BIOLOGICAL ASSESSMENT

(continued)

APPENDIX 0.1

Compensatory Wetland Mitigation Plan

(CONTINUED)











P.O. Box 5924, Charleston, Oregon 97420 By: Dr. John L. Gardiner MBE, PE, for River Docs, Llc.

> Figure K-7B Kentuck Project Site Complex Log Structure Concept





P.O. Box 5924, Charleston, Oregon 97420 By: Dr. John L. Gardiner MBE, PE, for River Docs, Llc. Figure K-7C Kentuck Project Site Complex Log Structure Concept

| WEAKLESS WOULD POSTS WEAKLESS WOULD POSTS WEAKLESS WOULD POSTS WEAKLESS WOULD POSTS WEAKLESS WOULD POSTS WEAKLESS WOULD POSTS WEAKLESS PEETION WATCHESS PEETION WASHOUT POSTS A"-G" DETAL SECTION WASHOUT STREAM BED WASHESS PEETION | KENTUCK WILLOW MATTRESS SAMPLE DRAWING LIVE WILLOW POST/ LIVE WILLOW BRANCHES GRAVEL/COBBU BRANKH "TIE DOWNS" FORM MATTRESS LIVE WILLOW |
|---|---|
| LIVE MILLON WASHOUT PROTECTION PEEP ACH FOR HOUT TECTION WILLOW NOSHOUT TECTION WILLOW POSTS 4"-6" IN VETER DRIVEN 5' TO 6' STREAM BED | PLE DRAWING HES GRAVEL/COBBLE FILL LIVE WILLOW POSTS |



P.O. Box 5924, Charleston, Oregon 97420 By: Dr. John L. Gardiner MBE, PE, for River Docs, Llc. Figure K-7D Kentuck Project Site Bioengineered Slope Concept



CWMP: APPENDIX A











APPENDIX B: 1200-C EROSION SEDIMENT CONTROL PLAN FIGURES



VICINITY MAP NOT TO SCALE



T.255, R.12W, Sec. 6, 7; T.255, R.13W, Sec. 1, 12 W.M.

PROJECT LOCATION:

Located east of North Bend, Oregon (Township 25 South, Range 12 West, Sections 6 and 7; Township 25 South, Range 13 West, Sections 1 and 12, Willamette Meridian).

Latitude: 43.426073 Longitude: -124.180924

PROPERTY DESCRIPTION:

The Kentuck Project site is located east of North Bend, Oregon (Township 25 South, Range 12 West, Sections 6 and 7; Township 25 South, Range 13 West, Sections 1 and 12, Willamette Meridian). Tax maps and lots are: 25s12w06c lot 100, 25s13w12a lot 100, and 25s13w1d lot 400.

ATTENTION EXCAVATORS:

Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of these rules from the center by calling 503-232-1987. If you have any questions about the rules, you may contact the center. You must notify the center at least two business days, before commencing an excavation. Call 503-246-6699.

The permittee is required to meet all the conditions of the 1200-C permit. This ESCP and general conditions have been developed to facilitate compliance with the 1200-C permit requirements. In cases of discrepancies or omissions, the 1200-C permit requirements supercede requirements in this plan. (Refer to State of Oregon DEQ 1200-C General Permit, NPDES Stormwater Discharge Permit.) Furthermore, this ESCP has been developed to adhere to the Federal Energy Regulatory Commission (FERC) Upland Erosion Control, Revegetation, and Maintenance Plan (May 2013 Version).

ESC PLAN FOR SITES OVER 5 ACRES

OWNER/DEVELOPER Fort Chicago LNG II U.S. LLC

Fort Chicago LNG II U.S. LLC Jordan Cove LNG 5615 Kirby Drive, Suite 500 Houston, Texas 77005 (971) 232–8637 Contact: Derik Vowels, Lead Environmental Advisor

CIVIL ENGINEER

David Evans And Associates, Inc. 2100 SW River Parkway Portland, Oregon 97201 (503) 223–6663 Contact: Brady Berry, PE

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS:

Located east of North Bend, Oregon, the project site historically provided estuarine habitats (i.e., salt marsh, mudflats, tide channels, and fringing freshwater wetlands) that were hydrologically connected to the Kentuck Slough and Coos Bay estuary systems. However, circa the 1940s, the Kentuck Project site was diked and converted to agricultural uses. Eventually the site was converted into an 18-hole golf course before reverting back to agricultural use (i.e., pasture) in 2009.

DEVELOPED CONDITIONS:

The mitigation concept involves restoration activities to return the Kentuck Project site to its natural potential, given existing on-site and off-site constraints that include local transportation systems, access to and protection of adjacent private property, and Kentuck Drainage District requirements. Mitigation activities will establish a combination of habitat types including tidal mudflat, salt marsh, and wetlands that will interact to provide a holistic coastal ecosystem, will result in an uplift in ecosystem functions, and are expected to be particularly beneficial to coho salmon recovery and support of Chinook salmon. Socio-cultural benefits will be incorporated into the site to the extent feasible. Proposed improvements consist of construction of a new bridge in East Bay Drive, removal or plugging of existing culverts, levee augmentation with MTR installation, construction of a publicly accessible trail.

INSPECTION FREQUENCY:

| SITE CONDITION | MINIMUM FREQUENCY |
|---|--|
| 1. Active period | Daily when stormwater runoff, including runoff from snow melt, is occurring. At least once every fourteen (14) calendar days regardless of whether stormwater runoff is occurring |
| 2. Prior to the site becoming inactive or in anticipation of site inaccessibility | Once to ensure that erosion and sediment control measures are in working order. Any necessary maintenance and repair must be made prior to leaving the site. |
| 3. Inactive periods greater than fourteen (14) consecutive calendar days | Once every month. |
| 4. Periods during which the site is inaccessible due to inclement weather | If practical, inspections must occur daily at a relevant and accessible discharge point or downstream location. |
| 5. Periods during which discharge is unlikely due to frozen conditions | Monthly. Resume monitoring immediately upon melt, or when weather conditions make discharges likely. |
| *Hold a pre-construction mee inspector to discuss erosion a | ting of project construction personnel that includes to nd sediment control measures and construction limits |

(Schedule A.8.c.i.(3), 1200-C General Permit) *All inspections must be made in accordance with DEQ 1200-C permit requirements. *Inspection logs must be kept in accordance with DEQ's 1200-C permit requirements. *Retain a copy of the ESCP and all revisions on site and make it available on request To DEQ, agent, or the local municipality. During inactive periods of greater than seven (7) consecutive calendar days, retain the ESCP at the construction site or at another location. (Schedule B.2.a, 1200-C General Permit)

NATURE OF CONSTRUCTION ACTIVITY:

| <i>Erosion and sediment control measures</i> 2Q202 <i>installation, clearing activities, site prep</i> <i>for dredge material delivery</i> | 20 - 1Q2021 |
|--|-------------------|
| Mass grading, dewatering of dredge 4Q202 material, begin construction of permanent and temporary infrastructure improvements | 21 - 4Q2022 |
| Dewatering of dredge material, 1Q202 continued construction of infrastructure improvements | 23 - 1Q2024 |
| Final grading and habitat structures, 2Q202 final stabilization, channel connection | ?4 - 4Q2024 |
| Total site area: 106 acres Total disturbed area: 106 acres | |
| SOIL CLASSIFICATIONS: | |
| 12 Coquille silt loam | |
| (U-1% slopes, very poorly drained) | |
| (0-3% slopes, somewhat poorly drained) | |
| RECEIVING WATER BODIES: | |
| Kentuck Slough | |
| Kentuck Creek | |
| | |
| PERMITTEE'S SITE INSPECTOR: | |
| Name: TBD | |
| Company/Agency: | |
| Phone Number: | |
| Fax Number | |
| E-Mail Address: | |
| Description Of Experience: | artified CESCL in |
| Oregon State. | |
| SHEET INDEX | DOC. CONTROL |
| C001 Erosion and Sediment | |
| Control (ESC) Cover Sheet | |

| | | 1 |
|-------------|------------------------------|-----|
| C001 | Erosion and Sediment | |
| | Control (ESC) Cover Sheet | |
| C002 | ESC Notes | |
| C003 | ESC Legend, ESC Details List | |
| C100 - C101 | Existing Conditions Plan | |
| C110 - C112 | Phase 1 | |
| C120 – C124 | Phase 2 | |
| C130 – C132 | Phase 3 | |
| C140 – C142 | Phase 4 | |
| C150 - C152 | Permanent Stabilization/CWMP | |
| | Plan | |
| C700 – C712 | ESC Details | l d |
| | | |

CWMP: APPENDIX B

BMP MATRIX FOR CONSTRUCTION PHASES Refer to DEQ Guidance Manual for a comprehensive list of available BMPs.

| | PHASE 1 *see description | PHASE 2 *see description | PHASE 3 *see description | PHASE 4 *see description | PHASE 5 *see description | WET WEATHER (OCT 1 - MAY 31) |
|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|
| EROSION PREVENTION | | | | | | |
| SOIL TACKIFIERS | | X | X | Х | Х | X |
| TEMPORARY MULCH | | X | X | Х | Х | X |
| PLASTIC SHEETING | | | | | | X |
| SLOPE AND CHANNEL MATTING | | X | X | Х | Х | |
| COMPOST BLANKET | | | | X | Х | X |
| PERMANENT SEEDING/PLANTING | | | | X | Х | |
| SEDIMENT CONTROL | | | | | | |
| PERIMETER SEDIMENT CONTROL | **X | X | X | X | | X |
| SEDIMENT FENCE (INTERIOR) | | X | X | X | | X |
| SEDIMENT BARRIERS | | X | X | X | | X |
| DIVERSION DIKES/SWALES | Х | X | X | X | | X |
| STOCKPILE MANAGEMENT | | X | X | X | | X |
| DUST CONTROL | | X | X | | | |
| RUN OFF CONTROL | | | | | | |
| CONSTRUCTION ENTRANCE | **X | X | X | X | X | X |
| PIPE SLOPE DRAIN | X | X | Х | X | | x |
| ENERGY DISSIPATERS | X | x | X | X | | x |
| OUTLET PROTECTION | X | X | Х | Х | | x |
| UNPAVED ROADS GRAVELED, OR OTHER BMP ON THE ROAD | x | x | x | x | | x |
| CHECK DAMS | | X | X | Х | Х | X |
| COIR LOGS | | | | Х | X | |
| POLLUTION PREVENTION | - | _ | | - | - | |
| CONCRETE TRUCK WASHOUT | X | | | | | |
| PROPER SIGNAGE | X | X | X | X | X | X |
| HAZ WASTE MGMT | X | X | X | X | X | X |
| SPILL KIT ON-SITE | X | X | X | X | X | X |

** Signifies BMP that will be installed prior to any ground disturbing activity. PHASES OF CONSTRUCTION:

* PHASE 1: Stripping & temp grading of site, construction of temp stream

diversion, construction of E Bay Road and bridge

* PHASE 2: Dewatering of dredge sands

* PHASE 3: Mass grading and levee widening

* PHASE 4: Site stabilization, Golf Course Lane construction, trail and

boardwalk construction, removal of temp stream diversion

* PHASE 5: Permanent seeding & planting

* For details on construction phasing, See ESC Plan Phasing Notes on sht. C003.

RATIONALE STATEMENT

A comprehensive list of available best management practices (BMP) options based on DEQ's guidance manual has been reviewed to complete this erosion and sediment control plan. Some of the above listed BMP's were not chosen because they were determined to not effectively manage erosion prevention and sediment control for this project based on specific site conditions, including soil conditions topographic constraints, accessibility to the site, and other related conditions, as the project progresses and there is a need to revise the ESC plan, an action plan will be submitted.

