



**DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922**

**RECORD OF DECISION
408 PERMISSION AND DEPARTMENT OF THE ARMY 404 PERMIT TO
SACRAMENTO AREA FLOOD CONTROL AGENCY FOR THE NATOMAS LEVEE
IMPROVEMENT PROGRAM, PHASE 4A LANDSIDE IMPROVEMENTS PROJECT
SACRAMENTO AND SUTTER COUNTIES, CA**

The Natomas Levee Improvement Program (NLIP), Phase 4a Landside Improvements Project (Phase 4a Project) is a flood risk management project proposed for construction by the Sacramento Area Flood Control Authority (SAFCA) as presented by the State of California Central Valley Flood Protection Board (CVFPB). The Secretary of the Army has delegated approval authority to the Chief of Engineers for the U.S. Army Corps of Engineers (USACE) to issue permission to proceed with the proposed construction pursuant to 33 U.S.C. Section 408 (408 Permission) based on finding that the proposed alteration is not injurious to the public interest and will not impair the usefulness of the Sacramento River Flood Control Project. In accordance with 33 CFR Parts 320 to 332, USACE is delegated authority to issue Department of Army permits (DA permits) for discharges of dredged or fill material into "waters of the United States", including wetlands, pursuant to Section 404 of the Clean Water Act and for work or structures affecting navigable waters under Section 10 of the Rivers and Harbors Act.

I. Background

The purpose of the NLIP is to provide at least 100-year flood protection to segments of the Federal levee system that do not currently meet that standard as quickly as possible. The remaining segments would be improved by USACE to meet State standards for 200-year flood protection following approval of a post-authorization change report for the American River Common Features Project.

The Landside Improvements Project, which is a component of the NLIP, consists of four project phases (1, 2, 3, and 4). The Phase 4 Project, however, has been split into two subphases (4a and 4b). The project phases have been analyzed in previous environmental documents either at a program level (Phases 1–4) or project level (Phases 1, 2, 3, and 4a). The Phase 1 Project was completed in 2008. The Phase 2 and 3 (except 3c) Projects are under construction, and are anticipated to be completed in 2010. The Phase 4a Project construction is proposed to begin in 2011 and be completed in 2012.

The Phase 4a Project consists of improvements to a portion of the Federal perimeter levee system of the Natomas Basin in Sutter and Sacramento Counties, California, as well as associated landscape and irrigation/drainage infrastructure modifications. The NLIP is proposed as early implementation of the anticipated outcome of a post-authorization change report for the American River Common Features Project.

The Phase 4a Final Environmental Impact Statement (FEIS), dated February 19, 2010, for the 33 U.S.C. Section 408 Permission to the CVFPB and Rivers and Harbors Act Section 10 and Clean Water Act Section 404 authority to SAFCA addressed flood damage reduction and habitat conservation in the Natomas Basin. The Phase 4a Project focuses only on segments that do not currently meet the 100-year design criteria adopted by the Federal Emergency Management Agency (FEMA): approximately 18 miles along the Sacramento River east levee, approximately 5 miles along the Natomas Cross Canal (NCC) south levee, and more than 3 miles along the Pleasant Grove Creek Canal (PGCC) west levee.

This Record of Decision (ROD) approves the specific flood damage reduction features proposed for implementation in the Phase 4a Project, as defined below:

- **Sacramento River east levee Reaches 10–15: Levee raising/rehabilitation and seepage remediation**—Construct an adjacent levee, raised in Reaches 10–11B, with cutoff walls, seepage berms, and relief wells, where required, to reduce seepage potential. Cutoff wall construction could continue 24 hours per day, seven days per week (24/7).
- **Sacramento River east levee Reach 4B: Seepage remediation**—Install cutoff wall in the adjacent levee from Stations 201+50 to 214+00 to provide additional seepage remediation.
- **NCC south levee: Levee raising and seepage remediation at two locations**—At the Natomas Central Mutual Water Company (NCMWC) Bennett Pump Station and Northern Main Pump Station, raise the NCC south levee, flatten levee side slopes, install cutoff wall, and modify or replace the existing pumps and motors to accommodate raising the discharge pipes above the 200-year design flood elevation. Cutoff wall construction could continue 24/7.
- **Replacement of South Lauppe Pump**—At Sacramento River Mile 77.2 (left bank), remove the pump, intake, and support structure prior to initiation of a separate USACE project to construct bank protection at the site. Following completion of USACE's bank protection project, SAFCA would reconstruct the pump, intake, and support structure.
- **Modification of Private River Pumps**—Raise discharge pipes and upgrade motors and pumps at nine private river pumps at NCC south levee Reach 1 and Sacramento River east levee Reaches 1, 2, and 11A–12A to be compatible with approved and proposed levee improvements.
- **Riverside Canal (highline irrigation canal) relocation and extension**—Extend the relocated canal upstream of Powerline Road in Reaches 11B–12B of the Sacramento River east levee; relocate the canal east of the adjacent levee in Reaches 13–15 and east of the adjacent levee, residences, and tree groves in Reaches 15–17; and construct a piped section in Reaches 15–18B at the toe of the new adjacent levee.
- **Modifications to NCMWC Riverside Pumping Plant**—Raise the pumping plant's discharge pipes above the 200-year design water surface and modify or replace the plant's existing pumps and motors to accommodate the raised discharge pipes. In-water construction would include use of dredge pumps to remove sediment so that new pumps could be installed, but dewatering involving use of a cofferdam is not anticipated.

- **Modifications to Reclamation District (RD) 1000 Pumping Plants Nos. 3 and 5—** Raise the pumping plants' discharge pipes above the 200-year design water surface, extend the pipes to tie into existing discharge pipes within the waterside bench, replace or modify pumps and motors, and perform other seepage remediation, including relocating the landside stations away from the levee to accommodate the raised discharge pipes. Most of these modifications would take place above the Sacramento River's normal summer and fall water surface elevations; however, reconstruction of the Pumping Plant No. 3 outfall and the removal of a deep culvert at Pumping Plant No. 3 would require dewatering. Construction on both pumping plants would occur 24/7.
- **Development of New and Replacement Groundwater Wells—**Abandon approximately 13 agricultural wells and replace the wells in locations outside the footprint of the levee improvements. Additionally, construct 5 new wells to provide a water supply for habitat mitigation features. Drilling of the wells would require construction to continue 24 hours per day for up to three days to avoid collapse or seizing of drill equipment within the hole.
- **Borrow site Excavation and Reclamation—**Excavate earthen material at the borrow sites and then return the sites to preconstruction uses or suitable replacement habitat. For the Phase 4a Project levee and canal improvements along the Sacramento River east levee, the Fisherman's Lake Borrow Area is anticipated to be the primary source of soil borrow material. However, additional borrow sites may be needed for Phase 4a Project work along the Sacramento River; these include the Interstate 5 Borrow Area, the Elkhorn Borrow Area, South Sutter, LLC, Krumenacher, the Airport north bufferlands, and the Twin Rivers Unified School District stockpile site. For the Phase 4a Project construction on the NCC south levee, the Brookfield borrow site is anticipated to be the primary source of soil borrow material. Some of these borrow sites (Elkhorn Borrow Area, Airport north bufferlands, Krumenacher, Twin Rivers Unified School District stockpile site, and South Sutter, LLC) have been fully analyzed in previous environmental documents; therefore, their potential impacts are incorporated by reference into the FEIS. The Fisherman's Lake and I-5 Borrow Areas are fully analyzed in the FEIS.
- **Habitat Creation and Management—**Establish a habitat complex in the Fisherman's Lake Borrow Area (Fisherman's Lake Habitat Complex) through the creation of approximately 140 acres of agricultural upland habitat; establishment of perennial native grasses on levee slopes, seepage berms, and access and maintenance areas; creation of up to 120 acres of managed seasonal and perennial marsh; and establishment of woodlands consisting of native riparian and woodland species at locations along the landside of the Sacramento River east levee.
- **Infrastructure Relocation and Realignment—**Realign and relocate private irrigation and drainage infrastructure (wells, pumps, canals, and pipes); and relocate utility infrastructure (power poles) as needed to accommodate the levee improvements and canal relocations.
- **Landside Vegetation Removal—**In Reaches 12B–15 of the Sacramento River east levee, clear landside vegetation in a corridor up to 660 feet wide to prepare for Phase 4a Project levee and canal improvement work.

- **Waterside Vegetation Removal**— Up to 2.23 acres of waterside vegetation would be removed due to replacement of pumping plants and construction of outfalls in Reaches 10–15 of the Sacramento River east levee.
- **Right-of-Way Acquisition**—Acquire lands within the Phase 4a Project footprint along the Sacramento River east levee, NCC south levee, and at associated borrow sites.
- **Encroachment Management**—Remove encroachments as required to meet the criteria of USACE, CVFPB, and FEMA.
- **Exchange of Properties Between SAFCA and SCAS in Reaches 4A, 5B, and 6 of the Sacramento River East Levee**—SAFCA and SCAS would carry out a land exchange that would support expansion of airport bufferlands along the eastern edge of the new Elkhorn Irrigation Canal and provide SAFCA additional habitat mitigation land along the upper portion of the Sacramento River east levee outside of the 10,000-foot Airport Critical Zone.

A letter requesting 408 Permission was received in April 2010 from the CVFPB. The project requires permission to alter the existing Federally-authorized levee and construct a new adjacent levee that would become part of the Federally-authorized flood risk reduction project.

An application for a DA Permit was originally received in January 21, 2010 for the Phase 4a Project. Authorization is required under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for the proposed Phase 4a activities. An initial public notice describing the Phase 4a Project was issued on February 19, 2010.

II. Alternatives Considered

In addition to the No-Action Alternative, the following alternatives were considered:

1. Alternative 1: (Preferred and Selected Alternative) Adjacent Levee. This alternative includes levee raising and seepage remediation along the Sacramento River east levee (Reaches 10–15) and in two locations of the NCC, relocation and extension of the Riverside Canal, and modifications to the Riverside Pumping Plant and RD 1000's Pumping Plants Nos. 3 and 5. Landside and waterside vegetation removal in Reaches 10–15, as needed, to accommodate these elements would be completed ahead of Phase 4a Project construction. Parcels within the Fisherman's Lake Borrow Area would be the primary sources of soil borrow for Phase 4a Project construction; those parcels excavated for borrow material would be reclaimed as agricultural land, grassland, or managed marsh depending on their location and existing land use. Wells would be constructed to provide a water supply for habitat features.

2. Alternative 2: Raise and Strengthen Levee in Place. This alternative would involve raising the landside slope of the Sacramento River east levee in Reaches 10–11B, widening the levee crown, flattening the landside slopes, constructing cutoff walls within the existing levee section, and construction seepage berms and relief wells, where required in Reaches 12–15 of the Sacramento River east levee. This alternative would include erosion control improvement along approximately 5,400 feet of riverbank at the waterside toe of the Sacramento River east levee at River Miles 68.8 through 70.0. Implementation of this alternative would require

substantial encroachment removal from the waterside and landside of the Sacramento River east levee (Reaches 10–15).

The environmentally preferred and Least Environmentally Damaging Practicable Alternative is Alternative 1, the Adjacent Levee.

III. Responses to FEIS Comments

Two comment letters were received during the FEIS comment period. These comments were from the U.S. Environmental Protection Agency (EPA) and an individual property owner, Ms. Ann Amioka. Their comments and USACE responses (*in italics*) to those comments are provided below.

U.S. Environmental Protection Agency:

- States that the Phase 4a DEIS/DEIR fails to include a modeling assessment for particulate matter of 2.5 microns or less (PM_{2.5}), for which the Sacramento Valley Air Basin is a nonattainment area. States that the FEIS contains inconsistencies related to the General Conformity under the Federal Clean Air Act discussion and analysis. A General Conformity analysis is required for Federal projects or approvals in areas that are designated as nonattainment for the National Ambient Air Quality Standards (NAAQS). States that offsets should not be considered when determining whether or not the project is applicable to General Conformity, but rather, offsets should only be used after applicability has been established. Recommends that USACE consider preparing a supplemental FEIS to address PM_{2.5} modeling deficiencies and a General Conformity determination. *Project emissions were recalculated based on a revised project schedule that spreads construction of the Phase 2, 3, 4a, and 4b Projects over a five-year period instead of the original four-year period. Based on this schedule adjustment, controlled (mitigated) emissions for criteria pollutants, including PM_{2.5}, were reduced below the applicable General Conformity de minimis thresholds. Specifically, PM_{2.5} emissions (controlled) for the 2010–2014 construction seasons were estimated to be 4.7, 6.2, 4.2, 2.9, and 2.6 tons/year, respectively. These estimated PM_{2.5} emissions are significantly below the General Conformity de minimis threshold of 100 tons/year for nonattainment areas. Regarding evaluation of oxides of Nitrogen (NO_x), the revised analysis does not consider off-site mitigation in evaluating General Conformity applicability. NO_x emissions are below the General Conformity de minimis threshold of 50 tons/year for all construction years.*
- Expresses continued concern regarding the residual flood risk and potential for indirect and cumulative impacts of future development, and recommends implementation of the Natomas Basin flood safety plan as soon as possible so that new development does not compromise the flood damage and risk reduction achievements of this project. *This same comment was received during the DEIS/DEIR comment periods for the Phase 3 and 4a Projects; responses are provided in the Phase 3 and 4a FEISs (Response F2-2 in both documents).*
- Recommends that USACE consult with the Sacramento Metropolitan Air Quality Management District (SMAQMD) to ascertain the effects of induced growth on meeting air quality goals for the Sacramento area. Suggests that USACE identify and commit to

smart growth strategies in the ROD to minimize negative air quality impacts of development behind the levees. *Growth-inducing impacts of the NLIP are discussed in Section 5.2, "Growth Inducement," of the Phase 4a DEIS/DEIR. As described in that section, population growth and urban development within the project area are driven by local, regional, and national economic conditions. Neither USACE nor SAFCA have authority over local land use planning; therefore, neither agency can commit to smart growth strategies, nor would it be appropriate for these agencies to do so. However, USACE and SAFCA are concerned about negative air quality impacts in the Sacramento Area, and have worked with both the SMAQMD as well as the Feather River Air Quality Management District (FRAQMD) to minimize the NLIP's construction-related emissions. As part of the NLIP, USACE and SAFCA have: consulted with SMAQMD and FRAQMD to review each district's regulations; incorporated each air district's recommended mitigation measures into the multiple NLIP EIS/EIRs; provided the air districts with copies of draft and final NLIP EIS/EIRs for review and comment; and responded to all comments provided, including incorporating recommended changes in the NLIP EIS/EIRs, as appropriate.*

Ann Amioka:

- Expresses concern that the Riverside Canal alignment appears to have shifted onto the commenter's mother's property, referring to the change in Plate 2-12 of the Phase 4a DEIS/DEIR, which was revised in the Phase 4a FEIS. *The canal alignment shown in the DEIS/DEIR was based on a worst-case flood risk reduction footprint preliminary engineering design. The subject property was included in this worst-case footprint and would have required acquisition of the property in whole. As part of ongoing design refinements, the flood risk reduction footprint was narrowed, as discussed in the FEIS and thus shifted the canal westward, onto the commenter's mother's property. This design refinement will likely result in partial, instead of whole, acquisition of the property.*
- Suggests the use of an underground pipeline to reduce the project's impacts related to visual and agricultural resources, and potential incompatibility with the Airport. *Use of a pipeline instead of a canal would not substantially change the footprint. The pipeline would still be installed in an embankment built above ground level. The bottom of the pipe would be set at the same level as the ditch bottom, and 2 feet of soil would be placed over the top of the pipe. The width of the footprint for this embankment would, therefore, be close to the width of a canal footprint. In addition, pipelines are more costly. Finally, the Riverside Canal in this reach has a much higher capacity, which would require a larger pipeline than is considered for other areas, further increasing the cost. The Riverside Canal's location within Airport Perimeter B is an existing condition. Relocation of the canal to accommodate the proposed levee improvements would not change this condition, meaning that any potential incompatibility already exists, with or without the project.*

