DWR's Delta Conveyance Project
Consistency Appeal (Cert. ID C20257)
January 2, 2026

1. Introduction

This supplemental brief is submitted in support of the appeal filed on behalf of DCC Engineering Company, Inc., of Walnut Grove ("DCC Engineering"). This supplemental brief supports the appeal filed by DCC Engineering for California Department of Water Resources' ("DWR") Final Draft Delta Conveyance Project Certification of Consistency with the Delta Plan. (Certification, [DCP.AA1.2.00001]) The supporting documents submitted with this brief are appropriate for notice by the Delta Stewardship Council ("Council"). (Cal. Code Regs., tit. 23, 5032 [records subject to judicial notice].) Table 1, below provides the basis for notice of the supporting documents submitted with this supplemental brief.

2. Delta Plan Regulatory Policy RR P1 / Cal. Code Regs., tit. 23, § 5012 - Prioritization of State Investments in Delta Levees and Risk Reduction

Under Delta Plan Regulatory Policy RR P1, the State of California and DWR must abide by the priority list of levees identified for investment in the Delta. (Cal. Code Regs., tit. 23, § 5012, subd. (b).) For the purposes of determining whether RR P1 applies to a covered action, the policy "covers a proposed action that involves discretionary State investments in Delta flood risk management, including levee operations, maintenance, and improvements."

The covered action includes numerous alterations of levee structures in the Delta according to the Delta Conveyance Project, Final Environmental Impact Report (FEIR), Chapter 3: Description of the Proposed Project and Alternatives, p. 23-24, 81, 117, 136. The covered action would alter and make improvements to levees, triggering RR P1. In addition, as explained in the appeal filed and as elaborated below; the covered action would be inconsistent with this policy due to the massive demand for materials, equipment, and trucking capacity associated with the covered action which would displace priority investments required under RR P1. This policy was considered not applicable, but it would increase competition for material resources used in levee construction and strain contractor availability. There is no analysis of the impacts to priority investments in levees that are reliant on local Reclamation Districts to perform work and cost share in funding opportunities in State grant programs.

There would be a large demand for aggregate base, trucking, import fill, and other materials and equipment necessary for project access improvements and levee construction at the Sacramento River at intake locations, access shafts, and reusable tunnel material disposal areas. (FEIR Chapter 3 Project Description Appendix 3D pp. 3-13). This work would rely heavily on trucking for delivery of materials of which there are limited contractors in the region. (FEIR Chapter 20 Transportation, pp. 52-62) The in-water work required for intake construction is only allowed during a 3-month window in the fall further putting strain on contractor availability and resources (FEIR Chapter 12 Fish and Aquatic Resources, p. 75). This will create a "choke point"

on material, equipment, and personnel available for priority levee improvements, and other levee improvements in the Delta.

Construction of the project would occur over a period of roughly 13 years. (FEIR Chapter 3 Project Description, p. 131) Acknowledging that different equipment and materials would be needed at different times during construction; the length and intensity of the construction window would nonetheless create a massive demand for equipment and materials and displace the allocation of those resources to priority levee projects. (Cal. Code Regs., tit. 23, § 5012, subd. (b).)

The issue of Delta levee maintenance and its relevant to the covered action is so critical, it was mentioned in a recent meeting of MWD at its Joint One Water & Adaptation Committee and Subcommittee on Imported Water (Exhibit 12).[1] Comments were made in the meeting that indicate that the failure to consider levees in the Certification was remiss and that the State of California needs to do more to maintain Delta levees.[2]

It is also worth noting that the nature of levee work in the Delta is often constrained by permitting restrictions that further concentrates work into narrow time windows. Exhibit 10[3] consists of a permit issued pursuant to Fish & Game Code section 1602 that limits in-water work for a project in the Delta to the time between August 1st to November 30th. In a similar fashion Exhibit 11[4] shows restriction of work to the window between August 1 and October 31. It is almost certain that the Delta Tunnel will face similar work-window restrictions for in-water work. This means that in addition to the quantitative bottle neck created by the demand for massive quantities of material and equipment, the Delta Tunnel would place in-water work in the same windows when other levee repair projects or levee maintenance projects are allowed to be conducted. This would further concentrate and constrict the capacity for levee work due to the need for routine and priority levee projects to perform work in similar or the same windows as the Delta Tunnel, placing a premium on equipment and materials that can be used during these windows of time.

Exhibits 1–13 are incorporated by reference and demonstrate construction-market impacts that impair Reclamation District capacity to maintain levees and implement flood-risk-reduction investments protected by Delta Plan Policy RR-P1.

3. Delta Plan Regulatory Policy RR P3 / Cal. Code Regs., tit. 23, § 5014 – Protect Floodways

[1] [Exhibit 7] Metropolitan Water District. November 17, 2025. MWD at its Joint One Water & Adaptation Committee and Subcommittee on Imported Water. See video at 1:26 https://mwdh2o.granicus.com/player/clip/11683?view_id=12&redirect=true (notice requested above in Table 1).
[2] *Ibid.*
[3] California Department of Fish & Wildlife. February 5, 2021. Final Lake or Streambed Alteration Agreement, Notification No. 1600-2017-0091-R3, Sacramento River Erosion Control and Habitat Enhancement Project, p. 4 (notice requested above in Table 1).
[4] Central Valley Regional Water Quality Control Board. April 29, 2021. Clean Water Act Section 401 Water Quality Certification and Order, Sacramento River Erosion Control and Habitat Enhancement Project (Project), p. 7 (notice requested above in Table 1).

Delta Plan Policy RR-P3 applies to covered actions that encroach upon floodways in a manner that could reduce flood conveyance, impair flood-fight access, or increase flood risk. The Certification of Consistency concludes that RR-P3 is "not applicable," yet the Final EIR describes construction features and activities that occur on or immediately adjacent to levees that function as floodways in the Delta. FEIR Chapter 3 (Project Description) identifies intake facilities, access roads, staging areas, and marine construction activities associated with the Proposed Project, which rely on levee-adjacent corridors and waterways during an extended construction period of approximately 13 years (FEIR Ch. 3, pp. 19 and 131).

These prolonged construction activities occur within levee-bounded channels that convey flood flows and provide essential access for Reclamation District flood-fight and emergency response operations. In addition, as reflected in the FEIR and supporting exhibits, the project relies on barge-based transport and in-water construction subject to restricted work windows, further concentrating construction activity in levee-adjacent floodways during critical periods. The Certification contains no analysis of how construction staging, access limitations, or long-term near-levee activities affect floodway conveyance, levee stability, or emergency flood-fight access. Declaring RR-P3 "not applicable" without evaluating these foreseeable encroachment-related impacts fails to satisfy the requirements of the Delta Plan. Accordingly, the Certification lacks substantial evidence of consistency with Policy RR-P3. Exhibits 8–11 are incorporated by reference and demonstrate in-water construction, barge use, restricted work windows, and near-levee activity relevant to floodway encroachment under Policy RR-P3.

4. Delta Plan Regulatory Policy DP P2 / Cal. Code Regs., tit. 23, § 5011 – Respect Local Land Use When Siting Water or Flood Facilities or Restoring Habitats

Delta Plan Policy DP-P2 requires covered actions to respect existing local land uses, including agricultural lands, rural communities, and infrastructure that define the Delta as a place. As documented in the Final Environmental Impact Report (FEIR), the Delta is predominantly rural and agricultural in character. FEIR Chapter 14 (Land Use, pp. 1-22) establishes that the Delta Conveyance Project would create land-use incompatibilities affecting up to approximately 4,753 acres, result in permanent conversion of agricultural land to conveyance and mitigation uses, and require the removal of approximately 61 to 93 structures located in rural agricultural areas. These documented impacts support the appeal's claim that the project would impair existing Delta agricultural, community, and rural land uses protected by DP-P2.

The Final EIR identifies Alternative 5 (Bethany Reservoir Alignment, 6,000 cfs) as the Proposed Project and evaluates construction timing based on an approximately 13-year construction period with phased and overlapping activities occurring throughout the Delta (FEIR Chapter 3, pp. 19 and 131). This prolonged and continuous construction schedule demonstrates that the project will create sustained, long-term demand for contractors, equipment, materials, transportation, and marine resources, directly competing with Reclamation District levee maintenance, emergency response, and flood-control activities during the same timeframes.

In addition, FEIR Chapter 17 (Socioeconomics, pp. 1-13) documents permanent conversion of agricultural land, annual agricultural production losses of approximately $2.8

million to $5.6 million, and associated reductions in agricultural employment, with impacts concentrated in small, rural Delta communities. Agricultural operations generate the property values and assessment base that fund Reclamation District operations and maintenance, including levee and drainage infrastructure essential to rural communities. Accordingly, reductions in agricultural acreage, productivity, and economic viability directly undermine local agencies' capacity to maintain levees, drainage systems, and transportation corridors that support existing land uses. The Certification of Consistency does not evaluate these foreseeable land-use and economic impacts and therefore fails to demonstrate consistency with Delta Plan Policy DP-P2.

Exhibits 1–13 are incorporated by reference and demonstrate the construction-market impacts that impair agricultural operations, rural communities, and infrastructure protected by Delta Plan Policy DP-P2.

5. Documents Submitted for Notice and Incorporated by Reference

Table 1, below requests that the Delta Stewardship Council ("Council") notice the documents submitted with this supplemental brief. The numbered exhibits consist of bidding and contracting documents that represent utilization of similar materials and equipment for levee works by Reclamation District 1002, Reclamation District 554, and Brannan-Andrus Levee Maintenance District. Because these documents may be verified as accurate, upon inspection, they are subject to request for notice under the Council's regulation allowing notice of matters that could be subject to judicial notice by a court. (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B); Evidence Code section 452, subd. (h).)

Table 1. Documents Submitted for Notice by the Delta Stewardship Council

Exhibit Number	Document	Basis for Notice
1	Lost Slough Patrol Road Rehabilitation – Bid Schedule for Construction	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)

Exhibit Number	Document	Basis for Notice
2	San Joaquin River Seepage Repair Project 2025– Bid Schedule for Construction	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
3	Sacramento River Levee Erosion Control and Habitat Enhancement Project – Bid Schedule for Construction	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
4	Delta Conveyance Authority. Soil Balance and Reusable Tunnel Material Supplement (Final Draft) May 27, 2022	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
5	Lost Slough Patrol Road Rehabilitation, Time and Materials Invoice	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)

Exhibit Number	Document	Basis for Notice
6	Lost Slough Patrol Road Rehabilitation and Surfacing, Invoice	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
7	Snodgrass Slough Emergency Levee Repair Invoice	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
8	Delta Conveyance Authority. Barge Transportation Study, Final Draft. December 23, 2021.	Notice pursuant to Evidence Code section 452, subdivision (c) (official acts of the State of California). (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3) (B).)
9	Georgiana Slough Rock Slope Protection Restoration, Fall 2025 – Summary of Work	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
10	California Department of Fish & Wildlife. February 5, 2021. Final Lake or Streambed Alteration Agreement, Notification No. 1600-2017-0091-R3, Sacramento River Erosion Control and Habitat Enhancement Project	Notice pursuant to Evidence Code section 452, subdivision (c) (official acts of the State of California). (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3) (B).)

Exhibit Number	Document	Basis for Notice
11	Central Valley Regional Water Quality Control Board. April 29, 2021. Clean Water Act Section 401 Water Quality Certification and Order, Sacramento River Erosion Control and Habitat Enhancement Project, 5A34CR00817	Notice pursuant to Evidence Code section 452, subdivision (c) (official acts of the State of California). (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3) (B).)
12	Metropolitan Water District (MWD), November 17, 2025 Joint One Water & Adaptation Committee and Subcommittee on Imported Water https://tinyurl.com/mtt6p9sz	Notice pursuant to Evidence Code section 452, subdivision (h) [facts and propositions that are not reasonably subject to dispute and are capable of immediate and accurate determination by resort to sources of reasonably indisputable accuracy]; (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3)(B).)
13	Delta Levees Investment Strategy Final Report (Delta Stewardship Council, July 2017), Executive Summary p. ES-1	Notice pursuant to Evidence Code section 452, subdivision (c) (official acts of the State of California). (Cal. Code Regs., tit. 23, § 5032, subds. (c)(3) (B).)

Note: These exhibits are submitted solely to demonstrate the types of materials, equipment, contractors, costs, and regulatory timing constraints applicable to Reclamation District levee maintenance and flood-risk-reduction projects, and do not introduce new grounds for appeal.

