CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER

Suisun Marsh Levee Maintenance Dredging Program
Suisun City, Solano County

Sent via electronic mail: No hard copy to follow

Effective Date:	July 1, 2025
Place ID:	792443
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Corps File No:	2012-00259N
Applicant:	Suisun Resources Conservation District Attn: Steve Chappell 2544 Grizzly Island Road Suisun City, CA 94585 Email: schappell@suisunrcd.org
Water Board Staff:	Jazzy Graham-Davis 1515 Clay Street, Suite 1400 Oakland, CA 94612 Phone: (510) 622-2509 Email: Jazzy.Graham-Davis@waterboards.ca.gov

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Certification and Order Coverage

This Clean Water Act (CWA) section 401 Water Quality Certification (Certification) and Order (Order) is issued to Suisun Resources Conservation District (Permittee) for the Suisun Marsh Levee Maintenance Dredging Program Project (Project).

The Permittee applied to the San Francisco Bay Regional Water Quality Control Board for a multi-year certification verifying that the project described below will not violate State water quality standards. We received the request for certification on April 16, 2024. We deemed the request invalid and incomplete on May 15, 2024 for the following reasons:

1. The Permittee did not submit a Pre-Filing Meeting Request 30 days ahead of submitting the request for certification as required by 40 Code of Federal Regulation (CFR) Part 121; and
2. A Request fee was not received.

The Permittee submitted a Pre-Filing Request on May 16, 2024. We determined that a Pre-Filing Meeting was unnecessary. On July 24, 2024, the Permittee submitted the necessary Request fee to complete the Request.

The Permittee has applied for a U.S. Army Corps of Engineers (USACE) Letter of Permission for the Suisun Marsh Dredging Program (USACE File No. 2012-00259N) authorizing multiple episodes over a 10-year period pursuant to CWA section 404 (33 USC 1344) and section 10 of the Rivers and Harbors Act of 1899 (33 USC 403).

A. Project Description

The Project is located in Suisun Marsh, which is bounded to the west by Interstate 680, Highway 12 to the north, Shiloh Road and Collinsville Road to the east, and Suisun Bay to the south at latitude 38.155034, longitude -121.976143 (Figure 1). Up to 1,000,000 cubic yards (cy) will be dredged from bays, major sloughs, minor sloughs, and dredger cuts within the 19.83-acre dredge footprint shown in Figure 2 by February 14, 2035. These areas will be mechanically dredged via clamshell bucket or excavator and material will be used for major and minor maintenance of 121.21 miles of levees. Dredging will be limited to a maximum of 2.1 cy per linear foot of channel, a depth of 4 feet below the pre-dredge sediment surface elevation, and shall not occur more than once every three years, on a rolling basis, on any single levee segment.

This Project is one component of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan, a comprehensive 30-year plan designed to address the management of the varied resources within the Marsh. Other components, such as ditch and levee maintenance activities not involving dredging outboard of exterior levees, managed wetland habitat maintenance, water control structure maintenance, and salinity monitoring are regulated under a separate water quality certification dated December 22, 2022, issued for the USACE's Regional General Permit Number 3.

The Project purpose is to provide higher quality fill material for exterior levee repairs, and to improve drainage in cut channels, by removing accumulated silt that impairs managed wetland drainage and water control structure tidal operations. The exterior levee system protects thousands of acres of State and private land managed for wildlife habitat, endangered species habitats, Delta water quality, and physical infrastructure such

as dwellings, structures, gas wells, power transmission lines, petroleum pipelines, and County roads. Material currently used for levee repairs comes mainly from interior ditch cleaning and pond bottom grading of managed wetlands. This material is typically of poor quality for exterior levee use because it is high in organic matter/peat, requiring more frequent levee maintenance, causing an increase in managed wetland subsidence, and weakening existing levee foundations. Sediment in the adjacent tidal sloughs comprises primarily silts and clays, significantly better material for levee integrity and long-term durability than the peaty soils from managed wetlands.

Implementation of the dredging program will allow private landowners (represented by SRCD), California Department of Fish and Wildlife (CDFW), and Department of Water Resources to dredge material from tidal areas adjacent to the exterior levees of Suisun Marsh and use it for levee maintenance and repair.

