/wetlands/upload/2008_04_10_wetlands_wetlands_mitigation_final_rule_4_10_08.pdf

Direct Impacts

The proposed action would require a Clean Water Act Section 404 permit due to the direct impacts to 37 acres of jurisdictional waters. Impacts would result from installation of boat docks, fill activities for footings on bridges, modification of the central drainage ditch, levee breaching for Lathrop Landing back bay, and maintenance dredging. The DEIS provides Table 2-2 showing the permanent fill for each alternative (page 2-38). The table does not show the acres of temporary and conversion impacts. The DEIS also lacks maps showing the jurisdictional waters and the location of the temporary, conversion, and permanent impacts to these waters for each of the alternatives.

The DEIS does not sufficiently describe the dredging components of the project, which makes it difficult to evaluate the adequacy of the impact analysis.

Recommendations: In the FEIS, update Table 2-2, or create an additional table, to include more detail about types of impact to jurisdictional water: temporary, conversion, or permanent. The FEIS should also include a map identifying the jurisdictional waters in the project area and specify the location of the different impacts for each alternative. Include a more complete description of the conversion of acres in the central drainage ditch in Alternative 3, including the likelihood of successful restoration/conversion and the basis for any assumptions underlying that prediction.

Further describe the type of dredging to be used, proposed dredging design depth in each waterway, the initial volume of material to be removed in each area, and expected maintenance dredging frequency and volumes.

Compensatory Mitigation

The DEIS does not describe a compensatory mitigation proposal to offset impacts regulated under CWA 404, nor does it contain a discussion of the 2008 Federal Mitigation Rule in the Regulatory Framework section of the Water Resources chapter.

Further, EPA believes the Paradise Cut Conservation Area, as currently proposed, is not an appropriate compensatory mitigation area for impacts to waters of the U.S. Without proper protection and management, the PCCA could be impaired by poor water quality, introduction and/or occurrences of non-native and invasive fish and plant populations, human intrusions such as boat traffic and pet-related recreation, and illegal poaching of fish and wildlife. If the project proponent intends to use this area as compensatory mitigation for impacts to waters of the U.S., it will need to be redesigned to address these issues.

Recommendations: In the FEIS, provide a draft mitigation proposal that complies with the 2008 Federal Mitigation Rule, including performance standards, monitoring, and long-term management. The proposal must compensate for the direct and indirect impacts to jurisdictional waters. EPA recommends implementing compensatory mitigation prior to the construction of the proposed project to help account for and offset temporal impacts to waters of the U.S.

A conservation area established to mitigate for project-related impacts should include wetland and riparian habitat suitable for native species; and exclude docks, boats, piers, and other recreation assets.

Water Quality

There would be significant impacts to the chemical, physical and biological integrity of waters resulting from the proposed development. In particular, water quality and native fish habitat in the San Joaquin River, Old River, and Paradise Cut would be adversely affected. These impacts have not been sufficiently described in, nor addressed by, the DEIS. NEPA and the 404(b)(1) Guidelines require that such indirect impacts be included in the evaluation of alternatives.

The existing conditions sections of the DEIS do not reflect current information on conditions in the Delta. The document should include information from the updated biological assessments for the Continued Long-term Operations of the Central Valley Project and State Water Project (OCAP)² and EPA's Action Plan for Water Quality Challenges in the SF Bay Delta Estuary³.

The San Joaquin River, Old River, and surrounding waterways provide critical habitat for Chinook salmon, steelhead, delta smelt, and green sturgeon, all of which have shown population declines in recent years⁴. These waters are listed on the 2010 Clean Water Act 303(d) *impaired* bodies list as violating water quality standards due to numerous contaminants, including pesticides, metals, nutrients/low dissolved oxygen, invasive species, salinity, and toxicity from unknown sources⁵. Without additional mitigation measures, the alternatives considered in the DEIS would exacerbate impairment of *beneficial uses* related to agricultural irrigation and aquatic life in the south Delta. The condition of these beneficial uses are governed by the State Water Resources Control Board and the nine Regional Water Boards in partnership with EPA. The DEIS states that the Central Valley Water Board is responsible for issuing waste discharge requirements to implement water quality objectives, but does not provide information about permits that would be required for this project.

The following elements of the proposed project are of particular concern when evaluating their effects on water quality and fish resources: stormwater runoff; installation of boat docks and the resulting boating, dredging, and fishing activities; creation of the Paradise Cut Canal; and removal of levee vegetation.