These exhibits support this appeal as follows:
Exhibit 1 - Lost Slough Patrol Road Rehabilitation – Bid Schedule of Construction

Demonstrates the types and quantities of materials, equipment, and labor required for routine levee-related road maintenance performed by Reclamation Districts, establishing the baseline demand that competes directly with DCP construction resources.

Exhibit 2 - San Joaquin River Seepage Repair Project 2025 – Bid Schedule of Construction

Shows resource requirements for levee seepage repairs that are essential for flood-risk reduction, illustrating how RD projects rely on the same materials, and equipment that would be strained by the DCP.

Exhibit 3 - Sacramento River Levee Erosion Control and Habitat Enhancement Project – Bid Schedule for Construction

Provides evidence of rock, riprap, and heavy civil construction inputs required for priority levee erosion repairs, supporting the claim that DCP material demand would displace or inflate costs for state-supported levee investments.

Exhibit 4 - Delta Conveyance Authority – Soil Balance and Reusable Tunnel Material Supplement (Final Draft)

Documents the massive quantities of excavated material and handling requirements generated by the DCP, establishing the scale of material movement and logistics that would directly compete with levee maintenance and flood-risk-reduction projects governed by RR-P1.

Exhibit 5 - Lost Slough Patrol Road Rehabilitation – Time and Materials Invoice

Provides real-world evidence of actual equipment types, crew time, and costs incurred by an RD, demonstrating the sensitivity of levee maintenance budgets to contractor availability and cost escalation caused by competing mega-projects.

Exhibit 6 - Lost Slough Patrol Road Rehabilitation and Surfacing – Invoice

Provides evidence of materials necessary for levee work. Further substantiates the direct financial burden of levee-related maintenance work and shows how increased material and contractor costs reduce the feasibility of RD participation in state cost-share programs prioritized under RR-P1.

Exhibit 7 - Snodgrass Slough Emergency Levee Repair – Invoice

Demonstrates the need for rapid access to contractors and materials for emergency levee repairs such as sheet pile, supporting the argument that long-term monopolization of resources by the DCP undermines emergency response capacity central to flood-risk reduction.

Exhibit 8 - Delta Conveyance Authority – Barge Transportation Study (Final Draft)

Shows that the DCP will rely heavily on barge-based transport, directly competing with levee projects that depend on the same limited marine contractors and barge fleets, particularly during constrained in-water work windows.

Exhibit 9 - Georgiana Slough Rock Slope Protection Restoration, Fall 2025 – Summary of Work

Establishes that levee erosion repairs are barge-dependent and material-intensive, reinforcing that DCP construction would draw from the same specialized contractors and equipment needed for priority levee investments.

Exhibit 10 - CDFW Final Lake or Streambed Alteration Agreement (LSAA)

Demonstrates that levee repair work is subject to restricted in-water work windows, concentrating RD construction into narrow periods that overlap with DCP construction, exacerbating competition for contractors and equipment.

Exhibit 11 - RWQCB Section 401 Water Quality Certification

Confirms additional regulatory timing and operational constraints on levee maintenance projects, reinforcing that RD flood-risk-reduction work must occur within limited windows that would be directly impacted by DCP construction demand.

Exhibit 12 - Metropolitan Water District (MWD), November 17, 2025 Joint One Water & Adaptation Committee and Subcommittee

Statements at noted meeting acknowledging the State's responsibility to invest in and maintain the Delta levee system and the omission of levee considerations from the Certification.

Exhibit 13 - Delta Levees Investment Strategy Final Report (Delta Stewardship Council, July 2017), Executive Summary p. ES-1

The Delta Levees Investment Strategy establishes that Delta levees protect statewide interests, including agriculture, ecosystems, water supply reliability, communities, and infrastructure, and that maintaining levee integrity is a core State responsibility. This evidence demonstrates the importance of the levees to statewide interests. Any covered action that impairs Reclamation District capacity to maintain levees, through displacement of materials, contractors, or funding, directly implicates the prioritization of State investments in levee operations, maintenance, and flood-risk reduction required under Delta Plan Policy RR-P1.

The basis for an appeal under the Delta Reform Act states that:

> *"[a]ny person who claims that a proposed covered action is inconsistent with the Delta Plan and, as a result of that inconsistency, the action will have a significant adverse impact on the achievement of one or both of the coequal goals or implementation of government-sponsored flood control programs to reduce risks to people and property in the Delta, may file an appeal with regard to a certification of consistency submitted to the council."* (Wat. Code, § 85225.10, subd. (a).)

The coequal goals mandate protection of Delta recreation and agriculture, which are land uses protected by levees. (Wat. Code, § 85054.) Here, because the covered action will create a massive bottle neck or shortage in equipment and material necessary to implement RR P1, and

other levee work, it is by its very nature, inconsistent with the "implementation of government-sponsored flood control programs to reduce risks to people and property in the Delta." (Wat. Code, § 85225.10, subd. (a).) In addition, the chokepoint on materials and equipment will impair necessary levee work needed to protect agriculture and other land uses identified for protection under the coequal goals. (Wat. Code, § 85225.10, subd. (a).) DWR asserts that RR P1 does not even apply to the covered action (Certification, p. 33 [DCP.AA1.2.00001].) Because DWR has no analysis of consistency with this policy, and the covered action clearly implicates and conflicts with RR P1, DWR's Certification lacks substantial evidence. (Wat. Code, § 85225.25 [substantial evidence required].) The Council should therefore remand the certification back to DWR.

DOCUMENT 00 43 22 - BID SCHEDULE

Schedule of Prices For Construction				
Item No.	**Item**	**Estimated Quantity [1]**	**Unit Price (in figures)**	**Total (in figures) [2]**
1.0	**Mobilization and Demobilization.**	1	Lump Sum	
2.0	**Site Preparation, Clearing and Grubbing**.	8,800 LF	Lump Sum	
3.0	**Road Rehabilitation Work**			
3.1	Grading.	8,800 LF	$_____ Lineal Foot	
3.2	Provide and place 3/4-inch Class II Aggregate Base roadway surface.	4,400 Tons	$_____ Per Ton	
3.3	Provide and place AASHTO #8 (3/8-inch crushed) aggregate on gravel road surface.	50 Tons	$_____ Per Ton	
4.0	**Asphalt driveway and pothole repair.**	1	Lump Sum	
5.0	**Gate Modifications to accommodate grade / elevation change(s) of finished project.**	1	$_____ Each	
			TOTAL BASE BID	

BID SCHEDULE FOOTNOTES

[1] Quantities listed in the Bid Schedule and/or on the drawings are estimated to give an indication of the general scope of the work, but the accuracy of these figures is not guaranteed. Actual contracted quantity may vary. It is the responsibility of the Contractor to complete the work in an expeditious manner under the direction of the District's representative.

[2] All amounts and totals in Bid Sheets will be subject to verification by the District. A bid is required for each item. In the event of discrepancy between the sum of the bid items listed previously and the Total Base Bid "written in words", the "Total Base Bid Written in Words"

DOCUMENT 00 43 22 - BID SCHEDULE

Schedule of Prices For Construction [1]				
Item No.	**Item**	**Estimated Quantity [2]**	**Unit Price (in figures)**	**Total (in figures) [3]**
1.0	Mobilization and Demobilization (inclusive of all construction surveying and staking; notifications; traffic; and safety and dust control measures).	1	lump sum	
2.0	Clearing and Grubbing.	1	lump sum	
3.0	Drain Gravel: Provide and place.	73 tons	$_____ per ton	
4.0	Perforated Pipe: Provide and place.	200 lin. ft.	$_____ per lin. ft.	
5.0	Outlet Pipe: Provide and place.	110 lin. ft.	_____ per lin. ft.	
6.0	Geotextile Fabric: Provide and install.	2,200 sq. ft.	$_____ per sq. ft.	
7.0	Imported Fill: Provide and place.	15 cu. yds.	$_____ per cu. yd.	
8.0	Trench Stabilization.	1	lump sum	
9.0	Monitoring Well.	1	lump sum	
			TOTAL BASE BID	

BID SCHEDULE FOOTNOTES

[1] Items include providing and placement. The outlet pipe additionally includes any outlet protection at the existing ditch and any cut off wall at the interface with the French drain. Also, trench stabilization is whole shoring work that may be needed.

DOCUMENT 00 41 13 - BID FORM

Stipulated Sum (Single-Prime Contract)

Stipulated Sum (Single-Prime Contract)				
ITEM NO.	**ITEM**	**ESTIMATED QUANTITY**	**UNIT PRICE (IN FIGURES)**	**TOTAL (IN FIGURES)**
1.00	**Mobilization and Demobilization.**	1	lump sum	
2.00	**Site Preparation**			
2.01	Clear levee slope above mean-low water line (MLW) of vegetative debris with removal and disposal off-island.	6.6 acres	lump sum	
2.02	Remove pump and irrigation pipes and dispose of off-site per Owner.	1	lump sum	
2.03	Remove recreational dock installation. Store dock for re-use. Dispose of wood piling, gangway and stairs off-site.	1	lump sum	
3.00	**Riprap Placement and Bench Construction**			
3.01	Provide and place riprap [DWR RSP].	148,174 tons	$_____ per ton	
3.02	Provide and place 50/50 Soil-Rock Mix in wetland bench and riparian bench.	21,922 tons	$_____ per ton	
3.03	Provide geogrid rolls, 12.5-ft x 288 linear feet per roll.	64 rolls	_____ per roll	
3.04	Transport and place 26,694 soil filled (6"x12"x24") GTX bags with interlocking gripper connectors and geogrid tie back system to form 4-foot high retaining wall enclosures.	4,430 lineal feet	$_____ per lineal foot	

ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
3.05	Provide and place 70/30 Soil-Rock mix on levee slope.	16,905 tons	$_____ per ton	
3.06	Provide and place coir erosion protection matt9ng on benches and levee slope.	141,900 square feet	_____ per square foot	
4.00	**Planting Riparian Benches**			
4.01	Mobilization and Demobilization.	1	lump sum	
4.02	Temporary Irrigation System: provide and install.	1	lump sum	
4.03	Treeband 2 Containers: install Owner-provided plants.	6,696	_____ each	
4.04	Treeband 4 Containers: install Owner-provided plants.	558	_____ each	
4.05	Treepot Containers: install Owner-provided plants.	5,571	_____ each	
4.06	Provide Erosion Control Seed Mix.	10.02 acres	_____ per acre	
4.07	Provide Terrabad/Gripper Wall Seed Mix.	0.51 acres	_____ per acre	
4.08	Hand Seed Terrabag/Gripper Wall.	0.51 acres	_____ per acre	
4.09	Hand Seed Riparian Bench and Vegetated Slope to 12-foot elevation.	4.92 acres	_____ per acre	
4.10	Hydroseed Embankment above 12-foot elevation to Top of Fill.	5.20 acres	_____ per acre	
5.00	**Plant Establishment and Maintenance (three year duration)**			
5.01	Perform irrigation and irrigation system maintenance/repair.	90 events	_____ per event	

ITEM NO.	ITEM	ESTIMATED QUANTITY	UNIT PRICE (IN FIGURES)	TOTAL (IN FIGURES)
5.02	Provide and apply herbicide.	9 events	_____ per event	
5.03	Hand Weeding.	12 events	_____ per event	
5.04	Remove irrigation system at sign-off of plant establishment period.	1	lump sum	
6.00	**Recreational Dock Piling**			
6.01	Provide and place three (3) 12-inch x 50-foot and two (2) 8-inch x 8-foot steel piling. Note: relocation/reestab-lishment of the recreational dock structure beyond piling placement is not a part of this contract.	1	lump sum	
			TOTAL BID	

BID SCHEDULE NOTES

1. A bid is required for each item. In the event of discrepancy between the sum of the bid items listed previously and the Total Base Bid "written in words", the "Total Base Bid Written in Words" as provided for below and on Page 1 of this Proposal shall prevail and be the "Bid". In case of variation between the unit price extension and the total cost, the unit price times the estimated quantity will be considered as the bid total. All amounts and totals in Bid Sheets will be subject to verification by the District.

2. Total price covering all direct and indirect costs, along with prorated project overhead and profit. No adjustments shall be made to the lump sum price due to differences between the Engineers estimated quantities and the actual "in-place" quantities.

3. Quantities listed in the Bid Schedule and/or on the drawings are estimated to give an indication of the general scope of the work, but the accuracy of these figures is not guaranteed. Actual contracted quantity may vary. It is the responsibility of the Contractor to complete the work in an expeditious manner under the direction of the District's representative.

4. Refer to attached map for approximate work limits.

5. Measurement of Materials

   5.1 Materials Delivered by Barge: Contractor shall calculate quantity by the displacement method and deliver barge tags and calculations to the Owner with

Table 2-2. Stockpile Summary-Bethany Alignment

Summarizes the temporary and permanent peat, topsoil, and excavated material stockpiles

Feature	Material	Volume*	Stockpile Duration (years)	Stockpile Area (Acres)	Stockpile Height (ft)
	Peat	2,557			
	Excavated Material	28,686	Permanent	3.1	6
Upper Jones Tract (6000 cfs)	Topsoil	12,060	1	1.0	9
	Peat	3,040			
	Excavated Material	34,102	Permanent	3.1	7
Upper Jones Tract (7500 cfs)	Topsoil	12,060	1	1.0	10
	Peat	3,487			
	Excavated Material	39,117	Permanent	3.1	8
Union Island (3000 cfs)	Topsoil	14,472	2	1.0	10
	Peat	2,120			
	Excavated Material	24,015	Permanent	3.0	5
Union Island (4500 cfs)	Topsoil	14,472	2	1.0	11
	Peat	2,795			
	Excavated Material	31,657	Permanent	3.0	6
Union Island (6000 cfs)	Topsoil	14,472	2	1.0	11
	Peat	33,22			
	Excavated Material	37,634	Permanent	3.0	8
Union Island (7500 cfs)	Topsoil	14,472	2	1.0	11
	Peat	3,811			
	Excavated Material	43,168	Permanent	3.0	9
Bethany Reservoir Pumping Plant and Surge Basin (3,000 cfs)	Topsoil	227,561	7	7.1	22
	Excavated Material	2,389,104	Permanent	61.1	27
Aqueduct and Connection to Bethany Reservoir (3,000 cfs)	Topsoil	133,181	2	4.1	22
Discharge Structure (3,000 cfs)	Topsoil	12,899	3	0.4	22
Bethany Reservoir Pumping Plant and Surge Basin (4,500 cfs)	Topsoil	227,561	7	7.1	22
	Excavated Material	2,680,213	Permanent	61.1	30
Aqueduct and Connection to Bethany Reservoir (4,500 cfs)	Topsoil	141,046	3	4.4	22
Discharge Structure (4,500 cfs)	Topsoil	14,367	4	0.4	22
	Topsoil	228,504	7	7.1	22

Table 2-2. Stockpile Summary-Bethany Alignment

Summarizes the temporary and permanent peat, topsoil, and excavated material stockpiles

Feature	Material	Volume*	Stockpile Duration (years)	Stockpile Area (Acres)	Stockpile Height (ft)
Bethany Reservoir Pumping Plant and Surge Basin (6,000 cfs)	Excavated Material	2,871,816	Permanent	59.3	33
Aqueduct and Connection to Bethany Reservoir (6,000 cfs)	Topsoil	144,716	4	4.5	22
Discharge Structure (6,000 cfs)	Topsoil	14,891	5	0.5	22
Bethany Reservoir Pumping Plant and Surge Basin and CVP Connection East of DMC (7,500 cfs)	Topsoil	268,878	7	7.2	26
	Excavated Material	3,536,502	Permanent	59.3	41
Aqueduct and Connection to Bethany Reservoir (7,500 cfs)	Topsoil	144,716	4	4.5	22
Discharge Structure (7,500 cfs)	Topsoil	14,891	5	0.5	22
CVP Connection West of DMC (7500cfs)	Topsoil	41,947	3	1.0	25
	Excavated Material	372,232	Permanent	9.2	25

Notes:

*Peat and Topsoil are reported in LCY as these stockpiles will not be compacted. Excavated material stockpiles are reported in CCY as these stockpiles will be compacted. Excavated peat soil would be placed in stockpiles and covered with five feet of topsoil to limit oxidation of the organic peat material.

ft = foot (feet)

2.4 Feature Summaries

The Model includes a sitewide inventory for each project feature (such as intakes and shafts) of the fill needs and source material generated from earthwork activities, except for road and railroad fill requirements. Road and railroad fill will generally be specialty base materials that will not be generated onsite and are not included in the Model.

The Model treats all source material (i.e. generated by onsite excavation) as a positive quantity. Conversely, it treats all material needs as a negative quantity. To account for any surplus material (material generated in excess of the identified needs), the Model introduces surplus stockpiles as a "need" that consumes any surplus material not consumed by the other identified needs of the project at that feature; therefore, the surplus stockpiles are treated as a negative quantity.

Results of the soil balance are provided for all project design capacities in the following sections. For each project design capacity there are a series of tables that summarize the fill need volumes, sources, and remnant quantities for each feature.

Note, the following summaries only include sites that are new or altered for the Bethany Reservoir Alternative. Refer to the Soil Balance TM (DCA 2021a) for the soil balance summaries that were unchanged for the Bethany Reservoir Alternative as compared to the Eastern Corridor, which include the intakes and the shaft pads at New Hope Tract, Canal Ranch Tract, Terminous Tract, and King Island.

2.4.1 Bethany Reservoir Alternative with Project Design Capacity of 6,000 cfs

Tables 2-3 to Table 2-8 present the results of the soil balance for each feature and summarize the fill needs and material sources.

Table 2-3. Twin Cities Complex (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Twin Cities Shaft-Pad	Onsite	-83,168
Twin Cities Ring Levee	Onsite	-262,859
Restore Topography from Twin Cities Shaft Pad Borrow	Onsite	-92,409
Restore Topography from Twin Cities Ring Levee Borrow	Onsite	-292,065
Restore Topography from New Hope Borrow	Export	-35,386
Restore Topography from Canal Ranch Borrow	Export	-31,922
Restore Topography from Terminous Borrow	Export	-70,233
Restore Topography from King Borrow	Export	-87,176
Sources		**Volume (CCY)[a]**
Twin Cities Shaft Pad Borrow from TCC	Onsite	83,168
Twin Cities Ring Levee Borrow from TCC	Onsite	262,859
Twin Cities Ring Levee Degrade/Stockpile	Onsite	262,859
Twin Cities Shaft Excavation	Onsite	186,308
TCC RTM	Onsite	5,111,861
Material Export/Reuse		**Volume (CCY)[a]**
Stockpile of Twin Cities Levee Degrade	Onsite	-262,859
Surplus RTM Stockpile at Twin Cities	Onsite	-4,688,978

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-4. Lower Roberts Island (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Lower Roberts Island Shaft-Pad	Onsite	-212,250
Lower Roberts Island Levee	Onsite	-39,424
Restore Topography from Lower Roberts Island Shaft Pad Borrow	Onsite	-235,833
Restore Topography from Lower Roberts Island Levee Borrow	Onsite	-43,804
Restore Topography from Upper Jones Tract Shaft Pad Borrow	Export	-60,883
Restore Topography from Union Island Shaft Pad Borrow	Export	-55,223
Sources		**Volume (CCY)[a]**

Table 2-4. Lower Roberts Island (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Lower Roberts Island Shaft Pad Borrow from Lower Roberts Island	Onsite	212,250
Lower Roberts Island Levee Borrow from Lower Roberts Island	Onsite	39,424
Lower Roberts Island Shaft-Excavation	Onsite	178,291
Lower Roberts Island RTM	Onsite	4,680,976
Material Export/Reuse		**Volume (CCY)[a]**
Surplus RTM at Lower Roberts Island	Onsite	-4,463,523

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-5. Upper Jones Tract (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Upper Jones Tract Shaft-Pad	Onsite	-54,795
Sources		**Volume (CCY)[a]**
Upper Jones Tract Shaft Pad Borrow from Lower Roberts Island	Import	54,795
Upper Jones Tract Shaft-Excavation	Onsite	34,102
Material Export/Reuse		**Volume (CCY)[a]**
Upper Jones Tract Shaft-On Site Stockpile	Onsite	-34,102

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-6. Union Island (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Union Island Shaft-Pad	Onsite	-49,701
Sources		**Volume (CCY)[a]**
Union Island Shaft Pad Borrow from Lower Roberts Island	Import	49,701
Union Island Shaft-Excavation	Onsite	37,634
Material Export/Reuse		**Volume (CCY)[a]**
Union Island Shaft-On Site Stockpile	Onsite	-37,634

[a] Note: All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-7. Bethany Reservoir Pumping Plant and Surge Basin (6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Surge Basin-Access Ramp Free Draining Backfill	Onsite	-10,083
Bethany Pumping Plant-Site Grading	Onsite	-7,121
Sources		**Volume (CCY)[a]**
Surge Basin-Shaft	Onsite	39,399
Surge Basin-Excavation	Onsite	934,835
Surge Basin-Drilled Shafts	Onsite	151,016
Surge Basin-Diaphragm Walls	Onsite	45,810
Bethany Pumping Plant	Onsite	1,270,298
Surge Basin-Access Ramp Free Draining Backfill	Import	10,083
Material Export/Reuse		**Volume (CCY)[a]**
Surge Basin-On Site Stockpile	Onsite	-2,434,237

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-8. Bethany Reservoir Aqueduct and Bethany Reservoir Discharge Structures 6,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Bethany Pump Station to Bethany Reservoir	Onsite	-1,257,486
Sources		**Volume (CCY)[a]**
Bethany Pump Station to Bethany Reservoir Excavation	Onsite	1,695,064
Material Export/Reuse		**Volume (CCY)[a]**
Bethany Pump Station to Bethany Reservoir Surplus	Onsite	-437,578

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

2.4.2 Bethany Reservoir Alternative with Project Design Capacity of 3,000 cfs

Tables 2-9 to Table 2-14 provide the results of the soil balance for each feature and summarize the fill needs and material sources.

Table 2-9. Twin Cities Complex (3,000-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Twin Cities Shaft-Pad	Onsite	-81,312
Twin Cities Ring Levee	Onsite	-230,450
Restore Topography from Twin Cities Shaft Pad Borrow	Onsite	-90,347
Restore Topography from Twin Cities Ring Levee Borrow	Onsite	-256,055
Restore Topography from New Hope Borrow	Export	-30,835
Restore Topography from Canal Ranch Borrow	Export	-27,769
Restore Topography from Terminous Borrow	Export	-63,015
Restore Topography from King Borrow	Export	-77,291
Sources		**Volume (CCY)[a]**
Twin Cities Shaft Pad Borrow from TCC	Onsite	81,312
Twin Cities Ring Levee Borrow from TCC	Onsite	230,450
Twin Cities Ring Levee Degrade/Stockpile	Onsite	230,450
Twin Cities Shaft Excavation	Onsite	172,410
TCC RTM	Onsite	2,366,209
Material Export/Reuse		**Volume (CCY)[a]**
Stockpile of Twin Cities Levee Degrade	Onsite	-230,450
Surplus RTM Stockpile at Twin Cities	Onsite	-1,993,307

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-10. Lower Roberts Island (3,000-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Lower Roberts Island Shaft-Pad	Onsite	-207,896
Lower Roberts Island Levee	Onsite	-39,424
Restore Topography from Lower Roberts Island Shaft Pad Borrow	Onsite	-230,996
Restore Topography from Lower Roberts Island Levee Borrow	Onsite	-43,804
Restore Topography from Upper Jones Tract Shaft Pad Borrow	Export	-53,585
Restore Topography from Union Island Shaft Pad Borrow	Export	-48,511
Sources		**Volume (CCY)[a]**
Lower Roberts Shaft Pad Borrow from Lower Roberts Island	Onsite	207,896
Lower Roberts Levee Borrow from Lower Roberts Island	Onsite	39,424
Lower Roberts Island Shaft-Excavation	Onsite	164,991
Lower Roberts Island RTM	Onsite	2,468,189
Material Export/Reuse		**Volume (CCY)[a]**
Surplus RTM at Lower Roberts Island	Onsite	-2,256,284

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-11. Upper Jones Tract (3,000-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Upper Jones Tract Shaft-Pad	Onsite	-48,226
Sources		**Volume (CCY)[a]**
Upper Jones Shaft Pad Borrow from Lower Roberts Island	Import	48,226
Upper Jones Tract Shaft-Excavation	Onsite	21,761
Material Export/Reuse		**Volume (CCY)[a]**
Upper Jones Tract Shaft-On Site Stockpile	Onsite	-21,761

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-12. Union Island (3,000-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Union Island Shaft-Pad	Onsite	-43,660
Sources		**Volume (CCY)[a]**
Union Island Shaft Pad Borrow from Lower Roberts Island	Import	43,660
Union Island Shaft-Excavation	Onsite	24,015
Material Export/Reuse		**Volume (CCY)[a]**
Union Island Shaft-On Site Stockpile	Onsite	-24,015

[a] Note: All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-13. Bethany Reservoir Pumping Plant and Surge Basin (3,000-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Surge Basin-Access Ramp Free Draining Backfill	Onsite	-10,083
Bethany Pumping Plant-Site Grading	Onsite	-7,121
Sources		**Volume (CCY)[a]**
Surge Basin-Shaft	Onsite	39,399
Surge Basin-Excavation	Onsite	934,835
Surge Basin-Drilled Shafts	Onsite	151,016
Surge Basin-Diaphragm Walls	Onsite	45,810
Bethany Pumping Plant	Onsite	948,122
Surge Basin-Access Ramp Free Draining Backfill	Import	10,083
Material Export/Reuse		**Volume (CCY)[a]**
Surge Basin-On Site Stockpile	Onsite	-2,112,061

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-14. Bethany Reservoir Aqueduct and Bethany Reservoir Discharge Structures (3,000-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Bethany Pump Station to Bethany Reservoir	Onsite	-593,662
Sources		**Volume (CCY)[a]**
Bethany Pump Station to Bethany Reservoir Excavation	Onsite	870,705
Material Export/Reuse		**Volume (CCY)[a]**
Bethany Pump Station to Bethany Reservoir Surplus	Onsite	-277,043

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

2.4.3 Bethany Reservoir Alternative with Project Design Capacity of 4,500 cfs

Tables 2-15 to Table 2-20 provide the results of the soil balance for each feature and summarize the fill needs and material sources.

Table 2-15. Twin Cities Complex (4,500-cfs Project Design Capacity)

Needs		Volume (CCY)[a]
Twin Cities Shaft-Pad	Onsite	-81,312
Twin Cities Ring Levee	Onsite	-238,740
Restore Topography from Twin Cities Shaft Pad Borrow	Onsite	-90,347
Restore Topography from Twin Cities Ring Levee Borrow	Onsite	-265,267
Restore Topography from New Hope Borrow	Export	-33,474

Table 2-15. Twin Cities Complex (4,500-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Restore Topography from Canal Ranch Borrow	Export	-30,177
Restore Topography from Terminous Borrow	Export	-67,214
Restore Topography from King Borrow	Export	-83,034
Sources		**Volume (CCY)[a]**
Twin Cities Shaft Pad Borrow from TCC	Onsite	81,312
Twin Cities Ring Levee Borrow from TCC	Onsite	238,740
Twin Cities Ring Levee Degrade/Stockpile	Onsite	238,740
Twin Cities Shaft Excavation	Onsite	172,410
TCC RTM	Onsite	3,807,778
Material Export/Reuse		**Volume (CCY)[a]**
Stockpile of Twin Cities Levee Degrade	Onsite	-238,740
Surplus RTM Stockpile at Twin Cities	Onsite	-3,410,675

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-16. Lower Roberts Island (4,500-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Lower Roberts Island Shaft-Pad	Onsite	-207,896
Lower Roberts Island Levee	Onsite	-39,424
Restore Topography from Lower Roberts Island Shaft Pad Borrow	Onsite	-230,996
Restore Topography from Lower Roberts Island Levee Borrow	Onsite	-43,804
Restore Topography from Upper Jones Shaft Pad Borrow	Export	-57,822
Restore Topography from Union Island Shaft Pad Borrow	Export	-52,407
Sources		**Volume (CCY)[a]**
Lower Roberts Island Shaft Pad Borrow from Lower Roberts Island	Onsite	207,896
Lower Roberts Island Levee Borrow from Lower Roberts Island	Onsite	39,424
Lower Roberts Island Shaft-Excavation	Onsite	164,991
Lower Roberts Island RTM	Onsite	3,486,816
Material Export/Reuse		**Volume (CCY)[a]**
Surplus RTM at Lower Roberts Island	Onsite	-3,266,778

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-17. Upper Jones Tract (4,500-cfs Project Design Capacity)		
Needs		**Volume (CCY)[a]**
Upper Jones Tract Shaft-Pad	Onsite	-52,040
Sources		**Volume (CCY)[a]**
Upper Jones Tract Shaft Pad Borrow from Lower Roberts Island	Import	52,040
Upper Jones Tract Shaft-Excavation	Onsite	28,686
Material Export/Reuse		**Volume (CCY)[a]**
Upper Jones Tract Shaft-On Site Stockpile	Onsite	-28,686

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-18. Union Island (4,500-cfs Project Design Capacity)

Needs		**Volume (CCY)[a]**
Union Island Shaft-Pad	Onsite	-47,166
Sources		**Volume (CCY)[a]**
Union Island Shaft Pad Borrow from Lower Roberts Island	Import	47,166
Union Island Shaft-Excavation	Onsite	31,657
Material Export/Reuse		**Volume (CCY)[a]**
Union Island Shaft-On Site Stockpile	Onsite	-31,657

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Table 2-19. Bethany Reservoir Pumping Plant and Surge Basin (4,500-cfs Project Design Capacity)

Needs		**Volume (CCY)[1a]**
Surge Basin-Access Ramp Free Draining Backfill	Onsite	-10,083
Bethany Pumping Plant-Site Grading	Onsite	-7,121
Sources		**Volume (CCY)[a]**
Surge Basin-Shaft	Onsite	39,399
Surge Basin-Excavation	Onsite	934,835
Surge Basin-Drilled Shafts	Onsite	151,016
Surge Basin-Diaphragm Walls	Onsite	45,810
Bethany Pumping Plant	Onsite	1,147,473
Surge Basin-Access Ramp Free Draining Backfill	Import	10,083
Material Export/Reuse		**Volume (CCY)[a]**
Surge Basin-On Site Stockpile	Onsite	-2,311,412

[a] All source materials are treated as positive quantities and all material needs and surplus are treated as negative quantities.

Reclamation District No. 1002 - Glannvale Tract
Loast Slough Patrol Road Rehabilitation and Surfacing
Project Number: 7642.12

ASTA CONSTRUCTION
Job #14424

DCC Engineering
PO Box 929
Walnut Grove, CA 95690

T&M Summary

SCOPE: Repair ex. gate on levee crown - reset ex. pole and re-install gate. Moisture condition, grade and compact ex. levee crown from jobsite to packing shed.

Labor/Equipment Cost Summary

Date	Category	Cost Code	ST-Hrs.	OT-Hrs.	DT-Hrs.	ST-Rate	OT-Rate	DT-Rate	Cost
November 7, 2024	Foreman	7274	1			$142.50			$142.50
November 7, 2024	Pickup	51106	1			$30.50			$30.50
November 7, 2024	Cat 415F Skiploader	21406	1			$61.00			$61.00
November 7, 2024	Operator	7300	1			$131.50			$131.50
November 7, 2024	Pickup	51110	1			$30.50			$30.50
November 8, 2024	Foreman	7274	8			$142.50			$1,140.00
November 8, 2024	Pickup	51106	8			$30.50			$244.00
November 8, 2024	Operator	7300	8			$131.50			$1,052.00
November 8, 2024	Pickup	51110	8			$30.50			$244.00
November 8, 2024	Cat 140H Blade	24311	4			$109.50			$438.00
November 8, 2024	Operator	7344	3			$127.00			$381.00
November 8, 2024	Cat CS56 Smooth Drum Roller	78408	1.5			$98.50			$147.75
November 8, 2024	Teamster	3081	6			$98.00			$588.00
November 8, 2024	4k Gallon Water Truck	57134	5			$76.50			$382.50

Labor/Equipment Total: $5,013.25 **(A)**

Materials/Misc. Cost Summary

Date	Category	Description	Unit	Unit Rate	Quantity	Cost
November 8, 2024	Lowe's - Lodi, CA	Misc. Materials - Gate (Trans. #912431640)	LS	$68.53	1	$68.53
November 8, 2024	California Rock & Ready Mix	Concrete (Inv. #169057)	LS	$194.85	1	$194.85

Sub-Total: $263.38
15% Mark-up: $39.51
Materials/Misc. Total: $302.89 **(B)**

Total Amount Due: $5,316.14 (A+B)

Authorized: [signature] - Project Manager

Date: November 30, 2024

ASTA CONSTRUCTION CO., INC. DAILY FOREMAN'S REPORT

DATE: 11-7-24 | SHIFT: FROM 6:30 AM PM TO 3:30 AM PM

FOREMAN'S NAME: G. Vasquez

CUSTOMER SIGNATURE (IF REQ'D.)

JOB	JOB	JOB	JOB
Glennvale	Glennvale T&M GATE	Shop Fuel/Grease	~~Glennvale~~
DESC.	DESC.	DESC.	DESC.
JOB NO. 14424	JOB NO. 14424 CODE T&M	JOB NO.	JOB NO. 14424
CODE NO.		CODE NO.	CODE NO.

EMP

EMPLOYEE NAME	EMP NO.	CLASS	RATE	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	TOTAL HRS
G. Vasquez	7274	4man		7	.5		51106	7	1			51106	1		.5								
												21406	1										
J. Wolking	7300	OP		7	.5		51110	7	1			51110	1		.5								
							24311	7															
J. Sherrill	7344	OP		8	.5		78408	4							.5								
							21406	4															
E. Lameli	3081	TEAM		8	.5		57134	8															
C. CHAIN	3074	TEAM		8	1		57145	9															
TOTAL HOURS OF MEN & EQUIPMENT																							

TODAY'S QUANTITY				
QUANTITY TO DATE				
ESTIMATED TOTAL QUANTITY				
TODAY'S COST				
COST TO DATE				
TODAY'S UNIT COST				
UNIT COST TO DATE				
ESTIMATED UNIT COST				
MATERIAL DELIVERED TO JOB — TYPE	Crushed 3/8			AB
QUANTITY	46.54 tons			23.20
FROM	George Reed ASTA			George Reed ASTA
HAULED BY				

COMMENTS: Finish Graded Rock on levee crown and Compacted. USED SKippy to move rock stockpiled on levee crown to Ramps that we graded and compacted.

SPREAD Crushed 3/8 on haul road coming in to job. STOCKPile AB at Pump station ramp.

ASTA CONSTRUCTION CO., INC. — DAILY FOREMAN'S REPORT

DATE: 11-8-24 | SHIFT: FROM 6:30 AM PM TO 2:30 AM PM

FOREMAN'S NAME: G. Vasquez

CUSTOMER SIGNATURE (IF REQ'D.)

JOB	DESC.	JOB NO.	CODE NO.	EMP
Glennvale	T&M GATE	14424	~~CODE NO~~ T&M	
Glennvale	T&M McCormack Road	14424	~~CODE NO~~ T&M	
Glennvale		14424		

EMPLOYEE NAME	EMP NO.	CLASS	RATE	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	ST HRS	OT HRS	DBL HRS	EQUIP. NO.	EQUIP HRS	TOTAL HRS
G. Vasquez	7274	4man		4			51106	4	4			51106	4											
J. Walking	7300	OP		4			51110	4	4			51110	4											
												24311	4											
J. Sherrill	7349	OP		1.5			~~0~~		1.5			78408	1.5	5			78408	5						
E Lomeli	3081	TEAM		1			~~0~~		5			57134	5	2			57134	2						
TOTAL HOURS OF MEN & EQUIPMENT																								

TODAY'S QUANTITY	* California Rock
QUANTITY TO DATE	3 Readymix
ESTIMATED TOTAL QUANTITY	↳ 1 cy-Concrete
TODAY'S COST	
COST TO DATE	* Lowe's
TODAY'S UNIT COST	(misc. Materials)
UNIT COST TO DATE	↳ $68.53
ESTIMATED UNIT COST	

MATERIAL DELIVERED TO JOB: TYPE | QUANTITY | FROM | HAULED BY

COMMENTS:

Graded, watered, Jeff McCormacks road to Packing shed.
Compacted with roller.
Set post for gate Lumber staked from lowes and concrete
Rerolled project area

Job #14424 A.A.