Dredging will occur in the following tidal aquatic habitats located adjacent to the levees to be maintained:

- Bays – Open water areas that extend offshore from levees or the water side of tidal emergent vegetation. Major bays in the Suisun Marsh region include Suisun, Grizzly, and Honker Bays to the Contra Costa County line, and Little Honker Bay.
- Major Sloughs – Montezuma and Suisun Sloughs are classified as major. These two sloughs have a combined acreage of 2,212 acres and consist of both shallow and deep channels.
- Minor Sloughs – Minor sloughs include Cordelia, Goodyear, Chadbourn, Peytonia, Boynton, Hill, Cut off, Cross, Nurse, First Mallard, Second Mallard, and Denverton. Minor sloughs are made up of shallow channel habitats and have a combined acreage of 1,108 acres.
- Dredger Cuts – These areas are tidally inundated, manmade borrow ditches adjacent to the toe of the existing exterior levees, isolated from the adjacent minor and major sloughs by vegetated berms. Dredger cuts are distributed throughout the Marsh and are very shallow channels.

Importation of Additional Dredged Material

Navigational dredging projects in the San Francisco Bay and Delta regions may also provide a source of levee maintenance material provided it is adequately characterized for physical and chemical suitability (e.g., it is fined grained, with minimal organic carbon and has pollutants at or below background concentrations). Sediment characterization will take place under the direction of the Dredged Material Management Office, which consists of several State and federal regulatory agencies, including the Water Board, with jurisdiction over dredging and dredged material disposal and beneficial reuse. The major constraints to importing dredged material from outside the Marsh are limited draft and waterside access for barge offloading onto the levees, and the added cost of transporting and offloading imported material.

B. Impacts

The Project could impact up to a maximum of 19.83 acres or 90,446 linear feet (17.13 linear miles) of waters of the U.S. and State per year. These waters provide habitat for several federal and State threatened and endangered species that could be adversely impacted by dredging.

Dredging activities will be tracked by SRCD to ensure dredging does not occur more often than once every 3 years on any single levee segment and does not remove material deeper than 4 feet (relative to the pre-dredge sediment surface elevation) per dredging cycle.

Benthic Disturbance

Dredging will disturb benthic habitat and remove sediment-dwelling invertebrate prey organisms which provide forage for many fish species in Suisun Marsh. NOAA National Marine Fisheries Service (NMFS) defines recovery as the later phase of benthic community development following disturbance, when species that inhabited the area prior to disturbance begin to re-establish. Rates of recovery can vary from several months to several years based on various location-specific physical factors. Because dredging will not occur at the same location more than once in a 3-year period, on a rolling basis, some level of benthic invertebrate recovery will occur between dredging events. Benthic monitoring proposed in Appendix E of the Suisun Marsh Habitat Management, Preservation, and Restoration Plan, titled Suisun Marsh Monitoring and Adaptative Management Plan, will provide further information regarding dredging impacts to benthic communities and their rates of recovery.

Wetland Fill

Major levee repair will not result in the widening of the exterior levee toe on the inboard (managed wetland) side; therefore no dredged material will be intentionally discharged into wetlands considered waters of the U.S. or waters of the State. Material used for backslope stabilization during major levee maintenance could, however, incidentally impact waters of the U.S. and State, but impacts would be temporary.

C. Avoidance, Minimization, and Mitigation Measures

The following is a summary (partial list) of the measures that the Applicants will perform to avoid and minimize impacts as conditions of this certification.

Construction Practices

Best management practices (BMPs) to avoid and minimize impacts to the aquatic environment will include the following:

- Dredging will not occur in areas that have been tidally restored.
- A berm will be constructed on the channel-side of the levee crown to prevent runoff into adjacent aquatic areas (e.g., bays, major and minor sloughs, and dredger cuts).
- Both emergent and submerge aquatic vegetation will be avoided during dredging activities. No dredging will be allowed in areas that would disturb or remove vegetation.
- Dredging will not be allowed in channels separated from the levees by vegetated berms greater than 50 feet wide. In these areas, the primary source of material for maintenance will come from the adjacent managed wetlands or will be imported from areas outside the Marsh.

Mitigation

Permanent and temporary impacts related to the current operation and maintenance of managed wetlands in the proposed Project area, including maintenance of exterior levees, have been offset by the Suisun Marsh Mitigation Agreement of 2005. Under the agreement, the Applicants continue to preserve, manage, and maintain 2500 acres of managed and tidal wetlands in Suisun Marsh as conservation areas.

Water Board staff finds that the Project proponents have taken appropriate steps to avoid, minimize, and mitigate impacts, as required by the San Francisco Bay Basin Water Quality Control Plan (Basin Plan).

D. Reuse of Dredged Sediment

Reusing 100 percent of the dredged sediment to maintain marsh habitat is consistent with CWA section 404(b)(1).

