

- (xii) The tidal groin must be constructed with vents/windows or as a low-profile structure so as to minimize impacts to the littoral drift.
- (xiii) Tidal shoreline stabilization activities will be reviewed based on the following order of preference: (a) nonstructural shoreline stabilization, including beach nourishment, marsh creation, root wads, and other similar measures; and (b) structural shoreline stabilization projects such as shoreline revetments, breakwaters, and groins., and (c) bulkheads. Written documentation must be required to support the preferred stabilization method, addressing the order of preference above.
- (xiv) Grain size analyses for both the dredged/fill material and the placement site are required. The discharged material must be equal to or larger in grain size and character than the existing beach material, or determined otherwise to be compatible with existing site conditions. The discharged material may not contain more than 10 percent silts and clays, or control measures such as breakwaters, groins or similar structures should be used to control movement. If the activity requires the beneficial reuse of dredge material, see General Condition 39.

f(2) LIVING SHORELINES/BEACH NOURISHMENT:

This activity authorizes discharges of fill material and associated shoreline protection structures, including but not limited to, groins, wave screens, low profile stone sills, oyster reef sills, small geo-tubes, and coir logs, in subtidal and intertidal waters and tidal wetland along tidal shorelines for the construction and maintenance of living shorelines and/or beach nourishment for the purpose of shoreline erosion control only. A living shoreline has a footprint that is made up mostly of native material. Living shorelines incorporate vegetation or other living, natural “soft” elements along or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection or stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal fringe wetlands or oyster or mussel reef structures. Structures used to protect living shorelines should follow an order of preference that utilizes a small impact footprint. Low profile stone sills are not authorized for use with beach nourishment projects. All work authorized by this activity, including discharges, must comply with all activity-specific impact limits and requirements listed below, in addition to the general conditions of this permit (Sections 10 and/or 404; limited to all tidal waters).

(a) Category A Impact Limits and Requirements:

- (i) Total impact is limited to 17,500 square feet of tidal waters of the United States.
- (ii) The fill and containment structures must not extend more than 500 linear feet in length and/or 35 feet channelward of mean high water.
- (iii) No impacts to SAV (documented to exist in the last five years as specified in Section III) are authorized.
- (iv) The total amount of vegetated wetlands which may be filled, graded, or excavated, in square feet, may not exceed 1 square foot per linear foot of the activity along the shoreline. All impacts to sub-tidal, inter-tidal, and/or existing wetland vegetation may require wetland planting, monitoring, adaptive management, and invasive species plans and must result in no net loss of vegetated wetlands.

- (v) This Category A activity does not authorize any discharge of dredged or fill materials for the purpose of constructing any type of compensatory mitigation, including mitigation banks, in lieu fee mitigation, and permittee-responsible mitigation.
- (vi) Projects involving breakwater structures must be reviewed as a Category B.
- (vii) If stone sills are deemed appropriate for the project site, after consideration of other alternatives, their placement at the toe of constructed marsh shall be designed to facilitate ingress/egress of estuarine fauna during regular tidal cycles. The following example sill design parameters are acceptable measures to meet this condition:
 - (a) Low profile sills (with top elevation set below mean high water), particularly for low to moderate erosion energy shorelines.
 - (b) Sill windows/vents of sufficient width (at least 10-15 feet across the bottom), placed in sufficient number along the sill length, or at sill termini (e.g., one window for every 100 feet of sill); and
 - (c) Sill window/vent designs, including (a) staggered; (b) off-set; and (c) with window bottom constructed below mean low water elevation.
- (viii) This Category A activity does not authorize any beneficial reuse of dredged materials.
- (ix) The fill material used must be clean substrate, no more than 10% of which shall pass through a standard number 100 sieve.

(b) Category B Impact Limits and Requirements:

- (i) The single and complete project will result in no more than a total 0.5-acre loss to tidal waters of the United States.
- (ii) The fill and channelward toe of containment structures must not extend more than 50 feet channelward of mean high water.
- (iii) Activities in SAV (documented to exist in the last five years as specified in Section III) beds must be avoided and minimized. Avoidance and minimization measures, such as relocating, reconfiguring, or eliminating a structure and/or the implementation of a time-of-year restriction for work in waters, may be required to reduce impacts to the SAV habitat. Unavoidable impacts may require compensatory mitigation.
- (iv) This Category B activity authorizes the discharge of both dredged and fill materials.
- (v) Grain size analyses for both the dredged/fill material and placement site are required. The discharged material must be equal to or larger in grain size and character than the existing beach material or determined otherwise to be compatible with existing site conditions. The discharged material may not contain more than 10 percent silts and clays, or control measures such as breakwaters, groins or similar structures should be used to control movement. If the activity requires the beneficial reuse material, see General Condition 39.