LEARN MORE AT LOWES.COM/MYLOWESREWARDS

LOWE'S HOME CENTERS, LLC
1389 S. LOWER SACRAMENTO ROAD
LODI, CA 95242 (209) 339-2600

- SALE -

SALES#: S1706027 4274266 TRANS#: 912431640 11-08-24

224272 42-GAL 24-CT 3ML CONTR CH	18.79
19.78 DISCOUNT EACH	-0.99
9803 3/4-24 ROUND STEEL STAKE	26.16
6.88 DISCOUNT EACH	-0.34
4 @ 6.54	
330568 2-4-8 KD DF SELECT STUD	13.88
3.65 DISCOUNT EACH	-0.18
4 @ 3.47	
CA LUMBER FEE	0.14
12180 1/2-IN X 18-IN #4 STEEL R	4.35
4.58 DISCOUNT EACH	-0.23

SUBTOTAL:	63.32
TOTAL TAX:	5.21
INVOICE 98504 TOTAL:	68.53
LBA:	68.53

TOTAL SAVINGS THIS TRIP: $3.30

LBA: XXXXXXXXXXXXXX7529 AMOUNT: 68.53 AUTHCD: 001133
SWIPED REFID:985040 11/08/24 10:40:44
LBA/PO: glennvale

STORE: 1706 TERMINAL: 01 11/08/24 10:41:11
OF ITEMS PURCHASED: 10
EXCLUDES FEES, SERVICES AND SPECIAL ORDER ITEMS

THANK YOU FOR SHOPPING LOWE'S.
FOR DETAILS ON OUR RETURN POLICY, VISIT
LOWES.COM/RETURNS
A WRITTEN COPY OF THE RETURN POLICY IS AVAILABLE
AT OUR CUSTOMER SERVICE DESK

California Rock and Ready Mix

1200 E. Turner Road
Lodi, CA 95240

Invoice

Date	Invoice #
11/12/2024	169057

Bill To

Asta Construction Co., Inc.
P.O. Box 758
Rio Vista, CA 94571-0758

Job # 14424 A.4.

Serviced	Item	Description	Qty	Rate	Amount
11/8/2024	concrete 6 sack/per yard	Walnut Grove PO#14424	1	115.00	115.00T
	Mixer rental		1	65.00	65.00T

RECEIVED
NOV 14 2024
BY:_____

Phone #	Fax #
(209) 368-5351	(209) 368-5824

Sales Tax (8.25%)	$14.85
Total	$194.85

California Rock & Ready Mix

1200 E. Turner Rd. • Lodi, CA 95240
(209) 368-5351 • Fax (209) 368-5824

No 169057

NAME Asta DATE 11/8/24

ADDRESS _____ PHONE _____

JOB SITE Walnut Grove Pot 14424 A.A

TIME OUT	AM ☐ PM ☐	TIME IN	AM ☐ PM ☐	TRUCK NO.	TRAILER NO.

QTY.	DESCRIPTION	PRICE	AMOUNT
1yd	6 Sack		

CAUTION
Freshly mixed cement, mortar, concrete or grout may cause skin injury. Avoid contact with skin where possible and wash exposed skin areas promptly with water. If any cement mixtures get into eyes, rinse immediately and repeatedly with water and get prompt medical attention. KEEP OUT OF REACH OF CHILDREN.

EQUIPMENT RENTED	PRICE/DAY		
HAND TROWEL		SUB-TOTAL	
HAND FLOAT		SALES TAX	
EDGER		EQUIPMENT RENTAL	
TRAILER		CLEANING CHARGE	
		TOTAL	

SALES & RENTAL AGREEMENT

- If the equipment is not properly cleaned after use, lessee agrees to pay a $50 cleaning charge.
- If the equipment is used more than two hours, fee of $25 per hour on weekdays and $35 per hour on weekends, will be charged.
- The lessee acknowledges that the above equipment has been delivered to his custody and control for his own use, and in consideration he agrees to pay the rental charge and sign this agreement. The lessee further agrees not to sell, loan, sublet or mortgage the leased equipment and to return the same in as good condition as when received.
- The lessee acknowledges that he has inspected said trailer, trailer hitch and safety chain, and the other items of equipment, and that he has found the trailer and hook-up safe and secure and the other equipment serviceable and he accepts same agreeing to assume all responsibility for said leased equipment while it is in his custody.
- The lessee further agrees to indemnify and save **California Rock & Ready Mix** harmless from any liability, claim or expense arising from any injury or damage to his person or property that may occur while said equipment is in his custody or as a proximate result of its being in his custody. In the event of any accident, the lessee agrees to make a written report to **California Rock & Ready Mix.**
- The lessee agrees to comply with all laws of the State covering the use of trailers, to travel within the speed limit, and to assume all responsibility for fire, theft, confiscation, and all citations and penalties incurred against said trailer while in his possession.

We are not responsible for any damage encountered while California Rock & Ready Mix is delivering materials customer has ordered. Customer will pay all tow charges if our truck or equipment gets stuck while dumping or working in the area the customer requested.

SIGNATURE	LICENSE
X	

ASTA CONSTRUCTION

1090 ST. FRANCIS WAY
P.O. BOX 758
RIO VISTA, CALIFORNIA 94571-0758

TELEPHONE (707) 374-6472
FAX (707) 374-6888

RD#1002 - GLANVILLE TRACT
C/O DCC ENGINEERING
14315 RIVER ROAD
WALNUT GROVE CA 95690

INVOICE #: 6100

DATE: 10/31/2023

PO #: 7642.11 ok ep

CUSTOMER #	TERMS:	JOB #
3027	NET 30	16423

TICKET DATE	TICKET NO.	DESCRIPTION	QTY	U/M	UNIT PRICE	EXTENDED $
		LOST SLOUGH PATROL ROAD REHABILITATION & SURFACING PER ATTACHED DETAIL	1.00	LS	274124.260	260,418.05

RETAINAGE	13,706.21
SUBTOTAL	260,418.05
SALES TAX	.00
TOTAL AMOUNT	260,418.05
INV AMOUNT + RETAINAGE	274,124.26

Reclamation District No. 1002 - Glannvale Tract

Lost Slough Patrol Road Rehabilitation and Surfacing

Job Number 7642.11

ASTA CONSTRUCTION
Job #16423

DCC Engineering
PO Box 929
Walnut Grove, CA 95690

PROGRESS PAYMENT THROUGH: October 31, 2023

		ORIGINAL QUANTITY				PREVIOUS PAYMENT		PAYMENT THIS AMOUNT	
Item	Description	Quantity	Unit	Price	Amount	Quantity	Amount	Quantity	Amount
1.0	Mobilization and Demobilization	1	LS	$8,003.00	$8,003.00			100%	$8,003.00
2.0	Site Preparation, Clearing and Grubbing	7265	LF	$1.50	$10,897.50			7265	$10,897.50
3.1	Grading	7265	LF	$5.70	$41,410.50			7265	$41,410.50
3.2	Provide and Place 3/4" AB Roadway Surface	4900	TON	$41.70	$204,330.00			4900.27	$204,341.26
4.0	Gate Modifications to Accommodate Grade Changes	4	EA	$2,368.00	$9,472.00			4	$9,472.00
				Original Contract:	$274,113.00	Total:	$0.00	Total:	$274,124.26
						5% Retention:	$0.00	5% Retention:	$13,706.21
						Previous Amount:	$0.00	**Amount Due:**	**$260,418.05**

Authorized: Scott Schmidt - Project Manager

Date: October 31, 2023

DOCUMENT 00 65 19.16 - CERTIFICATE OF RELEASE

(Check One)

☑ Progress Payment Request # 1 ☐ Final Payment Request

Terms in the Certificate of Release:

"Work": Lost Slough Patrol Road Rehabilitation and Surfacing

"District": Reclamation District No. 1002 (Glannvale Tract)

FROM: Asta Construction Co., Inc.

TO: Reclamation District No. 1002 (Glannvale Tract)
Office of the District Engineer
c/o Emily Pappalardo
Post Office Box 929
Walnut Grove, CA 95690-0929

CONTRACT: **7642.11** entered into the 11th day of September, 2023, between the District and Asta Construction Co., Inc., of Rio Vista, California, hereinafter called the Contractor, for the Work located in the County of Sacramento, California.

REFERENCE: Invoice # 6100
(Payment request or Invoice number)

KNOW ALL MEN BY THESE PRESENTS

1. The undersigned hereby certifies that there is due and payable under the contract and duly approved Change Orders and modifications the undisputed balance of $ 260,418.05.

2. The undersigned further certifies that in addition to the amount set forth in paragraph 1 hereof there are outstanding and unsettled the following items which are just and due and owing by the District to the Contractor.

	Item	Amount
a.		
b.		
c.		

3. The undersigned further certifies that all work required under this contract including work required under Change Order(s)_____, _____, (if any) has been performed in accordance with the terms thereof, and that there are no claims of laborers or mechanics for unpaid wages arising out of the performance of this contract, and that the wage rates paid by the Contractor and all Subcontractors were in conformity with the contract provisions relating to said wage rates.

4. Except for the amounts stated in paragraphs 1 and 2 hereof the undersigned has received from the District, all sums of money payable to the undersigned under or pursuant to the aforementioned contract or any change or modification thereof.

5. That in consideration of the payment of the amount stated in paragraph 1 hereof the undersigned does hereby release the Agency from any and all claims arising under or by virtue of this contract except the amounts listed in paragraph 2 hereof; provided, however, that if for any reason the District does not pay in full the amount stated in paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof. Contractor further certifies that upon payment of the amounts listed in paragraph 2 hereof, and of any amount which may be deducted from paragraph 1 hereof, the Contractor releases the District from any and all claims of any nature whatsoever arising out of said contract or modification thereof, and will execute such further releases or assurances as the District may request.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this _____
31st day of October, 2023.

Asta Construction Co., Inc.
Contractor

Scott Schmitt
Vice President
Title

ASTA CONSTRUCTION

1090 ST. FRANCIS WAY
P.O. BOX 758
RIO VISTA, CALIFORNIA 94571-0758

TELEPHONE (707) 374-6472
FAX (707) 374-6888

RD#1002 - GLANVILLE TRACT
C/O DCC ENGINEERING
14315 RIVER ROAD
WALNUT GROVE CA 95690

INVOICE #: 6101

DATE: 10/31/2023

PO #: RETENTION ok ep

CUSTOMER #	TERMS:	JOB #
3027	NET 30	16423

TICKET DATE	TICKET NO.	DESCRIPTION	QTY	U/M	UNIT PRICE	EXTENDED $
LOST SLOUGH PATROL ROAD REHABILITATION & SURFACING JOB#7642.11						
		PER ATTACHED DETAIL	1.00	LS	13706.210	13,706.21

RETAINAGE	.00
SUBTOTAL	13,706.21
SALES TAX	.00
TOTAL AMOUNT	13,706.21
INV AMOUNT + RETAINAGE	13,706.21

Reclamation District No. 1002 - Glannvale Tract

Lost Slough Patrol Road Rehabilitation and Surfacing

Job Number 7642.11

ASTA CONSTRUCTION
Job #16423

DCC Engineering
PO Box 929
Walnut Grove, CA 95690

RETENTION PAYMENT THROUGH: October 31, 2023

		ORIGINAL QUANTITY				PREVIOUS PAYMENT		PAYMENT THIS AMOUNT	
Item	Description	Quantity	Unit	Price	Amount	Quantity	Amount	Quantity	Amount
1.0	Mobilization and Demobilization	1	LS	$8,003.00	$8,003.00	100%	$8,003.00	xxxx	xxxx
2.0	Site Preparation, Clearing and Grubbing	7265	LF	$1.50	$10,897.50	7265	$10,897.50	xxxx	xxxx
3.1	Grading	7265	LF	$5.70	$41,410.50	7265	$41,410.50	xxxx	xxxx
3.2	Provide and Place 3/4" AB Roadway Surface	4900	TON	$41.70	$204,330.00	4900.27	$204,341.26	xxxx	xxxx
4.0	Gate Modifications to Accommodate Grade Changes	4	EA	$2,368.00	$9,472.00	4	$9,472.00	xxxx	xxxx
				Original Contract:	$274,113.00	Total:	$274,124.26	Total:	$0.00
						5% Retention:	$13,706.21	5% Retention:	$0.00
						Previous Amount:	$260,418.05	**Amount Due:**	**$13,706.21**

Authorized: Matt Schmidt - Project Manager

Date: October 31, 2023

DOCUMENT 00 65 19.16 - CERTIFICATE OF RELEASE

(Check One)

☐ Progress Payment Request #_____ ☑ Final Payment Request (RETENTION)

Terms in the Certificate of Release:

"Work": Lost Slough Patrol Road Rehabilitation and Surfacing

"District": Reclamation District No. 1002 (Glannvale Tract)

FROM: Asta Construction Co., Inc.