Dredged material will be used for major levee maintenance, which involves topping the levee crown and backslope, and minor levee maintenance, which involves only topping the levee crown. Approximately 50 percent of the annually dredged material will be used for major levee maintenance and 50 percent will be used for minor levee maintenance. Levees requiring more extensive repairs fall outside the scope of the Project and will be regulated via individual project certifications.

There are sixteen fish screens that are part of the water control structures located in the Marsh. The screens experience significant siltation problems. Silt is deposited around these screens, which impedes the operation of the screens and screen-cleaning brushes. Every few years a relatively small amount of material must be removed from the fish screen basins (about 20 to 100 cubic yards each) by dredging. This small amount of material is included in the total 1,000,000 cubic yards proposed for dredging in the Marsh for the duration of the Project. Alternative measures (e.g., trying to move silt by hand) have been ineffective. Dredging around fish screens will be done during low tide to minimize in-water work and minimize turbidity. Dredged sediment will be placed on the crown or landside slope of the exterior levee adjacent to the fish screen. In instances where material cannot be used adjacent to the dredging site, the material may be used on other levees within Suisun Marsh, following the same environmental commitments as identified in the SMP.

E. California Environmental Quality Act

U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, and CDFW published a final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the Suisun Marsh Habitat Management, Preservation, and Restoration Plan on December 6, 2011, that analyzed impacts over a 30-year period under the California Environmental Quality Act (CEQA). On December 22, 2011, CDFW filed a Notice of Determination of CEQA compliance (SCH#2003112039). The Water Board, as a responsible agency under CEQA, has considered the EIS/EIR and finds that the Project, as described above and conditioned by this certification, will not have significant environmental effects that are within the Water Board's purview and jurisdiction.

F. General Waste Discharge Requirements

I, Eileen M. White, Executive Officer do hereby certify that any discharge from the Project will comply with the applicable provisions of sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 303 (Water Quality Standards and Implementation Plans), 306 (National Standards of Performance), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law.

This discharge of dredged or fill material is also considered to be a discharge of waste to waters within the jurisdiction of the Water Board. Pursuant to Article 4 of Chapter 4, Division 7 of the California Water Code

(Wat. Code §13260 *et seq.*), the Water Board must issue waste discharge requirements for these discharges. Therefore, this Certification also enrolls the above referenced Project under the State Water Resources Control Board's Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges That Have Received State Water Quality Certification" (General Order). The only substantive requirement of the General Order is to comply with the limitations and monitoring requirements contained in this Certification. Fees paid to satisfy California Code of Regulations, title 23, section 3833(b) (fees associated with this Certification) shall also be deemed to satisfy fees required by the General Order.

G. Specific Certification Conditions

The Water Board independently reviewed the Project record to analyze impacts to water quality and the environment and designated beneficial uses within the Project's watershed. CWA section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitation necessary to ensure compliance with the CWA and with any other appropriate requirement of State law. Section 401 further provides that State certification conditions shall become conditions of any federal license or permit for the Project. The conditions of this Order must be met to ensure that the Project will comply with water quality standards, any applicable effluent limitations, standard of performance, prohibition, effluent standard, or pretreatment standard requirement pursuant to the CWA sections listed above and to ensure that the Project will comply with any other appropriate requirements.

General Conditions

1. Maintenance dredging shall be implemented in conformance with the Project Description provided in Section A above and all documents submitted with the request.
2. Emergent or submerged aquatic vegetation shall be avoided during dredging activities where feasible. Any unavoidable loss of emergent vegetation from dredging activities in bays, major sloughs, minor sloughs, and dredger cuts will be compensated for by implementing tidal wetland restoration at a 3:1 ratio or 2:1 if restoration is done in advance of the loss.
3. Dredging around fish screens shall be conducted within 1.5 hours of Mean Lower Low Water to minimize in-water work and minimize turbidity. After completion of dredging, fish screens shall be opened as the tide returns, to allow residual suspended sediment to be drawn into the adjacent managed wetlands. In instances where the dredged material from fish screen maintenance cannot be placed on the crown or landside slope of the exterior levee adjacent to the fish screen, it may be used on other levees within the Marsh.
4. Dredging shall be avoided within 200 feet of storm drain outfall and urban runoff discharge locations, unless pre-dredge contaminant testing (i.e., bulk sediment chemistry) is conducted in coordination with the DMMO per Condition 10.
5. Dredging will not be allowed in channels separated from the levees by vegetated berms greater than 50 feet wide. In these areas, the primary source of material for maintenance will come from the adjacent managed wetlands or will be imported from areas outside the Marsh.
6. Releases of discharge water from managed wetlands shall cease for at least 3 days following dredging and dredged material placement on adjacent exterior levees.