IV. Other Applicable Laws and Policies

1. National Environmental Policy Act (NEPA) of 1969, as Amended: The Proposed Action is considered a major Federal action. USACE determined the Proposed Action has the potential to significantly affect the quality of the human environment. Scoping for the Environmental Impact Statement (EIS) began on March 27, 2009 when a notice of intent to prepare an EIS and announce a public scoping meeting was posted in the Federal Register

(Vol. 74, No. 58) and distributed to a large mailing list. The public scoping meeting was held on April 13, 2009. On August 28, 2009, USACE issued the DEIS. The Notice of Availability was also published in the Federal Register on August 28, 2009 (Vol. 74, No. 166). On September 17, 2009, during the public comment period, a public meeting was held to receive comments on the DEIS. The public comment period for the DEIS closed on October 13, 2009. Seventeen comment letters were received as well as oral testimony from two individuals at the public meeting. The major areas of controversy associated with the comments were construction-related effects on Garden Highway residents; concerns regarding the air quality calculations and exceeding conformity thresholds; habitat mitigation; 24/7 construction; encroachment removal; and SAFCA's ability to fund mitigation measures. USACE issued the FEIS on February 19, 2010. A Notice of Availability was published in the Federal Register on February 19, 2010 (Vol. 75, No. 33).

2. Federal Clean Water Act (CWA) of 1972, as Amended: The Phase 4a Project requires DA authorization under Section 404 of the CWA for discharge of fill into waters of the United States, including wetlands. The discharge of fill would be a result of construction of several elements of the Phase 4a Project. Construction of the adjacent setback levee would result in the filling of irrigation and drainage ditches, including the Riverside Main Canal, within the footprint of the levee. The relocated Riverside Main Canal landward of the adjacent setback levee would result in the filling of several drainage ditches. Improvements to drainage and irrigation pumping plants would result in fill in the Sacramento River for new support infrastructure and within interior drainage canals due to improved intake structures for the pumping plants. Improvements to two irrigation pumping plants and one drainage plant along the Natomas Cross Canal would result in fill of land side irrigation and drainage ditches and some fill within the Natomas Cross Canal for a new outfall for the drainage plant. Parcels on the west side of Fisherman's Lake would be used for earthen material borrow and the excavation of borrow material would result in fill of wetlands within the borrow parcels. Temporary fill of adjacent irrigation and drainage ditches would occur to create temporary haul routes for borrow material transportation. Additional fill would occur within irrigation and drainage ditches surrounding the borrow parcels to construct drainage infrastructure from the borrow parcels into existing ditches to facilitate stormwater drainage of the borrow parcels. The FEIS is being used to support the 404 decision for the proposed project.

3. Rivers and Harbors Act of 1899, as Amended: The Proposed Action would require authorization under Section 10 (33 USC 403) for the reconstruction of RD 1000's Pump Stations No. 3 and 5, which involves raising and extending discharge pipes, replacing or modifying pumps and motors, and performing other infrastructure modifications, including relocation of the stations away from the levee to accommodate raising the discharge pipes above the 200-year design flood elevation. Modifications to NCMWC's Riverside Pumping Plant including raising and extending discharge pipes, and modifying or replacing the existing Riverside Pumping Plant pumps and motors to reflect raising the discharge pipes above the 200-year design flood elevation. Other private irrigation diversions would also be replaced to account for the increased levee height. The Proposed Action is also subject to Section 408 (33 USC 408) requiring permission for the alteration of the existing Federally-authorized levee and construction of a new adjacent levee that would become part of the Federally-authorized flood risk reduction project. A letter requesting 408 permission was received in April 2010 from the CVFPB. The FEIS is being used to support the Sections 10 and 408 decisions for the Proposed Action.

4. Fish and Wildlife Coordination Act (FWCA) of 1934, as Amended: The U.S. Fish and Wildlife Service (USFWS), the National Marine Fisheries Service (NMFS), and the California Department of Fish and Game (DFG) have provided coordinated input on the NLIP and specifically the Proposed Action. Consultation with these agencies is ongoing throughout the program. The Fish and Wildlife Coordination Act Report was provided by USFWS in May 28, 2010. The Proposed Action is in full compliance with the FWCA.

5. Endangered Species Act (ESA) of 1973, as Amended: Endangered Species Act Section 7 consultation with NMFS and USFWS has been completed. USFWS issued a programmatic BO on October 9, 2008 for the valley elderberry longhorn beetle (VELB) and Giant Garter Snake (GGS). In May 2010, USFWS appended the programmatic BO for the Phase 4a Project. USACE also received a Concurrence of Determination of Not Likely to Adversely Affect from NMFS in January 2010. The BO and Letter of Concurrence have been incorporated into the DA permit and the Section 408 permission as special conditions.

6. Magnuson-Stevens Fishery Conservation and Management Act (MSA) of 1976 as Amended: USACE received a letter of concurrence of not likely to adversely affect EFH under MSA in January 2010.

7. Migratory Bird Treaty Act (MBTA) of 1918: Compliance with the MBTA is being addressed through compliance with the ESA, FWCA, and California Endangered Species Act (CESA). Prior to construction, SAFCA will obtain authorization for take under Section 2081 of the CESA and will comply with the terms of the permit issued for that purpose.