TO: Reclamation District No. 1002 (Glannvale Tract)
Office of the District Engineer
c/o Emily Pappalardo
Post Office Box 929
Walnut Grove, CA 95690-0929

CONTRACT: **7642.11** entered into the 11th day of September, 2023 between the District and Asta Construction Co., Inc., of Rio Vista, California, hereinafter called the Contractor, for the Work located in the County of Sacramento, California.

REFERENCE: Invoice # 6101
(Payment request or Invoice number)

KNOW ALL MEN BY THESE PRESENTS

1. The undersigned hereby certifies that there is due and payable under the contract and duly approved Change Orders and modifications the undisputed balance of $13,706.21.

2. The undersigned further certifies that in addition to the amount set forth in paragraph 1 hereof there are outstanding and unsettled the following items which are just and due and owing by the District to the Contractor.

	Item	Amount
a.	_____	_____
b.	_____	_____
c.	_____	_____

3. The undersigned further certifies that all work required under this contract including work required under Change Order(s)_____, _____, (if any) has been performed in accordance with the terms thereof, and that there are no claims of laborers or mechanics for unpaid wages arising out of the performance of this contract, and that the wage rates paid by the Contractor and all Subcontractors were in conformity with the contract provisions relating to said wage rates.

4. Except for the amounts stated in paragraphs 1 and 2 hereof the undersigned has received from the District, all sums of money payable to the undersigned under or pursuant to the aforementioned contract or any change or modification thereof.

5. That in consideration of the payment of the amount stated in paragraph 1 hereof the undersigned does hereby release the Agency from any and all claims arising under or by virtue of this contract except the amounts listed in paragraph 2 hereof; provided, however, that if for any reason the District does not pay in full the amount stated in paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof. Contractor further certifies that upon payment of the amounts listed in paragraph 2 hereof, and of any amount which may be deducted from paragraph 1 hereof, the Contractor releases the District from any and all claims of any nature whatsoever arising out of said contract or modification thereof, and will execute such further releases or assurances as the District may request.

IN WITNESS WHEREOF, the undersigned has signed and sealed this instrument this _____ 31st day of October, 2023.

Asta Construction Co., Inc.
Contractor

Scott Schmitt
Vice President
Title

Reclamation District No. 1002 - Glannvale Tract

Lost Slough Patrol Road Rehabilitation and Surfacing

Job Number 7642.11

ASTA CONSTRUCTION
Job #16423

DCC Engineering
PO Box 929
Walnut Grove, CA 95690

3/4" Aggregate Base

Date:	Load Number:	Ticket Number:	Tons Per Load:	Total Tons:
October 16, 2023	1	53592435	24.87	
			24.87	24.87 Tons

3/4" Aggregate Base

Date:	Load Number:	Ticket Number:	Tons Per Load:	Total Tons:
October 18, 2023	1	53593164	23.18	
October 18, 2023	2	53593165	24.95	
October 18, 2023	3	53593167	24.79	
October 18, 2023	4	53593168	24.61	
October 18, 2023	5	53593169	25.02	
October 18, 2023	6	53593170	24.94	
October 18, 2023	7	53593173	25.05	
October 18, 2023	8	53593174	25.00	
October 18, 2023	9	53593176	25.17	
October 18, 2023	10	53593177	25.04	
October 18, 2023	11	53593180	24.08	
October 18, 2023	12	53593181	24.86	
October 18, 2023	13	53593183	22.42	
October 18, 2023	14	53593185	24.92	
October 18, 2023	15	53593186	24.85	
October 18, 2023	16	53593189	25.22	
October 18, 2023	17	53593191	25.11	
October 18, 2023	18	53593202	24.88	
October 18, 2023	19	53593203	24.71	
October 18, 2023	20	53593254	24.50	
October 18, 2023	21	53593257	24.34	
October 18, 2023	22	53593259	24.75	
October 18, 2023	23	53593261	24.69	
October 18, 2023	24	53593263	24.81	
October 18, 2023	25	53593265	24.81	
October 18, 2023	26	53593266	23.63	
October 18, 2023	27	53593268	24.11	
October 18, 2023	28	53593270	24.78	
October 18, 2023	29	53593272	24.28	
October 18, 2023	30	53593274	24.54	

ɔber 18, 2023	31	53593277	**24.17**
ɔctober 18, 2023	32	53593278	**25.28**
October 18, 2023	33	53593282	**24.74**
October 18, 2023	34	53593283	**24.45**
October 18, 2023	35	53593285	**24.59**
October 18, 2023	36	53593286	**24.74**
October 18, 2023	37	53593289	**24.83**
October 18, 2023	38	53593290	**24.67**
October 18, 2023	39	53593297	**24.58**
October 18, 2023	40	53593299	**24.60**
October 18, 2023	41	53593318	**25.69**
October 18, 2023	42	53593334	**24.43**
October 18, 2023	43	53593335	**24.36**
October 18, 2023	44	53593336	**24.58**
October 18, 2023	45	53593338	**24.82**
October 18, 2023	46	53593340	**24.42**
October 18, 2023	47	53593342	**24.72**
October 18, 2023	48	53593345	**24.41**
October 18, 2023	49	53593347	**25.05**
October 18, 2023	50	53593348	**25.17**
October 18, 2023	51	53593350	**25.25**
October 18, 2023	52	53593352	**24.82**
October 18, 2023	53	53593354	**25.13**
October 18, 2023	54	53593355	**24.66**
October 18, 2023	55	53593357	**24.78**
October 18, 2023	56	53593359	**24.98**
October 18, 2023	57	53593360	**24.72**
October 18, 2023	58	53593362	**24.85**
October 18, 2023	59	53593364	**24.34**
October 18, 2023	60	53593373	**24.33**
October 18, 2023	61	53593377	**24.41**
October 18, 2023	62	53593380	**24.87**
October 18, 2023	63	53593404	**25.59**
October 18, 2023	64	53593428	**25.13**
October 18, 2023	65	53593430	**24.71**
October 18, 2023	66	53593432	**25.76**
October 18, 2023	67	53593440	**24.66**
October 18, 2023	68	53593448	**24.85**
October 18, 2023	69	53593455	**25.33**
October 18, 2023	70	53593458	**24.53**
October 18, 2023	71	53593462	**25.08**
October 18, 2023	72	53593463	**23.95**
October 18, 2023	73	53593464	**24.95**
October 18, 2023	74	53593466	**24.94**
October 18, 2023	75	53593467	**24.77**

ober 18, 2023	76	53593469	24.82
October 18, 2023	77	53593470	25.02
October 18, 2023	78	53593472	24.53
October 18, 2023	79	53593473	24.29
October 18, 2023	80	53593474	25.13
October 18, 2023	81	53593475	24.46
October 18, 2023	82	53593476	24.62
October 18, 2023	83	53593477	24.40
October 18, 2023	84	53593478	25.14
October 18, 2023	85	53593489	26.50
October 18, 2023	86	53593514	24.12
October 18, 2023	87	53593518	24.58
October 18, 2023	88	53593525	24.13
October 18, 2023	89	53593529	24.45
October 18, 2023	90	53593548	24.86
October 18, 2023	91	53593550	25.00
October 18, 2023	92	53593552	24.42
October 18, 2023	93	53593553	24.25
October 18, 2023	94	53593555	24.98
October 18, 2023	95	53593556	24.37
October 18, 2023	96	53593557	24.22
October 18, 2023	97	53593558	24.47
October 18, 2023	98	53593560	24.21
October 18, 2023	99	53593562	22.89
October 18, 2023	100	53593563	24.25
October 18, 2023	101	53593564	25.14
October 18, 2023	102	53593565	24.53
October 18, 2023	103	53593567	24.16
October 18, 2023	104	53593568	24.60
October 18, 2023	105	53593570	24.66
			2590.93

2,615.80 Tons

3/4" Aggregate Base

Date:	Load Number:	Ticket Number:	Tons Per Load:	Total Tons:
October 19, 2023	1	53593591	25.08	
October 19, 2023	2	53593593	25.13	
October 19, 2023	3	53593594	24.77	
October 19, 2023	4	53593596	25.00	
October 19, 2023	5	53593597	24.79	
October 19, 2023	6	53593600	24.06	
October 19, 2023	7	53593601	24.65	
October 19, 2023	8	53593607	24.86	
October 19, 2023	9	53593611	25.03	
October 19, 2023	10	53593613	24.87	
October 19, 2023	11	53593616	25.41	

ɔber 19, 2023	12	53593617	**25.04**
Ɔctober 19, 2023	13	53593618	**25.53**
October 19, 2023	14	53593622	**24.80**
October 19, 2023	15	53593624	**25.22**
October 19, 2023	16	53593625	**24.90**
October 19, 2023	17	53593640	**24.83**
October 19, 2023	18	53593647	**24.98**
October 19, 2023	19	53593650	**25.38**
October 19, 2023	20	53593651	**25.34**
October 19, 2023	21	53593654	**25.51**
October 19, 2023	22	53593655	**24.93**
October 19, 2023	23	53593656	**25.48**
October 19, 2023	24	53593658	**24.70**
October 19, 2023	25	53593665	**25.28**
October 19, 2023	26	53593686	**23.91**
October 19, 2023	27	53593692	**24.46**
October 19, 2023	28	53593697	**23.82**
October 19, 2023	29	53593698	**24.04**
October 19, 2023	30	53593700	**25.77**
October 19, 2023	31	53593702	**25.26**
October 19, 2023	32	53593706	**25.23**
October 19, 2023	33	53593708	**25.83**
October 19, 2023	34	53593709	**24.87**
October 19, 2023	35	53593715	**24.99**
October 19, 2023	36	53593718	**24.81**
October 19, 2023	37	53593719	**25.03**
October 19, 2023	38	53593721	**24.85**
October 19, 2023	39	53593723	**25.78**
October 19, 2023	40	53593725	**25.13**
October 19, 2023	41	53593733	**24.59**
October 19, 2023	42	53593735	**24.67**
October 19, 2023	43	53593738	**25.09**
October 19, 2023	44	53593744	**24.94**
October 19, 2023	45	53593745	**24.57**
October 19, 2023	46	53593746	**24.80**
October 19, 2023	47	53593749	**24.84**
October 19, 2023	48	53593751	**24.97**
October 19, 2023	49	53593758	**24.95**
October 19, 2023	50	53593759	**25.83**
October 19, 2023	51	53593761	**24.48**
October 19, 2023	52	53593773	**24.10**
October 19, 2023	53	53593775	**25.23**
October 19, 2023	54	53593782	**25.28**
October 19, 2023	55	53593784	**25.61**
October 19, 2023	56	53593788	**24.82**

ober 19, 2023	57	53593792	24.55	
October 19, 2023	58	53593799	24.28	
October 19, 2023	59	53593801	22.75	
October 19, 2023	60	53593805	24.39	
October 19, 2023	61	53593806	23.99	
October 19, 2023	62	53593811	23.44	
October 19, 2023	63	53593815	25.11	
October 19, 2023	64	53593816	25.32	
October 19, 2023	65	53593818	23.98	
October 19, 2023	66	53593823	24.69	
October 19, 2023	67	53593826	24.91	
October 19, 2023	68	53593837	24.24	
October 19, 2023	69	53593839	24.55	
October 19, 2023	70	53593844	23.93	
October 19, 2023	71	53593845	24.88	
October 19, 2023	72	53593846	24.69	
October 19, 2023	73	53593847	24.46	
October 19, 2023	74	53593849	24.78	
October 19, 2023	75	53593852	24.02	
October 19, 2023	76	53593855	24.78	
October 19, 2023	77	53593857	25.82	
October 19, 2023	78	53593865	24.42	
October 19, 2023	79	53593868	24.03	
October 19, 2023	80	53593871	24.36	
October 19, 2023	81	53593873	25.68	
October 19, 2023	82	53593878	24.90	
October 19, 2023	83	53593879	24.64	
October 19, 2023	84	53593883	25.04	
October 19, 2023	85	53593884	24.87	
October 19, 2023	86	53593885	24.88	
October 19, 2023	87	53593889	25.06	
October 19, 2023	88	53593895	24.42	
			2183.98	4,799.78 Tons

3/4" Aggregate Base

Date:	Load Number:	Ticket Number:	Tons Per Load:	Total Tons:
October 23, 2023	1	53594337	24.79	
October 23, 2023	2	53594399	25.32	
October 23, 2023	3	53594448	25.01	
October 23, 2023	4	53594503	25.37	
			100.49	4,900.27 Tons <<<

Galindo Construction Company, Inc.
General Contractor, License #676941
14246 State Highway 160
Walnut Grove, CA 95690
Phone: (916) 776-1003

November 28, 2023

Invoice #3849

Reclamation District #554
PO Box 984
Walnut Grove, CA 95690

Job Location: Emergency Levee Repair – Sheet Piling Installation

1. Drive sheet piling (100 wall feet)
2. Backfill and compact where sheets were installed
3. Remove rock on land side slope and stockpile
4. Excavate and core levee toe
5. Install 5 loads of clean fill dirt at levee toe
6. Grade levee repair site and install ¾ AB rock on levee top

Price includes mobilization in and out for all equipment used below:

100 ton Crane	290 Long Reach Excavator
621-D Loader	Peterbilt Truck & Trailer
Gradall Forklift	CX-130 Excavator
Prinoth T14 Dump Truck	CAT 323 Compactor
CAT 305 Mini Excavator	

Job Price - $242,616.25

Terms of Payment: Net 30 days. Invoices not paid within 30 days of the date of the invoice are subject to a 1.5% monthly finance charge.