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| ITH ONLY | | | | Jori | DAN COVE ENERGY PROJECT KENTUCK PROJECT SITE COOS COUNTY | |
| | De | signer: B. | Henri | | Review: B. Guthrie | |
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CWMP: APPENDIX B PRE-CONSTRUCTION, CLEARING, AND DEMOLITION NOTES GRADING, STREET AND UTILITY EROSION AND 1. All base ESC measures (perimeter sediment control, construction entrances, inlet protection, etc.) must be in place, functional, SEDIMENT CONSTRUCTION NOTES and approved in an initial inspection, prior to commencement of construction activities. Sediment barriers approved for use are shown in the standard details and drawings listed on sheet C003 following mixtures, unless otherwise authorized: 3. Sensitive resources including, but not limited to, trees, wetlands, and riparian protection areas shall be clearly delineated with orange construction fencing or chain link fencing in a manner that is clearly visible to anyone in the area. No activities are be shown on the mitigation planting plans. permitted to occur beyond the construction barrier. *B.* Standard temporary seeding mix (min. 100 lb./ac.) Construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. 4 1. Annual Ryegrass (40% by weight) Additional measures including, but not limited to, street sweeping and vacuuming, may be required to insure that all paved 2. Creeping Red Fescue (60% by weight) areas are kept clean for the duration of the project. 2. Slope to receive temporary or permanent seeding shall have the surface 5. Run-on and run-off controls shall be in place and functioning prior to beginning substantial construction activities. Run-on and run-off control measures are listed in the BMP matrix on sheet C001, and are shown in the standard details and drawings listed on sheet C003. 3. Long term slope stabilization measures shall include the establishment of STANDARD EROSION AND SEDIMENT CONTROL PLAN DRAWING NOTES (Refer to Oregon DEQ 1200-C General Permit, NPDES Stormwater Design Permit) 4. 1. Hold a pre-construction meeting of project construction personnel that includes the inspector 22. Implement the following BMPs when applicable: written spill prevention and response to discuss erosion and sediment control measures and construction limits. (Schedule procedures, employee training on spill prevention and proper disposal procedures, spill kits in all vehicles, regular maintenance schedule for vehicles and machinery, material delivery and A.8.c.i.(3)) 2. All inspections must be made in accordance with DEQ 1200-C permit requirements. (Schedule storage controls, training and signage, and covered storage areas for waste and supplies. A.12.b and Schedule B.1) (Schedule A. 7.e.iii.) Inspection logs must be kept in accordance with DEQ's 1200-C permit requirements. 3. 23. Use water, soil-binding agent or other dust control technique as needed to avoid wind-blown (Schedule B.1.c and B.2) soil. (Schedule A 7.a.iv) additional erosion control measures. 4. Retain a copy of the ESCP and all revisions on site and make it available on request to DEQ, 24. The application rate of fertilizers used to reestablish vegetation must follow manufacturer's 7. Areas subject to wind erosion shall use appropriate dust control measures Agent, or the local municipality. During inactive periods of greater than seven (7) consecutive recommendations to minimize nutrient releases to surface waters. Exercise caution when using including the application of a fine spray of water, plastic sheeting, straw calendar days, the above records must be retained by the permit registrant but do not need time-release fertilizers within any waterway riparian zone. (Schedule A.9.b.iii) mulching, or other approved measures. to be at the construction site. (Schedule B.2.c) 25. If an active treatment system (for example, electro-coagulation, flocculation, filtration, etc.) for All permit registrants must implement the ESCP. Failure to implement any of the control sediment or other pollutant removal is employed, submit an operation and maintenance plan measures or practices described in the ESCP is a violation of the permit. (Schedule A 8.a) (including system schematic, location of system, location of inlet, location of discharge, 6. The ESCP must be accurate and reflect site conditions. (Schedule A.12.c.i) discharge dispersion device design, and a sampling plan and frequency) before operating the that all paved areas are kept clean for the duration of the project. Submission of all ESCP revisions is not required. Submittal of the ESCP revisions is only under treatment system. Obtain plan approval before operating the treatment system. Operate and 7. 