8. Clean Air Act (CAA) of 1963, as Amended: The Proposed Action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the CAA. Based on the modeling conducted, it is foreseeable that unmitigated, construction-generated emissions would result in or substantially conflict with applicable air quality planning efforts. However, with implementation of mitigation measures identified in the FEIS, emissions would be reduced below the U.S. Environmental Protection Agency's (EPA's) general conformity *de minimis* thresholds and would not hinder the attainment of air quality objectives in the local air basin. Coordination with EPA has resulted in project refinements that require off-road construction equipment to have a 40% reduction below the statewide fleet average for this project. This is a result of the new thresholds published in June 2010. USACE will continue to coordinate with EPA on the Phase 4a and all future projects in the Natomas Basin.

9. National Historic Preservation Act (NHPA) of 1966, as Amended: The NLIP, and specifically the Phase 4a Project, is in compliance with Section 106 of the NHPA. USACE has initiated Section 106 consultation with the State Historic Preservation Officer (SHPO). All evaluations of resource identification, determinations of significance, and determinations of project effects and mitigation/treatment measures will meet the requirements of 36 CFR 800 (procedures for implementing Section 106) through the Programmatic Agreement (PA) executed on May 1, 2008 between USACE, the SHPO, and SAFCA.

10. Executive Order (EO) 11988: Floodplain Management: There are no practicable alternatives to the Proposed Action which would avoid adverse effects and incompatible development in the floodplain. The NLIP will reduce flood risk to existing infrastructure and provide habitat for listed species.

11. EO 11990: Protection of Wetlands: The Proposed Action includes all practicable measures to minimize harm and loss to wetlands. Based on the FEIS and proposed compensatory mitigation for project impacts, the Proposed Action complies with the EO.

12. EO 13175: Consultation with Native American Tribes, Alaska Natives, and Native Hawaiians: The Proposed Action does not implement any regulations, legislation, policies, or actions that have substantial direct effects on one or more Native American tribes, on the relationship between the Federal Government and Native American tribes, or on the distribution of power and responsibilities between the Federal Government and Native American tribes. Native American participation has been incorporated into the terms of the PA entered into under Section 106 of the NHPA and executed on May 1, 2008.

13. Farmland Protection Policy Act (FPPA) (7 USC 4201 et seq.): The Proposed Action requires converting areas of farmland to flood damage reduction facilities. The NLIP, and specifically the Phase 4a Project, complies with the FPPA because it provides for compensation for unavoidable direct conversion of agricultural land to non-agricultural uses, will provide infrastructure that will support the continuation of agricultural resources on the west side of the Natomas Basin, and is consistent with state and regional planning efforts that will protect farmland from development.

V. Consideration of Mitigation Measures

Although all practicable means to avoid, minimize, and mitigate adverse effects on environmental resources have been incorporated into the NLIP, the Proposed Action would have several unavoidable, significant effects.

The volume of borrow material and associated haul traffic required for project implementation would result in temporary unavoidable and significant increases in traffic on local roadways. Creation and implementation of a traffic routing plan will greatly reduce the increased traffic levels, but it is anticipated that traffic during some periods will still exceed acceptable thresholds. During some time periods, temporary short-term noise and vibrations affecting residents along Garden Highway would also be significant and unavoidable.

Construction of the Phase 4a Project levee and canal improvements, including construction of cutoff walls, groundwater wells, and pumping plant modifications conducted 24/7, could result in temporary, short-term noise levels that exceed the applicable daytime and nighttime standards for non-transportation sources, resulting in increased annoyance and/or sleep disruption to occupants of residential buildings and other sensitive receptors. Mitigation measures would reduce this impact, but not to a less-than-significant level, especially during nighttime hours. Sensitive receptors live in close proximity to the construction sites, and mitigation cannot feasibly reduce all noise impacts to levels of less-than-significant.

To comply with new Federal air quality standards, to ensure that the project stays within de minimus, NOx emissions must be further reduced to 40% below the statewide fleet average on all construction equipment. Implementation of this mitigation measure will result in a less-than-significant air quality impacts.

The expansive footprint of the project would result in the conversion of a significant amount of important farmland to nonagricultural use(s). Mitigation intended to reduce project effects on farmland has been included in the mitigation monitoring and reporting plan adopted by SAFCA.

Although the Phase 4a Project would not require full closure or demolition of Garden Highway, intermittent short-duration road closures and detours would disrupt residents' access to the nearby community and would cause a temporary physical disruption to the community. Construction of the adjacent levee would also temporarily alter access to landside residences with driveways connecting to the Garden Highway. Implementation of mitigation measures would reduce these impacts, but not to a less than significant level. Residents and businesses would still experience temporary disruption due to road closures, detours, and construction. Therefore, this impact would remain significant and unavoidable.

Implementation of the Phase 4a Project would include excavation of soil from the eastern edge of the Fisherman's Lake Borrow Area, which is zoned MRZ-3 by the Department of Conservation's Division of Mines and Geology. The MRZ-3 designation indicates that the significance of mineral deposits in that area cannot be evaluated from existing data. Because economically valuable minerals, if present, could be removed from a portion of the Fisherman's Lake Borrow Area, this impact is considered to be potentially significant. While implementing the proposed mitigation measure would provide data that would allow SAFCA to determine whether or not economically valuable mineral resources are present in the designated MRZ-3 area of the Fisherman's Lake Borrow Area, if economically valuable mineral resources are found to be present, they would be removed as part of project activities. Therefore, this potential impact is considered significant and unavoidable.

The Phase 4a Project would involve the short-term loss of woodland habitat. The Phase 4a Project would offset the loss of woodlands by preserving and creating woodlands; however there would be a short-term loss of woodland habitat as the replacement plantings mature within approximately 10–15 years. This impact due to loss of existing woodland habitat while the replacement plantings are maturing would be significant. Additionally, the Phase 4a Project may involve the long-term loss of woodlands, if habitat creation/restoration is not effectively implemented, which would result in a potentially significant impact. Implementation of mitigation measures would reduce long-term impacts to a less-than-significant level, but the short-term impact would remain significant and unavoidable.

Removal of woodland habitat would have potential adverse impacts on Swainson's hawk, white-tailed kite, Cooper's hawk, northern harrier, and other special-status birds due to loss of suitable foraging and nesting habitat and disturbance of nesting pairs during project construction. Mitigation measures would create and preserve nesting and foraging habitat in the Natomas Basin and would reduce long-term impacts to a less-than-significant level. However, in the short-term, this impact would remain significant and unavoidable because replacement plantings would likely require a minimum of 10–15 years before providing important habitat components such as structure and shade.

The Phase 4a Project would require the use of construction equipment which would temporarily degrade the visual character of some parts of the project area. Additionally, the removal of trees and the conversion of some grassland to woodlands would alter the existing visual character of parts of the project area. There is no feasible mitigation available to reduce these impacts and they are considered to be significant and unavoidable.

Phase 4a Project nighttime construction of cutoff walls on the Sacramento River east levee, well construction activities, and pumping plant modifications, would introduce new lighting and glare to the project area. Proposed mitigation would reduce impacts, but not to a level of less-than-significant.

A Mitigation and Monitoring Plan (MMP) and a Long-Term Management Plan (LTMP) have been prepared to guide SAFCA and its partners as they manage the compensatory mitigation lands in perpetuity. The MMP and LTMP establish specific success criteria for the habitat components, specify remedial measures to be undertaken if success criteria are not met, and describe short- and long-term management and maintenance of the habitat lands.

Through coordination with NMFS, the NLIP, and specifically the Proposed Action includes designs to compensate for the loss of riparian vegetation and other impacts, permanent or temporary, to vegetation on the waterside of the Sacramento River east levee slope. Permanent impacts will be compensated through revegetation with native species at a 1:1 ratio, in-kind, where feasible.

A slurry spill contingency plan will be developed and included in the Stormwater Pollution and Prevention Plan (SWPPP) or slurry work plan prepared prior to work by the construction contractor. This SWPPP will include plans to notify NMFS, the Central Valley RWQCB, and USACE in case of a spill and measures to ensure any spill would be handled properly according to standard protocols.


Coordination with the SHPO in accordance with Section 106 of the NHPA, has led to the determination that at least one potentially significant cultural resource site could be affected by project activities. This has led to the development of a PA, for the NLIP program, that stipulates that Historic Property Treatment Plans (HPTP) shall be prepared to mitigate adverse effects to historic properties. The HPTP contains mitigation measures for potential effects on cultural resources that are consistent with those proposed in the FEIS.

The ROD completes the NEPA process. The ROD will be publicly available upon request, or can be found on the Sacramento District and SAFCA Web sites.

8 NOV 2010

Date

For


William J. Leady, P.E.
Colonel, U.S. Army
District Commander

LTC, DAC



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PERMISSION UNDER 33 U.S.C. 408

I. Special Conditions

In order to assure that the Proposed Action does not impair the usefulness of the existing Federal project and that it not be injurious to the public interest, the following conditions will be imposed and are as follows:

1. This Section 408 approval does not authorize the take of any threatened or endangered species or designated critical habitat. In order to legally take a listed species, there must be a separate authorization under an ESA Section 10 permit, or a BO under ESA Section 7, with incidental take provisions with which the CVFPB and SAFCA must comply. The USFWS BO Number 81420-2010-F-0446-1 dated May 20, 2010 contains mandatory terms and conditions to implement the reasonable and prudent measures associated with incidental take specified in the BO. Section 408 approval is conditional upon compliance with all of the mandatory terms and conditions associated with the BO, which are incorporated herein by reference. Failure to comply with the terms and conditions associated with the incidental take statement in the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with USACE's approval to proceed. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO and with the ESA. The CVFPB must comply with all conditions of this BO, including those ascribed to USACE. In response to ESA Section 7 consultation, NMFS prepared a letter of concurrence of not likely to adversely affect Central Valley steelhead, Central Valley spring-run Chinook salmon, or North American green sturgeon or their designated critical habitat or the Essential Fish Habitat of Pacific salmon.

2. SAFCA is required to submit a revision to RD 1000 Operation and Maintenance (O&M) (33 CFR Section 208.10) Manual for review and approval by USACE, Sacramento District within 180 days of construction completion. As-built drawings and permanent maintenance easement boundaries shall be submitted in conjunction with the draft O&M manual. Upon receipt of the draft O&M manual, this office will schedule a transfer inspection with CVFPB to verify all construction has been completed in accordance with the permission. Any features found to be deficient during that inspection will require CVFPB's correction prior to USACE accepting the alterations as part of the Federal project. Construction data is required to be provided to this office for review by the USACE Engineering Division during construction. Within 180 days of construction completion, CVFPB must furnish a certification report that the work has been completed in accordance with the conditions of this permission.

3. There shall be no disposal, including temporary disposal, of any material in any wetlands or other waters of the United States, except any discharge as authorized under a DA permit. Best Management Practices, such as silt fences and mulching, shall be employed to ensure exposed soils do not erode and wash into any waters of the United States.

4. To ensure that the project complies with Section 106 of the NHPA, CVFPB must comply with all terms of the PA between USACE, SAFCA and the SHPO signed on May 1, 2008.