- (vi) Ecologically beneficial, existing tidal wetlands should be incorporated into the design of Living Shorelines. If incorporating existing tidal wetlands on-site does not provide the desired ecological uplift, existing wetlands on-site may be impacted, but shall be replaced on-site with the same size and planted with similar species as the previously existing wetlands. The conversion of low marsh to high marsh is typically undesirable as these habitats perform different ecological functions and services; however, there are certain cases where conversion from low marsh to high marsh could be ecologically beneficial. Written documentation is required to justify the ecological benefits of converting low marsh to high marsh if proposed.

(c) Requirements Applicable to Both Category A and Category B Activities:

- (i) Application must be submitted to MDE for Corps authorization.
- (ii) The living shoreline must be planted as soon as practicable, within one year, following completion of the filling operation. Native plants appropriate for current site conditions, including salinity, must be used.
- (iii) The applicant must submit documentation of on-going shoreline erosion at the project site, along with their application, using recent photographs and/or supplemental shoreline retreat or change information obtained from the Maryland Geological Survey, or other expert substantial source.
- (iv) Wetland components of living shoreline projects shall be maintained as a wetland, with areal coverage by native, hydrophytic, non-nuisance species of at least 85% for three (3) consecutive years. Monitoring reports documenting areal coverage shall be submitted to the Corps annually. If 85% coverage by such species is not attained, the reasons for the failure must be documented in writing and provided to the Corps with proposed corrective measures, including replanting. Final corrective measures must be completed, as approved by the Corps.
- (v) Living shoreline projects must result in no net loss of wetlands.
- (vi) Free-standing wave screens should be designed with an appropriate spacing between slats and a minimum elevation of 12 inches off the bottom of the waterway. The spacing between slats and distance off the bottom of the waterway should be evaluated taking into consideration the wave energy of the project site.
- (vii) No discharges of dredged or fill material may be placed in excess of the minimum needed for erosion protection. Discharges of dredged or fill material into waters of the United States, and oyster or mussel reef structures in navigable waters, must be the minimum necessary for the establishment and maintenance of the living shoreline.
- (viii) The fill must be placed parallel to the uplands, other than groins and returns on stone sills.
- (ix) Clearing and/or pruning of riparian trees and shrubs within the defined project area shall be minimized to the maximum extent practicable.

- (x) Coir logs, coir mats, stone, native oyster shell, native wood debris, and other structural materials must be adequately anchored, of sufficient weight, or installed in a manner that prevents relocation in most wave action or water flow conditions, except for extremely severe storms.
- (xi) The activity must be designed, constructed, and maintained so that it has no more than minimal adverse effects on water movement between the waterbody and the shore and the movement of aquatic organisms between the waterbody and the shore.
- (xii) The living shoreline must be properly maintained, which may require periodic repair of sills, breakwaters, or reefs, or replacing sand fills after severe storms or erosion events. Vegetation may be replanted to maintain the living shoreline. This activity authorizes those maintenance and repair activities, including any minor deviations necessary to address changing environmental conditions.
- (xiii) Tidal shoreline stabilization activities, including living shorelines, will be reviewed based on the following order of preference: (a) nonstructural shoreline stabilization, including beach nourishment, marsh creation, root wads, and other similar measures; and (b) structural shoreline stabilization projects such as shoreline revetments, breakwaters, groins; and (c) bulkheads. Written documentation must be required to support the preferred stabilization method, addressing the order of preference above.

f(3) NEW BULKHEADS, INCLUDING STONE TOE PROTECTION:

This activity authorizes the construction of new bulkheads and associated backfill for the purpose of erosion protection and includes the placement of stone toe protection. This activity also authorizes replacement of currently non-serviceable bulkheads and associated backfill. All work authorized by this activity, including discharges, must comply with all activity-specific impact limits and requirements listed below, in addition to the general conditions of this permit (Sections 10 and/or 404; limited to tidal waters).

(a) Category A Impact Limits and Requirements:

- (i) New bulkheads or replacement of currently non-serviceable bulkheads or associated backfill must not exceed 500 linear feet in length and shall be placed at the mean high-water shoreline.
- (ii) Stone toe protection placed along the base of a new bulkhead must not extend more than 10 feet channelward of the bulkhead face or the minimum necessary to provide adequate stabilization, whichever is less.
- (iii) No impacts to special aquatic sites, including intertidal mudflats, vegetated marsh, and sites that support SAV (documented to exist in the last five years as specified in Section III), or anadromous fish spawning areas are authorized by this activity.
- (iv) Only clean, non-metallic, non-organic, non-floatable fill material obtained from an upland source may be used as backfill material.

(b) Category B Impact Limits and Requirements:

- (i) This activity authorizes new bulkheads and replacement of currently non-serviceable bulkheads up to three feet channelward of the mean high-water shoreline.