9. Active inlets to storm water systems shall be protected through the use of specific conditions. Submit all necessary revision to DEQ or Agent within 10 days. (Schedule maintain the treatment system according to manufacturer's specifications. (Schedule A.9.d) A.12.c.iv. and v) 26. Temporarily stabilize soils at the end of the shift before holidays and weekends, if needed. regularly inspected and maintained as needed. Phase clearing and grading to the maximum extent practical to prevent exposed inactive areas 8 The registrant is responsible for ensuring that soils are stable during rain events at all times from becoming a source of erosion. (Schedule A.7.a.iii) of the year. (Schedule A 7.b) trucks to eliminate spillage of sediment and sediment-laden water. 9. Identify, mark, and protect (by construction fencing or other means) critical riparian areas and 27. As needed based on weather conditions, at the end of each workday soil stockpiles must be 11. An area shall be provided for the washing out of concrete trucks in a location vegetation including important trees and associated rooting zones, and vegetation areas to be stabilized or covered, or other BMPs must be implemented to prevent discharges to surface preserved. Identify vegetative buffer zones between the site and sensitive areas (e.g., waters or conveyance systems leading to surface waters. (Schedule A 7.e.ii.(2)) wetlands), and other areas to be preserved, especially in perimeter areas. (Schedule A.8.c.i.(1) 28. Construction activities must avoid or minimize excavation and bare ground activities during and (2)) wet weather. (Schedule A.7.a.i) may be required. The wash-out shall be located within six feet of truck access 10. Preserve existing vegetation when practical and re-vegetate open areas. Re-vegetate open 29. Sediment fence: remove trapped sediment before it reaches one third of the above ground and be cleaned when it reaches 50% of the capacity. areas when practicable before and after grading or construction. Identify the type of vegetative fence height and before fence removal. (Schedule A.9.c.i) 12. Sweepings from exposed aggregate concrete shall not be transferred to the storm seed mix used. (Schedule A.7.a.v) 30. Other sediment barriers (such as biobags): remove sediment before it reaches two inches water system. Sweepings shall be picked up and disposed in the trash. 11. Maintain and delineate any existing natural buffer within the 50-feet of waters of the state. depth above ground height and before BMP removal. (Schedule A.9.c.i) (Schedule A.7.b.i.and (2(a)(b)) 31. Catch basins: clean before retention capacity has been reduced by fifty percent. Sediment water system. 12. Install perimeter sediment control, including storm drain inlet protection as well as all basins and sediment traps: remove trapped sediments before design capacity has been sediment basins, traps, and barriers prior to land disturbance. (Schedule A.8.c.i.(5)) reduced by fifty percent and at completion of project. (Schedule A.9.c.iii& iv) from reaching discharge points. 13. Control both peak flow rates and total stormwater volume, to minimize erosion at outlets and 32. Within 24 hours, significant sediment that has left the construction site, must be remediated. 15. Cover catch basins, manholes, and other discharge points when applying seal downstream channels and streambanks. (Schedule A.7.c) Investigate the cause of the sediment release and implement steps to prevent a recurrence of 14. Control sediment as needed along the site perimeter and at all operational internal storm the discharge within the same 24 hours. Any in-stream clean-up of sediment shall be system. drain inlets at all times during construction, both internally and at the site boundary. performed according to the Oregon Department of State Lands required timeframe. (Schedule (Schedule A 7 d i) A.9.b.i) 15. Establish concrete truck and other concrete equipment washout areas before beginning 33. The intentional washing of sediment into storm sewers or drainage ways must not occur. concrete work. (Schedule A.8.c.i.(6)) Vacuuming or dry sweeping and material pickup must be used to cleanup released sediments. 16. Apply temporary and/or permanent soil stabilization measures immediately on all disturbed (Schedule A.9.b.ii) areas as grading progresses. Temporary or permanent stabilizations measures are not required 34. The entire site must be temporarily stabilized using vegetation or a heavy mulch layer, for areas that are intended to be left unvegetated, such as dirt access roads or utility pole temporary seeding, or other method should all construction activities cease for 30 days or pads.(Schedule A.8.c.ii.(3)) more. (Schedule A.7.f.i) 17. Establish material and waste storage areas, and other non-stormwater controls. (Schedule DOC. CONTROL 35. Provide temporary stabilization for that portion of the site where construction activities cease A.8.c.i.(7)) for 14 days or more with a covering of blown straw and a tackifier, loose straw, or an 18. Prevent tracking of sediment onto public or private roads using BMPs such as: construction adequate covering of compost mulch until work resumes on that portion of the site. (Schedule entrance, graveled (or paved) exits and parking areas, gravel all unpaved roads located onsite, A.7.f.ii)