5. To ensure there is mitigation for residual flood risk, CVFPB is required to develop a Floodplain Management Plan that includes proactive elements for flood information dissemination, public awareness notification and training, flood warning and evacuation plans, emergency flood operations plan with annual exercise, dedicated evacuation resources and post-flood recovery plans. This plan shall be submitted within one year of the issuance of the Section 408 letter of permission. The CVFPB is required to participate in and comply with applicable Federal floodplain management and flood insurance programs.

6. Per section 2035 of the Water Resources Development Act of 2007, the CVFPB and its sponsor, SAFCA, will follow their approved, Safety Assurance Review plan dated September 30, 2009.

II. Findings

Based on my review of the 33 U.S.C. 408 recommendation package, the FEIS, the views of other Federal, state, regional, and local agencies, and input from the public, I find the recommended NLIP Phase 4a Project to be technically adequate and not an impairment to the usefulness of the existing Federal project; to be in accordance with environmental statutes; to be without significant adverse hydraulic impacts; and to not be injurious to the public interest. Therefore, pursuant to my delegated authority under 33 U.S.C. Section 408 and subject to the above special conditions, the request for alteration of the Sacramento River Flood Control Project, NLIP Phase 4a Project is approved. I hereby grant permission to the State of California CVFPB to allow SAFCA to construct the NLIP Phase 4a Project and to alter the Federal project.

10/21/10
Date


Steven L. Stockton, P.E.
Director of Civil Works



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

**DEPARTMENT OF THE ARMY PERMIT
UNDER SECTION 10 OF THE RIVERS AND HARBORS ACT
AND SECTION 404 OF THE CLEAN WATER ACT**

I. Compliance with 404(b)(1) Guidelines

1. Are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States." or at other locations within these waters?

Yes ___ No X

2. If the project is in a special aquatic site and is not water dependent, has the applicant clearly demonstrated that there are no practicable alternative sites available?

Yes X No ___

3. Will the discharge:

Violate state water quality standards?

Yes ___ No X

Violate toxic effluent standards under Section 307 of the Clean Water Act?

Yes ___ No X

Jeopardize endangered or threatened species or their critical habitat?

Yes ___ No X

Violate standards set by the Department of Commerce to protect marine sanctuaries?

Yes ___ No X

4. Evaluation of the information in FEIS indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s):

(X) based on the available information, the material is not a carrier of contaminants.

() the levels of contaminants are substantially similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas.

() acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site.

5. Will the discharge contribute to significant degradation of "waters of the U.S." through adverse impacts to:

Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and/or special aquatic sites?

Yes ___ No X

Life stages of aquatic life and/or wildlife?

Yes ___ No X

Diversity, productivity, and stability of the aquatic life and other wildlife? Or wildlife habitat or loss of the capacity of wetlands to assimilate nutrients, purify water or reduce wave energy?

Yes ___ No X

Recreational, aesthetic and economic values?

Yes ___ No X

f. Will all appropriate and practicable steps be taken to minimize adverse impacts of the discharge on the aquatic ecosystem? Does the proposal include satisfactory compensatory mitigation for losses of aquatic resources?

Yes X No ___

Public Interest Review

The decision whether to issue a permit is based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. Evaluating the probable impact which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each particular case. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. If the proposed activity complies with the EPA's 404(b)(1) Guidelines, a permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The FEIS analyzed a number of factors relevant to the public interest review. These factors include but are not limited to socioeconomic, aesthetics, wetlands, historic properties, fish and wildlife, flooding and floodplain values, land use, mineral needs, water quality, energy needs, safety, and agriculture.

1. The relative extent of the public and private need for the proposed work has been considered: The Proposed Action is needed to provide flood protection for the Natomas Basin, including existing residents and public facilities. The project will also allow public and private entities to continue to construct public, residential, and commercial developments in the area.

2. The practicability of using reasonable alternative locations and/or methods to accomplish the objective of the proposed structure or work has been evaluated. Several alternatives have been reviewed as part of the permit process, including practicable alternatives in the FEIS. With the addition of special conditions (below), the Proposed Action is the Least Environmentally Damaging Practicable Alternative.

3. The extent and permanence of the beneficial and/or detrimental effects that the proposed structures or work may have on the public and private uses for which the area is suited has been reviewed. The areas to be impacted are primarily used for private agricultural purposes. The Proposed Action will result in a permanent change in use in areas where the levee will be widened, in the adjacent levee alignment, canals and ditches, and in certain borrow areas. However, some borrow areas will be returned to agricultural use. Moreover, the Proposed Action is planned to protect existing and future uses in the Basin from potentially catastrophic flooding, which could cause significant adverse impacts to natural and man-made resources.

Special Conditions for the DA Permit

1. The document entitled Final Phase 4a Mitigation Monitoring and Reporting Plan (MMRP), Natomas Levee Improvement Program, Landside Improvement Project is incorporated

by reference as a condition of this authorization except as modified by the following special conditions.

2. In no case shall initiation of the construction of compensatory mitigation, specifically, the Fisherman's Lake Habitat Complex be delayed beyond October 30, 2011. Construction of compensatory mitigation must be completed no later than October 30, 2012.

3. To ensure that mitigation is completed as required, you must notify the District Engineer of the start date and the completion date of the mitigation areas' construction, in writing and no later than 10 calendar days after each date.