Recommendations: Include, in the FEIS, information from the updated biological assessments for the Continued Long-term Operations of the Central Valley Project and State Water Project (OCAP) and EPA's Action Plan for Water Quality Challenges in the SF Bay Delta Estuary. The FEIS should also describe the Clean Water Act 303(d) impairments and total maximum daily load restrictions in the impacted water bodies. EPA is available to assist with the incorporation and evaluation of this information. In the FEIS, specify the waste discharge requirement permits that the project will seek from the Central Valley Water Board. EPA recommends coordinating the WDR process with the NEPA process to identify appropriate mitigation measures to include in the FEIS that will avoid further impairment and water quality violations of the listed water bodies.

Stormwater Impacts

The proposed action would create an inner lake system that would double as a recreational/visual amenity and a stormwater treatment system. As stated in the DEIS, the lake system would be managed to maintain the water level within about 9 inches of the optimal water surface elevation of 4 feet above

² http://www.usbr.gov/mp/cvo/ocap_page.html

³ U.S. EPA. 2012. Bay-Delta Action Plan. <http://www2.epa.gov/sfbay-delta/bay-delta-action-plan>

⁴ Interagency Ecological Program 2008. Pelagic Organism Decline Progress Report: 2007 Synthesis of Results.

⁵ 2010 CWA Section 303(d) List of Water Quality Limited Segments.
www.swrcb.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

sea level, allowing no more than about 18 inches of total variation in lake level (page 2-25). Replacing agricultural fields with an urban development would greatly increase the amount of stormwater runoff generated on Stewart Tract, which would contain contaminants, including those for which the south Delta is already impaired under Clean Water Act Section 303(d).

According to the DEIS, discharges from the inner lake into Paradise Cut would be expected to occur December through March, when stormwater runoff into the lake would be at its peak and the storage capacity of the lake would be exceeded. EPA is concerned that there would be inadequate residence time for the successful treatment of stormwater in these instances, resulting in untreated stormwater being discharged into the already impaired receiving waters at Paradise Cut throughout the rainy season. These instances are modelled to occur most years (from 1983 to 2000, they would have occurred 14 out of 18 years) (page 2-16). In addition, the inner lake would likely be characterized by low levels of dissolved oxygen, high levels of nutrients, high temperature, and high levels of contaminants.

The inner lake would provide habitat that is conducive to invasive and nuisance plant species, e.g., water hyacinth and Egeria, and non-native predatory fish species, which are proposed to be stocked in the lake. While the proposed fish screens might prevent adult non-native fish from being released into Paradise Cut, it is likely that the invasive plants and non-native fish eggs/larva would disperse into Paradise Cut and downstream into Old River and the San Joaquin River.

As described above, the inner lake would have significant indirect impacts to the water quality of jurisdictional waterways, and would need to have sufficient capacity to capture and hold runoff during the winter to provide adequate stormwater storage and treatment.

The DEIS does not sufficiently describe the impacts to water quality and fish resources that would result from the stormwater discharges of the inner lake into Paradise Cut. The document primarily discusses construction-related impacts and does not provide enough detail on the proposed operation of the stormwater treatment system and necessary mitigation measures.

Recommendations: Provide more detail in the FEIS regarding stormwater treatment prior to water entering the inner lake and once it is in the lake system, including the volume of stormwater the inner lake could accommodate and treat before being discharged into Paradise Cut. This discussion should include details about the stormwater residence time required to achieve water quality standards, the extent and location of wetlands, and the potential for “green infrastructure” (low-impact development techniques) to be applied that could reduce potential adverse effects of the proposed project. The FEIS should include criteria for dissolved oxygen and temperature to be achieved before lake water can be discharged into receiving waters at Paradise Cut. The FEIS should attach as an appendix the stormwater report prepared by Ascent Environmental, Inc. that is referenced in the DEIS.

The FEIS should offer alternate stormwater management scenarios, including:

- Designing and sizing the inner lake for a 200-year storm in order to provide appropriate capacity and residence time for stormwater treatment during anticipated storm scenarios.
- Excluding non-native fish from the inner lake and working with agencies and science organizations to potentially introduce genetically-appropriate native fish species to augment “wild” populations in the Delta.
- Designing a stormwater treatment system that does not utilize lakes on Stewart Tract. In this scenario, explore the options of (1) creating a lake that serves as a visual/recreational

amenity and would not discharge into surrounding waterways or (2) removing the lake system from the proposal to eliminate the possibility of non-native lake biota being transferred to surrounding waterways.