Subject:	**Barge Transportation Study (Final Draft)**
Project feature:	Site Development / Logistics
Prepared for:	California Department of Water Resources (DWR) / Delta Conveyance Office (DCO)
Prepared by:	Delta Conveyance Design and Construction Authority (DCA
Copies to:	File
Date/Version:	December 23, 2021
Reference no.:	EDM_SD_CE_TMO_Barge-Transportation-Study_000970_V03_FD_20211223

1. Organization

This technical memorandum (TM) includes the following eight sections.

- Introduction
- Executive Summary
- Tug and Barge Characteristics
- Primary Waterway Navigability
- Maps for Waterway Navigability and Landing Site Availability
- Operational Constraints
- Document History and Quality Assurance
- Appendixes

2. Introduction

2.1 Background

California DWR is conducting an environmental review and planning process for a single-tunnel Delta Conveyance. Construction of the single-tunnel solution would require moving labor, equipment, and material resources within the Delta, potentially using waterborne transportation systems. This report analyzes the logistics required to support this project by using the rivers and watercourses existing in the Delta.

2.2 Scope and Objective

This TM evaluates the potential tunnel alignments' accessibility by barges. It discusses the Sacramento – San Joaquin River Delta (Delta) waterways' navigability and landing site availability near potential tunnel shaft locations. The following aspects of barge transportation logistics and waterway navigability are discussed in this TM:

- Channel description based on bathymetry, width of waterways, and other applicable limitations
- Physical restrictions, including bridges
- Barge sizes in terms of length, width, capacity, and draft
- Potential tow configurations

- Potential supply and demand for barge services given the potential volumes associated with this project
- Potential barge-landing areas near intake shaft sites
- Operational constraints
- Effect of tidal currents on navigation
- Effect of seasonal variations in water levels and flooding in winter months
- Impacts to others pertaining to navigation
- Environmental restrictions and fish seasons

This study is based on the preliminary tunnel corridor maps. The maps, which were developed on a preliminary basis to provide a basis for this analysis, show potential tunnel alignments, shaft locations, and intake locations.

2.3 Executive Summary

Constructing tunnel launch shaft sites requires deliveries of tunnel boring machine components, equipment, tunnel liner precast concrete segments, aggregate, cement, and other building materials. These deliveries would otherwise result in a large number of truck trips during the construction period. The use of barges reduces the number of truck trips on highways and local roadways, which could also result in reduced costs for improving current roads and bridges. The barges could also be used to transfer reusable tunnel material (RTM) to other locations for reuse. Materials could be delivered by barge from existing ports near the Delta, including Port of Stockton, Port of Pittsburg, and Port of West Sacramento as well as commercial mooring facilities (for example, a facility in Rio Vista used to load barges with rock). Barge landings could be constructed near the tunnel launch facilities to facilitate off-loading tunnel liner pre-cast concrete segments and loading RTM. This TM analyzes the logistics required to support material transport in the Delta's rivers and watercourses.

2.3.1 Tug and Barge Characteristics

Equipment characteristics for tug and barge equipment working on the Delta waterways were evaluated based upon equipment and configurations that experienced contractors have historically used for on-the-water work in the Delta. For barges, the ideal size would be 200 feet long by 50 feet wide, with a draft less than 12 feet and a hauling capacity of 2,000 tons. The ideal tug for the Delta would be 1,500 horsepower with drafts of 9 feet or less. Because of the width of many of the smaller waterways, the preferred towing configuration would be a single barge being pushed by a single tug. In some locations, a second tug would be needed to assist at tight turns. Barges also could need to be light-loaded to be able to navigate through shallow areas. Also, site-dependent variations could dictate whether smaller or larger tugs and barges (from the ideal specifications cited previously) are used because of the different site conditions.

2.3.2 Primary Waterway Characteristics

The waterways that could be used to haul materials and equipment were analyzed for depth, width, and bridge restrictions. The primary waterways evaluated included the Sacramento River, Sacramento River Deep Water Ship Channel (SRDWSC), Three Mile Slough, Mokelumne River Complex, San Joaquin River and Stockton Deep Water Ship Channel (SDWSC), Old River Complex, Connection Slough, Railroad Cut,

Woodward Canal/North Victoria Canal, Potato Slough Complex, and Middle River Complex. The SRDWSC and SDWSC have enough depth and width to transport materials. Most of the watercourses have enough width to transport materials, but there are some areas of concern where the water depth is less than 12 feet during low tide throughout the year. These areas could require light-loaded barges that draft less than 10 feet or for barging to be scheduled during higher tides to provide depth to transport over the shallow areas. Opening bridges on these waterways could also affect the barge schedule. Waterway characteristic are summarized as follows:

- SRDWSC has adequate widths and depths; however, delays could occur for travel from Port of West Sacramento at the Rio Vista Bridge.
- Lower Sacramento River between Rio Vista and Clarksburg includes several shallow areas, and delays could occur at the Walnut Grove, Paintersville, and Isleton Bridges.
- Three Mile Slough includes several shallow areas, and delays could occur at the Three Mile Slough Bridge.
- North Fork Mokelumne River includes several shallow areas, and delays could occur at the Millers Ferry Swing Bridge.
- South Fork Mokelumne River includes several shallow areas, and delays could occur at the Mokelumne River Bridge along State Route 12.
- San Joaquin River and SDWSC have adequate widths and depths.
- Old River includes shallow and narrow areas, and delays could occur at the Orwood Bascule and Old River Railroad Bridges.
- Connection Slough includes shallow areas, and delays could occur at the Connection Slough Swing Bridge.
- Railroad Cut has adequate widths and depths for barges.
- Woodward Canal/North Victoria Canal includes shallow areas, and delays could occur at the new bridge between Woodward Island and Jones Tract.
- Potato Slough includes shallow depths and tight turns.
- Middle River Complex, including Columbia Cut, Empire Cut, Turner Cut, and Whiskey Slough, includes several shallow and narrow areas, and delays could occur at the Bacon Island Swing Bridge.

2.3.3 Operational Constraints

The ability to effectively use the water access routes would be periodically limited by tidal cycles, weather, and environmental constraints. Storm events cause higher currents from December through April. Higher flows reduce the speeds of tugs and loaded barges going upstream and increase speeds of empty barges going downstream. Tule fog in the Delta can shut down barging operations for 1 to 2 days per month on average during the winter months. Wind speeds and gusts affect tug and barge operations in the summer and fall months; however, these effects are not anticipated to be substantial.

Environmental constraints could affect the ability to operate barges or construct barge landings in some months or at night. The SRDWSC and SDWSC have enough width to accommodate passing oceangoing vessels and barges, and therefore, barge operations would not interrupt commercial vessel navigation. However, the Delta has over 130 marinas with multiple slips for recreational boaters; therefore, barge

operations would require coordination with navigation regulatory agencies to protect recreational vessel navigation.

2.3.4 Recommendations

Tunnel launch shaft sites on Bouldin and Lower Roberts islands could be located near waterways that could be accessed by multiple barges. The tunnel launch shaft site on Bouldin Island could be accessed along a barge route on SDWSC and Potato Slough. The tunnel launch shaft site on Lower Roberts Island could be accessed along the adjacent SDWSC to the east of an existing Port of Stockton barge landing and Windmill Cove. These barge landings would be connected to the tunnel launch shaft sites by a combination of conveyors, roads, or rails.

Barges could directly access Bouldin Island and Lower Roberts Island barge landings from the Port of Stockton and ports in the San Francisco Bay Area. Barges from the Port of West Sacramento would navigate along the Sacramento Deep Water Ship Channel to the Sacramento River; and continue under two moveable bridges: one at Rio Vista along the Sacramento River and one at the confluence of the Sacramento River and Three Mile Slough. Navigation under the moveable bridges could result in delays. Some barge operations could be utilized at other locations such as water-based support of pile driving, rock slope placement and levee construction. These types of operations do not typically require extensive land-based support infrastructure.

Other work locations such as the intakes and Southern Complex are not recommended due to combinations of the constraints included above.

Major barge operations at the intakes are not recommended for the following reasons:

- Multiple Barge Landings or increased hauling on roadways would be needed
- Materials would be delivered on the opposite side of State Route 160 from the majority of the work that could be effectively supported by barge operations, requiring traffic interruptions.
- Multiple operable bridges would need to be passed on the inbound and outbound legs, effecting roadway traffic patterns.

Major barge operations at the Southern Complex are not recommended for the following reasons:

- Width and depth of waterways would limit barge speed and ability to pass.
- Passing the BNSF Railroad operable bridge would cause delays due to the number of trains that utilize this route.

3. Tug and Barge Characteristics

The key to successfully implementing waterborne equipment in the Delta is appropriate vessel width and draft for navigation within Delta waterways. The Delta has two major waterways—the Sacramento River Deep Water Ship Channel (SRDWSC) and the Stockton Deep Water Ship Channel (SDWSC)—both of which have ample width and draft to accommodate multiple barges pushed by a single tow or tug boat. By comparison, the Sacramento River and the other watercourses and canals that are examined in this study are limited in width and draft. This is due to bridge, marina, and draft restrictions.

The following subsections summarize information on barges, tugs and workboats, and deck barge sizes and capacities.

DIVISION 01 GENERAL REQUIREMENTS

SECTION 01 10 00 - SUMMARY OF WORK

PART 1 GENERAL

1.01 DESCRIPTION — The term project is defined in Document 007100 - CONTRACTING DEFINITIONS. The project includes the following principal features:

1.01.01 Clearing and grubbing the area, and disposing of organic debris (e.g. grass, and wild grape along the waterside slope.

1.01.02 Place 18-inch minus rock slope protection (RSP) along eroded and exposed slope, placed out of the water above the ordinary high water mark as distinguished by the presence of litter and debris. Existing material shall be benched to support new rock revetment at the toe of the escarpment.

1.01.03 Contractor shall provide adequate labor, equipment and materials to safely and efficiently complete the assigned project.

1.01.04 The object of these specifications is to assure that material and workmanship meet the standards required to achieve a high-quality, durable project. All operations shall be done at such times as the Contractor and Engineer may agree in order that dust-fee and neat work is obtained.

1.02 RELATED SECTIONS — Supplementary Conditions, General Conditions, other Division 01 sections, and Drawings apply to this Section.

1.03 REFERENCED STANDARDS: Current versions of the published specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to work of this Section where cited by abbreviations noted below.

1.03.01 California Department of Transportation

1.03.01.01 Standard Specifications

1.03.01.02 Manual on Uniform Traffic Control Devices

1.03.02 California Occupational Safety and Health Administration (OSHA)

1.03.03 California Central Valley Flood Protection Board Vegetation Maintenance Standards

1.03.04 United Stated Army Corps of Engineers (USACE) Engineering Manuals (EM)

The Contractor shall perform all work in accordance with the latest governmental safety regulations and including, but not limited to, the Department of Labor, Office of Safety and Health Administration Regulations and Suggested Practices.

PART 2 PRODUCTS — Not Used

PART 3 EXECUTION

3.01 SITE CONDITIONS — Contractor shall not be relieved of liability under the Contract for any loss sustained as a result of any variance between conditions deduced from a pre-bid investigation and actual conditions encountered during the course of the work.

3.02 LOCATION — Waterside slope of the right bank of Georgiana Slough as shown in the plans and as directed by the Project Engineer.