4. To provide a permanent record of the completed mitigation work, you shall provide two complete sets of as-builts of the completed mitigation areas (i.e., Fisherman's Lake Habitat Complex, Riverside Canal, etc.) to USACE. The as-builts must indicate changes made from the original plans in indelible red ink. These as-builts must be provided to this office no later than 60 days after the completion of construction of each of the mitigation areas.

5. To protect the integrity of the mitigation areas and avoid unanticipated future impacts, no roads, utility lines, trails, benches, equipment or fuel storage, grading, firebreaks, mowing, grazing, pesticide use, burning, or other structures or activities shall be constructed or occur within these areas without specific, advance written approval from USACE.

6. The USFWS BO (Number 81420-2008-F-0195-5, October 9, 2008, amended in May 2010 as Number 81420-2010-F-0446-1), contains mandatory terms and conditions to implement the reasonable and prudent measures associated with "incidental take" as specified in the BO, including those ascribed to the USACE therein. Authorization under this USACE permit is conditional upon your compliance with all of the mandatory terms and conditions associated with "incidental take" of the attached BO, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed species occurs, would constitute an unauthorized take, and it would also constitute noncompliance with your USACE permit. The USFWS is the appropriate authority to determine compliance with the terms and conditions of its BO, and with the ESA. You must comply with all conditions of this BO, including those ascribed to USACE.

7. To further ensure the project's compliance with the ESA, you must implement all of the mitigating measures identified in the NMFS letter of concurrence dated January 8, 2010 (file 2009/01731) including those ascribed to USACE therein. If you are unable to implement any of these measures, you must immediately notify this office and the NMFS so we may consult as appropriate, prior to initiating the work, in accordance with Federal law.

8. To ensure the project's compliance with Section 106 of the NHPA, you must comply with all terms of the PA between USACE, SAFCA, and the SHPO signed on May 1, 2008, which is incorporated by reference as a special condition of this permit.

9. To ensure long-term viability of the lower Fisherman's Lake Habitat Complex , prior to October 31, 2012, you must:

- a. Submit draft contractual arrangements with The Natomas Basin Conservancy (TNBC) to provide for long-term management and monitoring of these areas as described in the MMP and Economic & Planning Systems (EPS) memo dated January 26, 2009 (Revised March 2010). You must provide the language of the contractual

arrangements to USACE for approval prior to finalization. You must fund TNBC site management contract costs via assessment district revenues until the assessment district expires. You must establish an endowment before December 31, 2011 to fund annual site management costs after the assessment district expires. The endowment must be fully funded by 2038.

- b. Record an easement(s) maintaining the appropriate area(s) as preserves and wildlife habitat in perpetuity. The draft easements shall be appended to the approved Long Term Management Plan (LTMP).
- c. Provide copies of the recorded documents to USACE no later than 30 days after the completion of construction of the mitigation site.
- d. The easement(s) must contain a provision requiring 60-day advance notification to USACE before any action is taken to void or modify the easement(s), including transfer of title to, or establishment of any other legal claims over, the compensatory mitigation sites.

11. To ensure completion of compensatory mitigation construction, you shall adhere to the approved financial assurances mechanism developed and described in the Memorandum dated January 26, 2009 (Revised March 11, 2009) from SAFCA to DFG, outlining SAFCA's Contingency Assurances Package.

12. You must allow representatives from USACE to inspect the authorized activity and at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

13. You must submit monitoring reports to this office for each year of the monitoring period, beginning at the completion year of the mitigation construction, and for each additional year, if remediation is required, by December 31st of each year.

14. All terms and conditions of the Section 401 Water Quality Certification dated January 14, 2010, are expressly incorporated as conditions of this permit.

15. Your responsibility to complete the required compensatory mitigation as set forth in this permit will not be considered fulfilled until you have demonstrated mitigation success and have received written verification from USACE.

II. DA CWA Section 404 Permit (for Phase 4a Project)

1. The evaluation of the Proposed Action and alternatives was done in accordance with all applicable laws, executive orders, regulations, and agency regulations. The FEIS and supporting documents are adequate and contain sufficient information to make a reasoned permit decision.

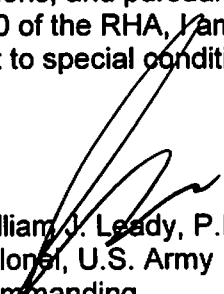
2. The selected alternative is the applicant's Proposed Action, with appropriate and practicable mitigation measures to minimize environmental harm and potential adverse impacts of the discharges on the aquatic ecosystem and the human environment. The applicant's proposed project, as mitigated by the special conditions, is considered the Least Environmentally Damaging Practicable Alternative.

3. The discharge complies with the Section 404(b)(1) Guidelines, with the inclusion of appropriate and practicable general and special conditions in the permit to minimize pollution or adverse effects to the affected ecosystem.

4. Issuance of a DA Permit, with the inclusion of special conditions on the permit, as prescribed by regulations published in 33 CFR Parts 320 to 332, and 40 CFR Part 320 is not contrary to the public interest.

I have reviewed and evaluated, in light of the overall public interest, the documents and factors concerning the permit application for the Proposed Action, as well as the stated views of interested agencies and the public. In doing so, I have considered the possible consequences of the Proposed Action in accordance with regulations published in 33 CFR Parts 320 through 332 and 40 CFR Part 230. Based on these considerations, and pursuant to my delegated authority under Section 404 of the CWA and Section 10 of the RHA, I am issuing a DA permit to SAFCA to construct the NLIP Phase 4a Project subject to special conditions.

8 NOV 2010
Date

For

William J. Leady, P.E.
Colonel, U.S. Army
Commanding
LTC, DOL