

Sturgeon Project Design Criteria

Projects meeting the following criteria are expected to reduce the likelihood and magnitude and severity of effects to the environment such that the effects of the project would be consistent with a “not likely to adversely affect” Gulf sturgeon or Alabama sturgeon determination. For any activities not listed below, further coordination with the Ecological Services Office for further guidance on potential project effects is recommended.

1. Removal, Repair, and Replacement:
 - a. Must occur within the same footprint of the existing fill or structure, with only minor deviations. For repair of uplands damaged by discrete events, restoration of the damaged area (including bank stabilization) must not exceed the contours, or Ordinary High Water (OHW) or Mean High Water (MHW) line, that existed before the damage occurred.
2. Bank Stabilization/Fill:
 - a. Limited to no more than 500 linear feet of structure, fill and/or bank disturbance.
 - b. Bank stabilization does not extend more than 10 feet waterward of the OHW/MHW line, including the toe of any rip-rap.
 - c. For living shorelines projects, fill does not extend more than 30 feet waterward of the OHW/MHW line.
3. Pile-supported Structures:
 - a. Limited to minor structures that do not support large commercial vessels (e.g. ferries, tankers, cargo ships).
 - b. Piers/docks for single-family lots are limited to no more than 4 slips for motorized vessels.
 - c. Piers/docks for marinas or multi-family facilities are limited to no more than 50 total slips for motorized vessels.
4. Dredging:
 - a. Maintenance dredging of existing areas (e.g. canals, channels, basins, berths, marinas, slips, intake/discharge structures) does not exceed previously authorized limits (i.e. area/depth).
 - b. New dredging does not exceed 5,000 square feet and is limited to depth of -8 feet OHW/MHW.
 - c. Dredged material disposal is limited upland disposal sites only, unless the in-water/beneficial use site has previously undergone ESA Section 7 Consultation.
5. Boat Ramps and Indented Slips:
 - a. Boat ramps are limited to 40 feet in width.
 - b. Indented slips are limited to the berthing, dredging, and bank stabilization criteria listed in Section 2-4 above.
6. Utility and Aerial Transmission Lines:
 - a. In-water structures (e.g. foundations, piles, footings) for aerial transmission lines are limited to 0.5 acres total.

- b. For horizontal directional drilling, applicants must provide a frac-out contingency plan.
 - c. Repair activities (including placement of rip-rap and articulated mats) are limited to minimum amount necessary to stabilize and protect existing infrastructure.
7. Intake/Outfall Structures:
- a. Structures must be designed and implemented to prevent erosion and scour.
 - b. Intake velocities at the screen should not exceed $\frac{1}{2}$ ft/sec (USFWS 1993).
 - c. Mesh size at intake screens should have a maximum mesh opening of $\frac{1}{4}$ inch to reduce the size of aquatic organisms that can be entrained (USEPA 1976, USFWS 1993)
 - d. A Johnson (or Johnson-type) screen/intake with 1/8-inch mesh or less, should be used if feasible.

USEPA. 1976. Development document for best technology available for the location, design, construction and capacity of cooling water intake structures for minimizing adverse environmental impact. EPA 440/1-76/015-a. 263 pp.

USFWS. 1993. Pallid sturgeon recovery plan. U.S. Fish and Wildlife Service, Bismark, North Dakota. 55 pp.