- (Schedule A 7.d.ii and A.8.c.i(4)) 19. When trucking saturated soils from the site, either use water-tight trucks or drain loads on site. (Schedule A.7.d.ii.(5))
- 20. Control prohibited discharges from leaving the construction site, i.e., concrete wash-out, wastewater from cleanout of stucco, paint and curing compounds. (Schedule A.6)

or use an exit tire wash. These BMPs must be in place prior to land-disturbing activities.

- 21. Use BMPs to prevent or minimize stormwater exposure to pollutants from spills; vehicle and equipment fueling, maintenance, and storage; other cleaning and maintenance activities; and waste handling activities. These pollutants include fuel, hydraulic fluid, and other oils from vehicles and machinery, as well as debris, fertilizer, pesticides and herbicides, paints, solvents, curing compounds and adhesives from construction operations. (Schedule A.7.e.i.(2))
- 36. Do not remove temporary sediment control practices until permanent vegetation or other cover of exposed areas is established. Once construction is complete and the site is stabilized, all temporary erosion controls and retained soils must be removed and disposed of properly. unless doing so conflicts with local requirements. (Schedule A.8.c.iii(1) and D.3.c.ii and iii)

1. Seed used for temporary or permanent seeding shall be composed of one of the

- A. Permanently seeded areas require native seed mixes. Permanent seeding will

roughened by means of track-walking or the use of other approved implements. Surface roughening improves seed bedding and reduces run-off velocity. permanent vegetative cover via seeding with approved mix and application rate. Temporary slope stabilization measures shall include: covering exposed soil with plastic sheeting, straw mulching, wood chips, or other approved measures. 5. Stockpiled soil or strippings shall be placed in a stable location and configuration. During "wet weather" periods, stockpiles shall be covered with plastic sheeting or straw mulch. Sediment fence is required around the perimeter of the stockpile. 6. Exposed cut or fill areas shall be stabilized through the use of temporary seeding and mulching, erosion control blankets or mats, mid-slope sediment fences or wattles, or other appropriate measures. Slopes exceeding 25% may require

8. Construction entrances shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures including, but not limited to, tire washes, street sweeping, and vacuuming may be required to insure

approved inlet protection measures. All inlet protection measures are to be

10. Saturated materials that are hauled off-site must be transported in water-tight

that does not provide run-off that can enter the storm water system. If the concrete wash-out area cannot be constructed greater than 50' from any discharge point, secondary measures such as berms or temporary settling pits

13. Avoid paving in wet weather when paving chemicals can run-off into the storm

14. Use BMPs such as check-dams, berms, and inlet protection to prevent run-off

coat, tack coat, etc. to prevent introducing these materials to the storm water

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| IFW OHL. | | | Jori | DAN COVE ENERGY PROJECT KENTUCK PROJECT SITE COOS COUNTY | | | | | | |
| | Designer: | B. Henri | | Review: B. Guthrie | | | | | | |
| | Drafter: T | Danisch | | Checker: - | | | | | | |
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ESC PLAN BMP LEGEND

Temporary Construction Fencing

26333X Construction Entrance

Sediment Fence

Concrete Truck Wash Out Facility

- Slope and Channel Matting
- Check Dam (compost filter sock)

CWS STANDARD DETAILS

CWS Drawing No.

- 810 Plastic sheeting
- 815 Pipe slope drain
- 820 Outlet protection, rip rap
- 830 Surface roughening, cat tracking

ODOT STANDARD DRAWINGS

- RD1000 Construction entrances
- RD1005 Aggregate, sandbag, and biofilter bag check dams
- RD1006 Wattle / fiber roll and compost filter sock check dams

850 - Diversion dike / swale 915 - Inlet protection, bio-filter bags

940 – Spacing tables

- RD1030 Biofilter bag / sand bag sediment barrier and fiber roll sediment barrier
- RD1032 Compost filter sock sediment barrier RD1033 - Compost filter berm series sediment barrier
- RD1040 Sediment fence
- RD1055 Slope and channel matting
- RD1070 Concrete truck wash out facility
- DET6017 Compost erosion blanket

STANDARD DETAILS

Sediment barrier, coir log

Note:

Some of the BMPs in the Standard Details and Standard Drawings currently listed may not be shown on the ESC plans at this time. These BMPs will be available to the contractor for use during construction, specified in the final ESC design or required for Emergency and Wet Weather stockpiled materials.