Fish Resources

EPA is concerned about the impacts to fish resources from the direct effects of boating activities and maintenance dredging in Old River and San Joaquin River to support boating, and the indirect effect of increased predation of sensitive fish species. These waterways serve as the primary migration corridor for salmonids moving between the Pacific Ocean and the San Joaquin River Basin, and the DEIS discloses that the proposed project could result in multiple adverse impacts to fish, including significantly increased mortality and disruption of anadromous fish migration into the Basin.

A number of efforts are under way to prevent extinction of these salmonids and promote their recovery, and these efforts could be compromised by elements of the proposed project. The Cumulative Effects chapter briefly acknowledges the Bay Delta Conservation Plan, the San Joaquin River Restoration Project, and the CALFED Ecosystem Restoration Program, but does not describe the impacts of the proposed project on these initiatives.

Recommendation: In the Cumulative Effects chapter of the FEIS, provide additional information about the projected impacts of the project on fish and aquatic restoration activities in the project vicinity, and propose appropriate mitigation for those cumulative impacts. The discussion should include a description of the importance of the San Joaquin River and Old River to native fish populations.

Boating Activities

The DEIS lists a number of impacts to fish resources that would result from the operation of the boat docks and marina infrastructure. First, the release of nonpoint source pollution from boat engines, spills during boat refueling, cleaning and maintenance of boats, and illegal dumping of sewage from boats is listed as a significant effect (page 4-41). The DEIS states that the environmental commitments listed for the project would address these impacts. It appears that the only environmental commitment listed in Chapter 2 Proposed Action and Alternatives that would apply to this impact is the exclusion of refueling stations from the Lathrop Landing back bay or Paradise Cut Canal facilities. EPA is concerned that this commitment would not provide enough protection from nonpoint source pollution associated with the proposed boat docks and marina.

The DEIS states that additional impacts to fish would result from increased noise and propeller strikes. These impacts would remain even after mitigation measures and environmental commitments are implemented: a no-wake zone limiting the magnitude of disturbance and noise levels, implementation of a fish monitoring plan, and the expectation that most boating activity would occur in the summer when “abundance of sensitive fish species in the south Delta is naturally low.” The DEIS also states that increased boating could result in increased sedimentation and turbidity with impacts to fish, but states the expectation that those effects would be mitigated by no-wake zones and low usage in months with abundant sensitive native fish.

The DEIS does not contain a description or analysis of boating activity patterns throughout the year in the south Delta or for developments of a similar nature in the area. The analyses of several impacts to fish rely on the assumption of low boating activity in non-summer months when sensitive fish would be abundant. This assumption is unsupported.

There would be significant direct effects to fish resulting from the maintenance dredging of the San Joaquin River and Old River, which would only be necessary due to the boat activity proposed. These effects are proposed to be mitigated by best management practices that may reduce, but would not fully compensate for, the impacts.

Recommendations: Consider a “no docks” approach in each alternative. For options that include docks, identify additional mitigation measures for nonpoint source pollution related to the operation of boats and marinas in the project. In the FEIS, Chapter 4 Fish Resources should also specifically highlight which environmental commitments from Chapter 2 are intended to mitigate for these nonpoint source pollution impacts.

Provide a description of boat usage patterns over time in the south Delta or for similar developments in the area in order to validate the assumption of low boating activity in months when sensitive fish would be abundant.

Consider an additional mitigation measure of providing funding to enhance enforcement staffing of State and/or federal regulatory agencies responsible for fish recovery and waterway protection.

As recommended in the Clean Water Act, Section 404 discussion above, provide additional information on proposed dredging activities to properly evaluate the impacts of dredging on native fish species.

Increased Predation of Sensitive Fish Species

The DEIS states that “overwater structures can cause long-term effects on the biological community by altering predator-prey relationships, fish behavior, and habitat function” (page 4-43). It acknowledges that constructing hundreds of new structures around the island would create nonnative fish habitat that could substantially increase mortality of native fish, including salmonids, delta smelt, and green sturgeon. Shade from these structures alters migratory behavior for some species, can “reduce the abundance of aquatic plants and benthic macroinvertebrates, an important food source for fish,” and creates favorable conditions for predatory fish to ambush juvenile fish. In addition to these effects from shade/docks, the proposed project would increase shallow-water habitat and low-velocity water that could lead to greater abundance of predatory fish and predation of sensitive fish species.

The mitigation measures proposed – such as maximizing light penetration for structures, avoiding the creation of habitat favoring predatory fish species, and designing shallow-water tidal marsh habitats “to the extent practicable” – lack the specificity needed to clearly demonstrate that impacts would be adequately avoided, minimized, and mitigated.

The DEIS briefly mentions a fishery resources mitigation and monitoring plan to be developed in consultation with the California Department of Fish and Wildlife, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service (page 4-46), but no draft of this plan is provided, so we are unable to evaluate its likely effectiveness.

Increased fishing activity in the area would be facilitated by proposed boat docks and fishing piers. The impact of fishing on native fish, including the mortality rate for salmon and steelhead from being hooked and released, is not addressed in the DEIS.

Recommendations: Demonstrate how the minimization measures for fish impacts have been incorporated into the project design, and provide sufficient information on compensatory mitigation for unavoidable impacts to listed fish to demonstrate consistency with the Clean Water Act section 404(b)(1) Guidelines. Provide descriptions and efficacy data for dock and pier structure designs that would maximize light penetration.

EPA recommends that the FEIS include the fishery mitigation and monitoring plan as an appendix, and a summary of the plan in the Fish Resources chapter. The plan and summary should include specific locations for mitigation and expected timelines for habitat restoration.

For each alternative, consider a “no docks” approach and discuss the extent to which such an approach could avoid some impacts related to predation of sensitive fish.

Paradise Cut

The conditions that would exist in the proposed Paradise Cut Canal would not be beneficial to listed fish species and, based on the information provided in the DEIS, would likely negatively impact such fish. The Canal would create additional habitat for non-native, predatory fish, compounded with the adverse effects of docks, boats, recreational use, and poor water quality. EPA is concerned that Paradise Cut and the new Paradise Cut Canal would likely not have suitable habitat for native fish; and the proposed changes to Paradise Weir would result in more fish being directed into these areas, where they would be exposed to high temperatures and increased risk of predation. Existing temperatures in Paradise Cut are in the stressful-to-lethal range for salmon and green sturgeon, and these temperatures would be expected to be higher after project implementation.

Additionally, fish that move into Paradise Cut or Canal would have a higher likelihood of being directed towards the pumps of the Central Valley Project and State Water Project rather than the San Joaquin River. The DEIS states that this impact would be insignificant because habitat improvements in Paradise Cut are expected to benefit fish and, therefore, compensate for the impact. These habitat improvements are not substantiated. In addition, native fish would likely face increased predation in these areas.

Recommendations: In the FEIS, provide additional information to substantiate the conclusion in the DEIS that habitat improvements in Paradise Cut would be beneficial to native fish species, particularly with regard to water temperature and the presence of predatory non-native fish. This discussion should also more clearly demonstrate how increased entrainment at the CVP and SWP pumps would be mitigated by habitat improvements. If the discussion warrants, provide additional mitigation for the impacts from entrainment and mortality of native fish from poor water quality and predation.

Air Quality

EPA is concerned with the air quality impacts from this project. The project area is federally classified as an extreme nonattainment area for the federal 8-hour ozone standard, a nonattainment area for the federal Particulate Matter PM_{2.5} standard, and a maintenance area for the federal Particulate Matter PM₁₀ standard and federal Carbon Monoxide standard. CO, PM₁₀, PM_{2.5}, and ozone are pollutants of concern within the San Joaquin Valley Air Basin. The DEIS includes proposed mitigation measures and project design elements that are intended to mitigate the project’s air impacts. EPA believes that additional measures are available that would avoid, minimize, and further mitigate such impacts.

Table 14-10 of the DEIS provides a summary of air emissions from project operations at full buildout in 2035 and shows that boating activities are the largest source of operational emissions of Reactive

Organic Gases, CO, SO₂, PM₁₀, and PM_{2.5} for the project. Importantly, the emissions of CO from boating activities in 2035 are predicted to be 151.44 tons/year, well above the Federal de minimus threshold of 100 tons/year, with ROG emissions predicted to be 8.10 tons/year, approaching the de minimus threshold of 10 tons/year from this single source. EPA notes that the totals for criteria pollutants in Table 14-10 from each source do not add up to the “total emissions” line in the table because the total emissions figures include amortized emissions from construction. This is explained in the text, but not on the table itself.

Recommendations: Consider air impacts when determining the LEDPA and evaluating the potential benefits of a “no docks” approach to each alternative.

Consider the removal of docks from the proposed action as an avoidance and mitigation measure for air quality impacts.

Commit to proposed mitigation measures in the FEIS and clarify which mitigation measure elements are also part of the project design and environmental commitments.

Coordinate with the San Joaquin Valley Air Pollution Control District to ensure that construction and operational emissions from this project, combined with other reasonably foreseeable projects nearby, would not exceed the relevant emission budgets in the State Implementation Plan, and document this coordination in the FEIS.

Clarify whether the tables in Chapter 14 include emissions estimates before or after mitigation. Table 14-10 should clearly state that the figures for “total emissions” include amortized construction emissions as shown in Figure 14-1.

Climate Change

On December 18, 2014, the Council on Environmental Quality released revised draft guidance for public comment that describes how Federal departments and agencies should consider the effects of greenhouse gas emissions and climate change in their NEPA reviews. The revised draft guidance supersedes the draft greenhouse gas and climate change guidance released by CEQ in February 2010 that is referenced in the DEIS under Regulatory Framework for the Climate Change chapter. This new draft guidance explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated greenhouse gas emissions, and the implications of climate change for the environmental effects of a proposed action.

EPA is concerned about the impacts of climate change on the proposed project. The DEIS discusses the implications of climate change with respect to the project’s impacts on flood risk, human health, energy use, and water supply. It does not discuss the implications of climate change with respect to impacts on other environmental resources, such as habitat and water quality.

The DEIS cites a conclusion by the San Francisco Bay Conservation and Development Commission that high water events throughout the Bay Area will be more frequent in the future such that today’s 100-year flood event will be a typical high tide event in 2050 (page 15-9). The BCDC assumed a sea level rise of 16 inches by 2050 and 55 inches by 2100. The proposed project includes levee improvements to meet California’s 200-year flood event objectives, but does not clarify whether the 200-year flood event is based on today’s flood models or models projected out through the life of the project that would consider sea level rise.

The DEIS also references a 2007 report prepared by EDAW, Inc. for the project titled “Evaluation of Potential Effects of Global Climate Change on the River Islands Project.” This report used sea level rise scenarios of 24 inches and 36 inches in 2100, considerably less than the figures used by BCDC. According to the DEIS, the report concludes that,

“reasonably foreseeable effects from climate change, including sea level rise, would not result in new significant impacts or substantial increases in the severity of any previously identified adverse environmental effects from the River Islands project related to flood risk reduction. Climate change also would not affect the feasibility of the River Islands flood risk management system, nor would it alter that flood risk management system’s effects on downstream properties” (page 15-24).

The DEIS appears to rely on this conclusion without considering the potential for a greater rise in sea level as projected by the BCDC. No summaries or data from the 2007 report are provided in the DEIS.

The DEIS states that the 2007 report does not take into account potential benefits of the flood bypass plan to be investigated as part of the 2008 settlement of a lawsuit by a coalition of conservation and fishing groups against the Central Valley Flood Protection Board and River Islands at Lathrop, LLC regarding the issuance of flood protection permits for the River Islands project (page 21-8). EPA understands, from a conversation with River Islands, LLC and a representative from the City of Lathrop (January 6, 2014), that inclusion of the bypass in Alternative 4 of the DEIS is intended to help inform the development of the settlement bypass, but should not be seen as a full project description as further analysis is required and ongoing.

Recommendations: Update the Regulatory Framework section of the Climate Change chapter to reflect the new CEQ draft guidance released on December 14, 2014.

Provide a discussion of the impacts from climate change on the environmental resources impacted by the project, including the impact of sea level rise on the San Joaquin River Wildlife Corridor, riparian habitat along levee reaches, Paradise Cut Conservation Area, native fish species, and water quality. Consider how those impacts from climate change may increase the vulnerability of these resources when estimating the potential impacts of the project.

Include the 2007 EDAW report as an appendix in the FEIS. The FEIS should also include a discussion of impacts based on reasonable projections of greater sea level rise than those used in the 2007 report, such as those used by BCDC, or explain why such projections were not used.

Clarify the basis for the 200-year flood projections and include a discussion of levee improvements that would need to be considered over time to maintain the 200-year flood event protection.

Provide a status update, in the FEIS, on the development of the flood bypass proposed in the 2008 settlement, and its impact on the proposed project’s resiliency against climate change.

