

**COE SEA TURTLE INSPECTION CHECKLIST FOR HOPPER DREDGES**  
**For**  
**COE Projects or COE/Army Permitted Project**

1. Read contract plans and specs and/or all applicable permits (Dept. of the Army Permit, State Permits) to determine the contract or permit requirements for the protection of endangered sea turtles (each District specs or permit may be different).
2. Read the Biological Opinion and any COE Protocol if available.
3. Develop a list of inspection requirements:
  - a. Deflector leading edge angle (90 degrees or less).
  - b. Approach angle or leading edge plowing depth (6 inches or more).
  - c. Aft rigid attachment of deflector to the draghead (hinged or trunnion).
  - d. Forward deflector attachment point (adjustable pinned or cable/chain with stop).
  - e. Opening between drag head and deflector (4"X 4" max).
  - f. Is screening of dredged material required?
  - g. Are inflow screens or overflow screens or both required?
  - h. Are inflow basket screen openings 4"X 4" max and is 100% of the dredged material being screened.
  - i. Lighting of inflow and overflow screens and proper access for cleaning (must meet EM 385-1-1).
  - j. Structural design of deflector (per approved deflector submittal).
  - k. Dredge operational requirements (starting /stopping dredge pump, draghead plugging, razing draghead, turning the dredge).
  - l. Is dredging data recording, Silent Inspector, (drag elevation, slurry density & velocity) required by specs or permit? If so is it being collected or is Silent Inspector turned on and is data being submitted?
  - m. Is turtle trawling required by specs or permit? If so is it being performed?
  - n. Turtle observer requirements (12 or 24 hours req.)
  - o. Assure a copy of the approved turtle deflector submittal is on board the vessel.
  - p. Assure a copy of the contract plans and specs or Dept. of the Army permit is on board the vessel.
4. Review turtle deflector submittal (do not allow dredging to start until submittal is approved):
  - a. Structural soundness
  - b. Deflector leading edge angle (90 degrees or less).
  - c. Is the approach angles submitted for this project dredging depths.
  - d. 4"X 4" opening between deflector and draghead.
  - e. Aft rigid deflector attachment to draghead (hinged or trunnion).
  - f. Forward deflector attachment point (adjustable pinned or cable/chain with stop).
5. Assure the CQC performs a pre-dredging inspection:
  - a. CQC is required to review and inspect all items in paragraph 3.

6. Assure the CQC performs a startup-dredging inspection:
  - a. CQC is required to check the turtle deflector to see if the deflector is installed and adjusted for required dredge depth of this project in accordance with the approved deflector submittal.
  - b. CQC is required to assure the drag tenders are operating the dredge pump and draghead in accordance with the specs/permit.
  - c. CQC should perform a paint test to assure the deflector is plowing at least 6" into the dredge material while the dragtender is consistently maintaining the (approved, submitted) approach angle to a tolerance of + 0 to - 4 degrees.
  - d. CQC should note the inspection results in his QC Daily Report.
7. QA should perform dredging operation inspection soon after the dredge starts dredging:
  - a. Review and inspect all items in paragraph 3.
  - b. Inspect the turtle deflector to assure the deflector is installed and adjusted for the required dredge depth of this project in accordance with the approved deflector submittal.
  - c. Require the contractor to perform paint test to assure the deflector is plowing at least 6" into the dredge material while the dragtender is consistently maintaining the (approved, submitted) approach angle to a tolerance of + 0 to - 4 degrees (over penetration of the deflector could reduce production and may increase fuel consumption of the dredge but is allowed).
  - d. Ride the dredge through at least one dredging cycle (dredging, to the dump, and back to the dredge site).
  - e. Watch the dragtender to assure he is operating the dredging equipment in accordance with the plans and specs:
    - i. Starting the dredge pump only when the draghead is firmly on the bottom by watching the slurry specific gravity & swell compensator.
    - ii. Reducing the slurry velocity to the dredge pump idle speed velocity before raising the draghead off the bottom.
    - iii. Consistently maintaining the approach angle to a tolerance of + 0 to - 4 degrees when ever the draghead is on the bottom and the dredge pump is operating
    - iv. Watch to see if the dragtender is raising the draghead off the bottom because of plugging of the draghead or ship crabbing.
  - f. Lockout tagout procedure for cleaning the inflow and overflow screens (must meet EM 385-1-1).
  - g. Talk to turtle observers to assure they are aware of contract and permit requirements and are performing inspection of screens and deflectors and reporting any maintenance required to the dredge personnel. Assure that correct turtle observer forms are being used and filled out properly.
  - h. Talk to Dredge Captain about maintaining the screens and deflectors.
  - i. Assure Silent Inspector data is being sent to ERDC.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.