ESC PLAN PHASING NOTES**

PHASE 1:

Construction activities include the reconstruction (raising the elevation) of E Bay Rd, construction of the new bridge at E Bay Rd, clearing and grubbing the site, performing temporary grading, and building the diversion dike and swale for the temporary stream diversion. Perimeter controls, including temporary construction fencing, construction entrances, perimeter sediment fence and inlet protection, will be installed prior to beginning construction. A temporary coffer dam, to be designed by the bridge engineers, will be installed between the E Bay Rd bridge and the bay, isolating the construction area from tidal influence. Fish will be removed and excluded from work area.

Topsoil throughout the site will be excavated, and stockpiled in the form of the temporary diversion berm. All disturbed soils will be stabilized according to the requirements set out in the ESC notes and plans. Temporary pipe slope drains will be used to divert existing streams to undisturbed areas while the diversion dike and swale are under construction. The diversion swale will be stabilized with channel matting and check dams before existing streams are diverted to the swale, to ensure that flows will be clean and free of sedimentation by the time they leave the site through the existing culvert. The site is otherwise isolated by existing topography and perimeter controls, and construction activities will be fully contained.

PHASE 2:

Construction activities mainly revolve around the construction and operation of the dredge sand de-watering facility, which will be located on the west end of the site. (The dredge sand de-watering facility is described in more detail on the Phase 2 Notes and Keynotes sheet, C122.)

Runoff from the dredge sand de-watering facility will be free of most sediment by the time it leaves the vicinity of the facility itself, but the flows will be directed, through an upturned pipe penetrating the diversion dike, into the temporary diversion swale at a point where the runoff must flow through several check dams before leaving the site. The intent is that this will remove any remaining fine particles from the dredge sands runoff, before the water exits the site through the existing culvert.

PHASE 3:

Construction activities consist of mass grading throughout the site, widening of the existing Kentuck Levee (on the interior side), relocation of the levee at the east end of the site, construction of the Muted Tidal Regulator (MTR) tide gate in the levee, and ongoing dredge sand de-watering. The relocation of the levee in the western portion of the site is proposed to create a freshwater mitigation area and restore historic channels of Kentuck Creek. Mass grading will occur as dredge sand becomes available for use from the de-watering facility. The Pacific Connector Gas Pipe (PCGP) line, which will run through the site underground, is anticipated to be installed during this phase, prior to completion of mass grading. When mass grading and de-watering are complete, the de-watering facility will be removed and the area will be graded according to the grading plan.

Disturbed soils will be stabilized with temporary mulch and seeding as required, while grading activities progress. Perimeter BMPs will be maintained, and installed in new areas as required. The diversion swale will be isolated from construction activities by the stabilized diversion dike, and it will continue to provide diversion for existing streams and treat sediment-laden water from the dredge sand de-watering facility.

PHASE 4

Construction includes the regrading (raising) of Golf Course Ln, construction of the soft surface trail and boardwalk along the southern edge of the site, and stabilization of all graded areas. Permanent stream stabilization and bio-engineering features, including coir soil lifts and habitat structures, will be installed following mass grading. Streambed gravels will be placed in the bottom of the freshwater channel, northeast of the relocated dike. The diversion dike and swale will be removed in stages, as the new channels become sufficiently stabilized, with the help of proposed pipe slope drains throughout the process, and the coffer dam between E Bay Bridge and the bay will be removed. As the diversion dike and swale are removed, those areas will be graded according to the proposed grading plan, and those soils will be stabilized. Perimeter controls, including construction entrances, sediment fence, temporary construction fence and inlet protection, will remain in place until permanent stabilization is established.

PHASE 5:

This phase consists of permanent stabilization through mitigation planting. The permanent stabilization plans are copies of the Compensatory Wetland Mitigation (CWM) Plans for the Kentuck site, which illustrate how the site will be planted. When the site is considered permanently stabilized with established plantings, the remaining perimeter controls will be removed.

**Phases described are the anticipated order of construction activities. The construction sequencing may be changed according to contractor "means and methods." However, all specified BMPs are required for corresponding construction activities as shown on the plans.





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CWMP: APPENDIX B



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Phase 1 Construction Notes

- (1) Install temporary construction fencing (See specifications section ____)
- (2) Construct construction entrance, ODOT type 2 (See ODOT drawing no. RD1000)
- (3) Install sediment fence, ODOT type 1 where site conditions permit trenching. Install ODOT type 2 where rock or tree roots prevent trenching. (See ODOT drawing no. RD1040) On existing Kentuck Levee, install sediment fence at toe of proposed fill to be constructed in Phase 2 (See section B1 – B, sht. C123)
- (4) Construct concrete truck wash out facility (See ODOT drawing no. RD1070)
- (5) Construct diversion dike as shown on plans (See CWS drawings no. 850 and typical section, sht.C102)
- (6) Construct diversion swale as shown on plans (See CWS drawings no. 850 and typical section, sht. C102)
- (7) Apply temporary seeding to entire diversion dike. Apply before installation of slope matting. (See specifications section ____)
- (8) Install slope matting on slopes steeper than 3:1, where shown (See ODOT drawing no. RD1055)
- (9) Install channel matting on diversion swale bottom, extending a minimum of 4' up channel sides (See ODOT drawing no. RD1055 and typical section, sht. ___)
- (10) Install check dam, compost filter sock, in diversion swale as shown on plans (200' on center, typ.) (See ODOT drawing no. RD1006)
- (11) Install temporary mulch to stabilize exposed soils as temp. grading progresses (See specs sections _____ and _____ for soil stabilization and mulching requirements)
- (12) Install sediment barrier (compost filter sock) parallel to contours. Place on slopes according to spacing table on ODOT drawing. (See ODOT drawing no. RD1032)
- (13) Install pipe slope drain as directed, to be field located where required during construction of temp. stream diversion (See CWS drawing no. 815)
- (14) Install temporary outfall structure (See C203)
- (15) Install gravel construction staging area
- (16) Access with gravel construction access
- (17) Construct East Bay Rd. Detour

Note

Any BMPs shown outside the property or easement lines are for graphic clarity. All BMPs to be located within the project property or easements.







PHASE 2 - DEWATERING OF DREDGE SANDS



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Phase 2 Construction Notes

(1) Construct construction entrance, ODOT type 2 (See ODOT drawing no. RD1000)

(2) Apply temporary seeding (See specifications section ____)

(3) Install temporary mulch to stabilize exposed soils as temp. grading progresses (See specs sections _____ and _____ for soil stabilization and mulching requirements)

Note

Any BMPs shown outside the property or easement lines are for graphic clarity. All BMPs to be located within the project property or easements.

Dredge Sand Dewatering Facility information:

The dewatering facility will be constructed to dewater dredge sand material, which will be used on site for mass grading. The facility is designed with impermeable diversion berms and swales, graded to direct runoff out of the complex.

Dredge sand material will be delivered to the project site via temporary pipeline, anticipated to cross through the intersection of East Bay Road and the Kentuck Levee. Saturated dredge sand material will be placed within the dewatering facility in lifts.

Fully dewatered material will be excavated from the dewatering complex, and deposited throughout the Kentuck site via access along the existing Kentuck Levee. The dewatered dredge sand material will be used in mass grading as it becomes available, to be followed by stockpiled topsoil which will be layered above it for mitigation planting.

Runoff from the dewatering facility will be treated as it leaves the facility, travelling through a temporary sedimentation swale and into a riprap protected perforated pipe. The pipe will be installed to penetrate the temporary diversion berm which was constructed for temporary stream diversion. Through this pipe, runoff will be conveyed out of the complex and into the temporary stream diversion swale, where the runoff will travel through several check dams before leaving the site through the existing culvert at the southwest corner of the site.

The dredge sand dewatering facility, as shown on sheet C120, is conceptual and is shown for illustrative purposes. The dewatering complex will be placed and constructed according to contractor means and methods, and may be relocated within the site to accommodate construction sequencing. Runoff and sediment control BMPs must be effectively applied, ensuring that facility runoff is free of sediment before leaving the project site.



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ESCP - PHASE 3 - MASS GRADING AND LEVEE WIDENING/RELOCATION



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