7. No dredging or construction related wastes, debris, petroleum products, or hazardous materials shall be allowed to enter into waters of the State, or be placed where they may be washed by rainfall or runoff, or otherwise discharge into waters of the State. When dredging and levee maintenance construction activities are completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be washed into waters of the State.
8. A berm shall be constructed on the channel-side of the levee crown sufficient to prevent runoff into adjacent aquatic habitats.
9. This Certification expires on February 28, 2035.

Reporting and Monitoring

10. **Importation of Additional Dredged Material:** Data characterizing the quality of all navigational dredged material (e.g., Bay sediments) proposed for import to use on Marsh exterior levees shall be submitted to Water Board staff for review and approval prior to placement. This review shall be coordinated through the Dredged Material Management Office (DMMO). Sediment characterization shall follow the protocols for bulk sediment chemistry analysis specified in:
    a. The DMMO guidance document "Guidelines for Implementing the Inland Testing Manual in the San Francisco Bay Region" (Corps Public Notice 01-01, or most current version); and,
    b. The Water Board May 2000 (Updated 2019) staff report "Beneficial Reuse of Dredged Materials: Sediment Screening and Testing Guidelines," or most current revised version.

    Only material that meets wetland surface quality chemistry screening guidelines as defined in the Water Board May 2000 staff report listed above may be used for levee rehabilitation and maintenance. Modifications to these procedures may be approved on a case-by-case basis pending the Applicants' ability to demonstrate that the dredged material is unlikely to adversely impact water quality and the beneficial uses of adjacent water bodies.
11. **Episode Approvals**: Dredging episodes must not commence until authorized in writing by Water Board staff. At least 60 days prior to a dredging episode, the Permittee must provide an episode approval request package to the Water Board. The package must include the following information specific to the episode:
    a. Estimated volume of sediment
    b. Areas to be dredged (include a map and acerage);
    c. Dimensions of the levee;
    d. Description of the dredging source site conditions (waterway type and location within the Project area);
    e. Photo documentation of current conditions;
    f. Results of pre-dredge emergent and submerged vegetation surveys showing absence of vegetation in dredging footprint;
    g. Type of equipment proposed to conduct the work;
    h. GPS coordinates of the extent of the proposed work.

12. **Post-Dredge Report:** The Permittee must provide an electronic copy of a post-dredge report to Water Board staff by February 14 each year for dredging performed the previous calendar year. The report may be submitted via email to RB2-Dredgereports@waterboards.ca.gov. The report must contain the following information:
    a. Total annual landowner-requested dredging volume;
    b. Total authorized volume;
    c. Dredging dates;
    d. Calculated total final dredge volume;
    e. Breakdown of dredging activities by waterway type, including a map of properties maintained by dredging;
    f. Additional site-specific information for each levee segment as appropriate

Administrative and General Compliance

13. The Permittee or its representative shall notify Water Board staff immediately by telephone and e-mail whenever an adverse condition occurs due to this activity. An adverse condition includes, but is not limited to, a violation or threatened violation of conditions of this Order, or a release of petroleum products or toxic chemicals to waters of the State. Pursuant to Water Code section 13267, a written notification of adverse condition shall be submitted to the Water Board within 30 days of occurrence. The written notification shall identify the adverse condition, describe the action necessary to remedy the condition, and specify a timetable, subject to the modifications of the Water Board, for remedial actions.
14. In response to a suspected violation of any condition of this Order, the Water Board may require the Permittee to furnish, under penalty of perjury, any technical or monitoring reports the Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports (Water Code section 13267).
15. Failure to implement the Project as proposed is a violation of this Order. Any violation of 401 water quality certification conditions is subject to administrative civil liability pursuant to Water Code sections 13268 and 13350. Failure to meet any condition of this Certification may subject the Permittee to civil liability imposed by the Water Board to a maximum of $5,000 per violation day for violations of Water Code section 13267 technical report requirements and $5,000 per violation day or $10 for each gallon of waste discharged in violation of this Certification.
16. Should new information come to our attention that indicates a water quality problem with this Project, the Water Board may issue Waste Discharge Requirements pursuant to 23 CCR section 3857.