Vegetation and Shaded Riverine Aquatic Cover

The DEIS states that removal of riparian vegetation along levees would be necessary to comply with Corps levee guidelines, and would result in significant impacts. The DEIS also states that the reclamation district can seek a variance from the Corps that would allow retention of some vegetation, but the document assumes maximum vegetation removal for the impact analysis because it is not certain

the variance would be granted. Vegetation removal and impacts to Shaded Riverine Aquatic cover would also result from construction of access bridges and planned breaches of levees.

EPA is aware of other projects in the Delta that were able to obtain variances by incorporating certain design elements into the project, such as including sediment benches on top of the engineered levee to allow for additional vegetated areas. The proposed project briefly discusses benches for vegetation, but does not provide sufficient detail about location, length, and elevation of the benches to evaluate their suitability as mitigation or for variance requests.

Recommendations: EPA encourages the project proponent to contact the California Coastal Conservancy and U.S. Bureau of Reclamation to learn how they have been able to successfully incorporate vegetation into their levee projects and obtain variances from the Corps. The FEIS should provide the status of any variance request and the location and size of any vegetation benches proposed as riparian habitat mitigation.

Should a variance be granted to allow planting on levee sediment benches, riparian vegetation would not establish quickly, as acknowledged in the DEIS, and there would likely be a temporal loss from construction impacts. The FEIS should quantify this projected loss and discuss whether compensatory mitigation would be needed for temporal impacts. In addition, we recommend that a monitoring plan be developed for riparian re-vegetation areas. In the event a vegetation variance is not obtained, the FEIS should identify additional mitigation measures for the loss of riparian vegetation.

Sustainability

A new, large-scale development provides opportunities to incorporate policies and designs that minimize demand for energy, minimize operational impacts, and create a high-quality living environment, with easy access to jobs, services, and recreation. Several sections of the DEIS discuss and incorporate sustainability measures into the action alternatives, but the document lacks a comprehensive summary and discussion of these measures⁶.

The DEIS contains inconsistent descriptions of the current status of California's Title 24, although it does make clear that building permits for the River Islands project will be required to follow the standards. A development of this size provides an excellent opportunity to go beyond the minimum required standards and commit to more extensive voluntary measures for energy and water efficiency, and environmental sustainability.

The DEIS mentions that the San Joaquin Council of Governments would be developing a Sustainable Communities Strategy and Regional Transportation Plan in 2014. The RTP and SCS have since been adopted and published⁷.

⁶ Chapter 23 Energy Resources and Environmental Sustainability discusses energy use; Chapter 2 Proposed Action and Alternatives states that the "Residential Design Guidelines and Development Standards of River Islands at Lathrop" requires all buildings to incorporate energy conservation into their design and provides several methods to consider (page 2-50); Chapter 14 Air Quality includes a number of measures provided in Mitigation Measure AQ-3 that could be considered sustainability measures: transit/pedestrian/bicyclist-enhanced infrastructure, telecommuting centers, passive solar, increased insulation beyond California's Title 24 standards, etc. (page 14-31); and Chapter 12 Transportation discusses measures to establish and encourage the use of public transportation and bicycle and pedestrian pathways.

⁷ www.sjcog.org/index.aspx?NID=117

A complete green building commitment would incorporate strategies to minimize energy and water needs, minimize harmful chemicals, and create a healthy indoor environment, among other goals. Green building strategies can also reduce operation and maintenance costs for owners and ease the project's public service (i.e., water and electricity) demands. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program offers detailed guidance, and EPA is available to assist the Applicant in identifying appropriate opportunities.

Recommendations: Revise descriptions of Title 24 in Chapters 15 and 23 to consistently reflect the current status and requirements. Provide a copy of "Residential Design Guidelines and Development Standards of River Islands at Lathrop" in the appendix of the FEIS. Include an updated discussion of the San Joaquin Council of Governments Sustainable Communities Strategy and Regional Transportation Plan and how these documents will impact the alternatives.

EPA further suggests that the project proponent consider the following sustainability measures:

- Leadership in Energy and Environmental Design for Neighborhood Development Certification for the project area or a portion of it. LEED-ND certification provides independent, third-party verification that a neighborhood development project is located and designed to meet high levels of environmentally responsible, sustainable development.
- LEED certification for homes, schools, and commercial buildings.
- Use of recycled materials to replace raw materials for particular infrastructure components. Some options include tire-derived aggregate, crushed recycled concrete, recycled asphalt pavement, and rubberized asphalt concrete.
- Creating a policy to use locally sourced materials to reduce air emissions from transportation.