3.03 ACCESS

3.03.01 Due to the nature of the work required, sensitive site conditions and levee location, construction activities should be performed from the water by barge, u less on-site conditions necessitate the use of limited land-based equipment.

3.03.02 No trespass or storage is allowed on adjacent property without specific permission from adjacent and impacted property owner(s).

3.04 TRUCK TRAVEL

3.04.01 Vehicular traffic shall be restricted to a maximum speed of 20 miles per hour while traversing the District levees.

3.04.02 No work trucks are allowed to park on the levee.

3.05 PREPARATION AND LAYOUT

3.05.01 The District Engineer or a representative shall verify extent of the work area with the Contractor before commencement of work under the contract.

3.05.02 District Engineer shall establish bench mark and survey stakes within the project area. If disturbed or destroyed, reestablishment of such references necessitating action of the District Engineer shall be born by the Contractor.

3.05.03 Contractor shall layout and establish finish grades in accordance with the drawings, and shall match adjacent existing grades and surfaces to provide a smooth well graded surface contour. All disturbed and backfilled areas shall be graded per plans.

3.06 PROJECT MEETINGS — Project meetings will be held as often as deemed necessary. Representatives of the Contractor shall attend at a minimum. The purposed of such meetings will be to discuss compliance with the Contract Drawings and Project Manual, coordination, submittals, project safety, environmental compliance, and job related issues and alterations.

3.07 NOTIFICATION — Contractor shall provide two weeks advance notice of the Contractor's intended dates of operation for construction activities to property owners in the vicinity of the work and others who may be impacted by the construction by posting signage of a size reasonably readable by passing motorists at construction sites.

3.08 VERIFICATION OF EXISTING FACILITIES — The Contractor shall familiarize himself with the locations of existing features and improvements, the topography and other applicable factors affecting execution and completion of the project.

3.09 DUST AND DEBRIS

3.09.01 Dust resulting from the Contractor's performance of the work, either inside or outside the limits for work shall be controlled.

3.09.02 Contractor shall immediately clear, sweep clean, and/or flush existing access roadways of any spilled debris or material.

3.10 PUBLIC SAFETY — Contractor shall comply with Caltrans, OSHA, and any other applicable safety standards. Traffic control measures are required.

3.11 SPILLS — Spills resulting from hauling operations shall be removed immediately by the Contractor at no additional cost to the District. All drainages and ditches shall be kept free from obstructions unless directed by District Engineer.

3.12 CONSTRUCTION MONITORING — The affected levee section should be subjected to regular and frequent monitoring and surveillance by the Contractor during the course of the project. Attention

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

February 5, 2021

Larry Gardiner
Brannan-Andrus Levee Maintenance District
P.O. Box 338
Isleton, CA 95641

Dear Mr. Gardiner:

Final Lake or Streambed Alteration Agreement, Notification No. 1600-2017-0091-R3, Sacramento River Erosion Control and Habitat Enhancement Project

Enclosed is the final Streambed Alteration Agreement (Agreement) for the Sacramento River Erosion Control and Habitat Enhancement Project (Project). Before the California Department of Fish and Wildlife (CDFW) may issue an Agreement, it must comply with the California Environmental Quality Act (CEQA). In this case, CDFW acting as a responsible agency filed a Notice of Determination (NOD) within five working days of signing the Agreement. The NOD was based on information contained in the Initial Study/Mitigated Negative Delcaration prepared by the lead agency.

Under CEQA, the filing of an NOD triggers a 30-day statute of limitations period during which an interested party may challenge the filing agency's approval of the Project. You may begin the Project before the statute of limitations expires if you have obtained all necessary local, state, and federal permits or other authorizations. However, if you elect to do so, it will be at your own risk.

If you have any questions regarding this letter, please contact Brianne O'Rourke, Senior Environmental Scientist (Specialist) at (209) 234-3456 or by email at brianne.orourke@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Melissa Farinha for James Starr
0D25EB6A0381473...
James Starr, Environmental Program Manager

ec: California Department of Fish and Wildlife

Brianne O'Rourke, Senior Environmental Scientist (Specialist)
Bay-Delta Region
brianne.orourke@wildlife.ca.gov

to the onset of staging and construction activities and to any new contractors and equipment operators through the duration of the project and/or if a lapse occurs in construction. The training will provide awareness of the ecological values of the site, including the potential for special-status species and their habitat to be present, and how to avoid environmental impacts. The training is expected to include, at a minimum, the species and avoidance measures listed in this Agreement.

2.2 Work below Mean High Water (MHW) authorized under this Agreement shall be confined to the period of August 1st to November 30th.

The work period specified in this subsection is consistent with the "California Department of Fish and Game's In-Channel Project Review Guidelines for the Protection of Delta Smelt (*Hypomesus transpacificus*), Winter-Run Chinook Salmon (*Oncorhynchus tshawytscha*), and Spring-Run Chinook Salmon (*Oncorhynchus tshawytscha*) in the Sacramento-San Joaquin Estuary" (hereinafter "the guidelines"). CDFW may modify the work period specified in this subsection at any time if it determines such action is necessary to protect CESA or ESA endangered, threatened, or candidate fish species or other fish species based on information contained in any new or revised guidelines that are published after the effective date of this Agreement. CDFW shall provide the Permittee with any new or revised guidelines after they are published.

2.3 Take of individual raptors and migratory birds, their nests, and eggs and the nests and eggs of any other bird species is prohibited under Fish and Game Code Sections 86, 3503, 3503.5, and 3513.

2.4 Permittee shall conduct a focused survey for active raptor nests if construction, grading, or other project-related improvements are scheduled during the raptor nesting season (February 15 to August 15). The nest survey, including ground nests, shall be conducted by a CDFW approved biologist (as determined by a combination of academic training and professional experience in biological sciences and related resource management activities) within a half-mile of the project site and within 15 days prior to the beginning of project-related activities. A minimum of 3 separate survey days within the 15 days shall be conducted. The results of the survey shall be faxed to (707) 428-2036, Attn: Delta Levees Program, and emailed to brianne.orourke@wildlife.ca.gov. Refer to Notification Number 1600-2017-0091-R3 when submitting the survey to CDFW. If active nests are found, the Permittee shall consult with CDFW to establish appropriate nest buffers and/or avoidance measures prior to initiating activities. If a lapse in project-related activities of 15 days or longer occurs, another focused survey shall be conducted as described above.

2.5 Surveys shall be conducted for passerine/songbirds. Prior to the initiation of construction, including ground disturbing activities scheduled to occur between February 15 and September 15, the Qualified Biologist shall conduct a habitat

Central Valley Regional Water Quality Control Board

CLEAN WATER ACT SECTION 401 WATER QUALITY CERTIFICATION AND ORDER

Effective Date: 29 April 2021

Expiration Date: 28 April 2026

Program Type: Fill/Excavation

Reg. Meas. ID:	441147
Place ID:	870166
WDID No.:	5A34CR00817
USACE No.:	SPK-2017-00424
	Letter of Permission

Project Type: Restoration Bank Stabilization and/or Adjacent Upland Area

Project: Sacramento River Erosion Control and Habitat Enhancement Project (Project)

Applicant: Brannan-Andrus Levee Maintenance District

Applicant Contact: Larry Gardiner
Brannan-Andrus Levee Maintenance District
PO Box 929
Walnut Grove, CA 95690
Phone: (916 776-9121
glabrie@dccengineering.net

Applicant's Agent: Gilbert Labrie
DCC Engineering
PO Box 929
Walnut Grove, CA 95690
Phone: 916)776-9122
Email: glabrie@dccengineering.net

Water Board Staff: Angela Nguyen-Tan
Environmental Scientist
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670
Phone: (916) 464-0335
Email: Angela Nguyen-Tan@waterboards.ca.gov

Water Board Contact Person: If you have any questions, please call Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) Staff listed above or (916) 464-3291 and ask to speak with the Water Quality Certification Unit Supervisor.

hazardous materials (e.g., fuel, lubricants, hydraulic fluid) during construction and staging activities, could have deleterious effects on water quality. Additionally, the project could result in short-term increases in turbidity and suspended sediment levels. The Project will self-mitigate for habitat losses and create additional habitat enhancement acreage resulting from the construction of habitat benches and subsequent establishment of new riparian and wetland habitat. These habitat features will provide beneficial use to aquatic wildlife and will assist with control of erosion and pollutant trapping and filtering.

IX. Avoidance and Minimization

To minimize the potential effects of construction on water quality and resources, the Permittee shall implement all measures required as described in the Order. According to the Permittee, the following measures will be in place during construction activities to avoid, reduce, and minimize impacts to waters of the state:

Timing of Work

- All in-water construction activity would be conducted between August 1 and October 31 to ensure protection of anadromous salmonids. This time period is the suggested work window for waterways located within the Delta.
- As much work below OHWM work as possible would be performed during low tide to reduce potential impacts to water quality.
- Work is limited to daylight hours, leaving a nighttime period for anadromous salmonids and Green Sturgeon to migrate past the Project area.

Worker Training

- All contractors and equipment operators would participate in a Worker Environmental Awareness Program (WEAP) training regarding potential environmental impacts to make them aware of the ecological value of the area, including the potential for special status species and their habitat to be present near the proposed Project area.
- The WEAP training would cover, at a minimum, the special status species listed that have the potential to occur in the proposed Project area during construction, including but not limited to anadromous fishes, Biological characteristics of sensitive resources, and review of the limits of construction and avoidance measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the Project. All employees shall sign a form provided by the trainer documenting they have attended the WEAP and understand the information presented to them.
- The WEAP training shall be conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the Project area.

EXECUTIVE SUMMARY

In the California Sacramento-San Joaquin Delta (Delta), levee failure could cause catastrophic flooding, potentially causing injury or loss of life, and possibly damaging property, water supply, infrastructure, and environmental resources of importance to the entire State of California (State). Though levee maintenance and improvements over the past three decades have reduced the frequency of levee failures, the State has no comprehensive method to prioritize its investments in Delta levees operations, maintenance, and improvement projects. The Delta Plan, adopted on May 16, 2013, recommends that the Delta Stewardship Council (Council), in consultation with the California Department of Water Resources (DWR), the Central Valley Flood Protection Board (CVFPB), the Delta Protection Commission (DPC), local agencies, and the California Water Commission, implement California Water Code (CWC) section 85306 by developing a Delta Levees Investment Strategy (DLIS) to identify funding priorities for State investments in Delta levees.

Today, the 1,100 miles of levees in the Delta play a crucial role in reducing risk to State interests. The Delta is home to more than 500,000 people and 200,000 jobs, and it contributes more than $35 billion to the State's economy (CWC section 32300(g)). In addition, the Delta provides water to more than 25 million Californians and three million acres of agricultural land (CWC section 32300(h)). It is a flood-prone area, and many of the Delta islands and tracts are below sea level. Levees reduce flood risk to people who reside in the Delta's urban, rural, and legacy communities as well as those who travel, work, and recreate in the Delta. The levees are also critical to maintaining water quality in the Delta, which provides water for in-Delta users and for export through the State Water Project (SWP) and the Central Valley Project (CVP). On some islands, the levees also protect valuable terrestrial habitat and nontidal wetlands for native species.

Suisun Marsh, the largest contiguous brackish marsh on the west coast of North America, is a critical part of the San Francisco Bay-Delta estuary ecosystem. The marsh encompasses 116,000 acres, including 52,000 acres of managed wetlands, 30,000 acres of bays and sloughs, 27,700 acres of uplands, and 6,300 acres of tidal wetlands. There are about 230 miles of levees that protect the marsh and help manage flows for wetlands in Suisun Marsh, but only about 80 miles of these levees protect State interests in terrestrial and aquatic habitat and Delta water quality.

The DLIS is an innovative approach for determining priorities for State funds for levee improvement in the Delta and Suisun Marsh. The DLIS, which considers the assets protected by levees, the threats to levees, and the multiple beneficiaries of levee investments, uses a risk analysis methodology to recommend priorities for State investments in levee operations, maintenance, and improvements. This methodology was developed in close coordination with State agency partners, local and regional flood management and emergency response planning agencies, and other interested parties. In total, the Council worked with 113 different stakeholders and conducted 10 public meetings, 60 stakeholder outreach meetings, and 60 interagency coordination meetings. The Council also discussed DLIS issues at 38 Council meetings and workshops, which provided opportunities for public comment.

The DLIS team developed a Decision Support Tool (DST) to enable the Council and stakeholders to review and update the data and analysis that form the basis of the risk evaluation. The DST supports deliberations by summarizing information about baseline and future risks, aggregating and displaying