Standard Conditions

17. This Certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and 23 CCR section 3867.
18. This Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23

CCR subsection 3855(b) and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought

Fees

19. Certification is conditioned upon total payment of the full fee required in State regulations (23 CCR section 3833). The application fee of $2,985 for the Project was paid in full on July 24, 2024.
20. If the Permittee does not provide a Post-Dredge Report or a letter certifying that it did not perform the dredging episode as authorized by the episode approval the previous calendar year, the Water Board will use the volume proposed in the episode approval request to assess the annual fee.
21. Annual fees are required and will be invoiced in fall/winter for the previous fiscal year (July 1 – June 30) until the Project is complete or when the Certification expires on February 28, 2035. Fees are updated by the State Water Resource Control Board on an annual basis each fall before invoicing. The fee website (https://www.waterboards.ca.gov/resources/fees/) lists the current annual fees. The application fee is applied to the first annual fee.

If you have any questions concerning this Certification, please call Jazzy Graham-Davis, of my staff, at (510) 622-2509 or send them an email at jazzy.graham-davis@waterboards.ca.gov.

I, Eileen M. White, do hereby order that the Permittee comply with the above Conditions of this Order.

for BOARDS
Digitally signed by Xavier Fernandez
Date: 2025.03.07 17:16:50 -08'00'

Eileen M. White
Executive Officer

Attachments:

Figure 1. Location Map
Figure 2. Levees and Waterways

cc w/attachments (all via email):

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USFWS, Sacramento. CA (Ryan Olah, ryan_olah@fws.gov)

Figure 1. Location Map

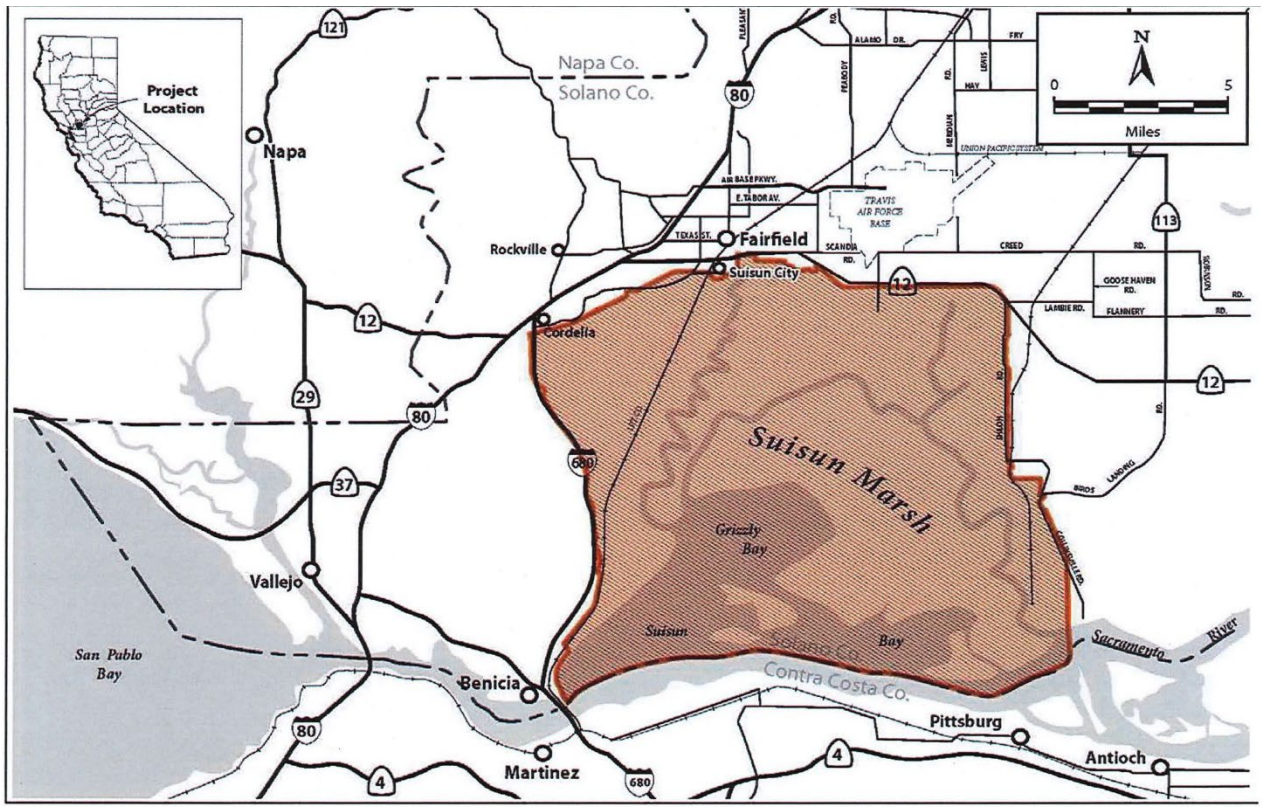

Figure 2. Levees and Waterways