# Method 10: In-Water and Overwater Structure Repair and Replacement

# 10G: *Fixed Breakwaters*

**Project Title:**

**Project CIP Number:**

*See Section 3 of the SBE, Method* ***10G*** *for a complete description of the activity and conservation measures for this method. You need this information to fill out this form.*

Fixed Breakwaters

1. Will the length of the repaired or replaced structures be larger, smaller or the same size as the existing structure?

| Larger | Smaller | Same Size | Fixed Breakwater Type | Amt. Larger or Smaller |
| --- | --- | --- | --- | --- |
| [ ]  | [ ]  | [ ]  | Pile with lagging |       ft |
| [ ]  | [ ]  | [ ]  | Rock revetment |       ft |
| [ ]  | [ ]  | [ ]  | Other:       |       ft |
| [ ]  | [ ]  | [ ]  | Other:       |       ft |

2. Identify work that will be conducted:

[ ]  Repair and replace piles. Number of piles to be repaired or replaced:

[ ]  Repair and replace lagging timbers. Number (     ) and length (     ) of lagging timbers.

[ ]  Replace revetment rock. Quantity of rock:       yd3

[ ]  Other

3. Will work be conducted by hand or mechanized equipment?

 [ ]  Hand [ ]  Mechanized equipment

4. Will be work be done by shore or from barge/work boat? [ ]  Shore [ ]  barge/work boat

4. Provide additional information:

Conservation Measures

The following table contains the conservation measures identified for Method 10G. The table only provides a brief summary of the conservation measures. Please see Section 4 of the SBE for a complete description of each conservation measure. To get programmatic coverage by the Corps and Services for projects using this method, all conservation measures identified below must be included with the project (see Section 10 of the SBE). If, for some reason, a conservation measure is not applicable, or will not be used, you MUST provide a reason the conservation measure is not applicable or will not be used in the “Provide additional information” section below. Provide any additional conservation measures that may be implemented but are not listed. These may be found in Section 4: Conservation Measures of the SBE or in the City Standard Specifications.

| **Conservation Measures** | **Description** | **Included in****Project?** |
| --- | --- | --- |
| 1 | Approved work windows |  |
| 2 | Onsite Temporary Erosion and Sediment Control Plan |  |
| 3 | Onsite Spill Prevention and Control Plan |  |
| 4 | Maintain a spill kit onsite |  |
| 6 | Establish staging and site access areas along existing roadways or other disturbed areas |  |
| 12 | Use sediment barriers to prevent erosion and sediment from entering waterbodies |  |
| 13 | Keep erosion control materials onsite to respond to emergencies |  |
| 14 | Use curb inlet sediment traps and geotextile filters to capture sediment before it leaves the site |  |
| 15 | Clean equipment that will work below the OHW or MHHW lines or in riparian or shoreline areas |  |
| 16 | Fuel equipment in staging areas |  |
| 17 | Onsite oil absorbing floating booms |  |
| 18 | Use vegetable-based hydraulic fluid when equipment operates in sensitive areas |  |
| 19 | Operate machinery from existing roads and paved areas |  |
| 20 | Use temporary materials to stabilize haul and access routes, staging areas, and stockpile areas |  |
| 27 | Place erosion and water quality control devices prior to beginning of work |  |
| 28 | If mechanized equipment is used within the OHW or MHHW, only an extension arm with bucket or similar attachment shall enter the water. Conduct debris removal and work below OHW or MHHW during low water levels (fresh waters) or at low tide (marine waters) |  |
| 42 | Logs shall be clean and without bark |  |
| 57 | Perform all work in the dry when possible |  |
| 58 | Conduct work during minus tides or low water levels |  |
| 59 | Use clean, washed material |  |
| 62 | Do not ground or rest construction barge on substrate or on vegetation |  |
| 63 | Take care to prevent spread of invasive plant species during their removal |  |
| 64 | Plant with native vegetation |  |
| 65 | Retrieve and remove debris that enters waterbody |  |
| 67 | Use clean grave (less than 3% fines) |  |
| 73 | Include rootwads and LWD with riprap |  |
| 74 | Cover riprap with habitat mix to fill voids |  |

Please provide any additional information on Conservation Measures used or not used for this Method: