

## **Sea Turtle Trawling and Relocation Guidelines** (as derived from ACOE South Atlantic Division protocol)

Note: This only applies to Biological Opinions (BiOps) where NOAA Fisheries has determined that:

- Relocation trawling is necessary to minimize the take of sea turtles in dredging operations,
- Handling and measuring as outlined in the Incidental Take Statement is necessary to monitor the take of sea turtles, or
- Genetic sampling of dead sea turtles is necessary to monitor take.

However, external or internal sampling procedures (e.g., flipper tagging, PIT tagging, blood letting, skin tag sampling, laparoscopies, gastric lavages, mounting satellite or radio transmitters, genetics sampling, etc.) performed on live sea turtles are not permitted under the Section 7 BiOp unless the observer holds a valid sea turtle research permit (obtained pursuant to section 10 of the ESA, from the NOAA Fisheries' Office of Protected Resources, Permits Division) authorizing sampling, either as the permit holder, or as designated agent of the permit holder.

### **Sea turtle trawling procedures**

1. Trawling shall be conducted under the supervision of a biologist approved by the NOAA Fisheries. A letter stating that NOAA Fisheries has approved the supervising biologist must be obtained prior to the commencement of trawling.
2. Sea turtles captured pursuant to relocation trawling shall be handled in a manner designed to ensure their safety and viability, and shall be released over the side of the vessel, away from the propeller, and only after ensuring that the vessel's propeller is in the neutral, or disengaged, position (i.e., not rotating). Captured turtles shall be kept moist, and shaded whenever possible, until they are released. Please see the Handling and Resuscitation Guidelines.
3. Any turtles captured during the survey shall be measured in accordance with standard biological sampling procedures prior to release, and weighed when possible. Sampling data shall be recorded on the Relocation Trawling Report Form.
4. Turtles shall be kept no longer than 12 hours prior to release and shall be released at least 3 miles away from the dredge site (if it can be done safely, turtles may be transferred onto another vessel for transport to the release area to enable the relocation trawler or relative abundance trawler to keep sweeping the dredge site without interruption).
5. The trawler will be equipped with two 60-foot nets constructed from 8-inch mesh (stretch) fitted with mud rollers and flats as specified in the Turtle Trawl Nets Specifications. Paired net tows will be made for 10 to 12 hours per day or night.

Trawling will be conducted with the tidal flow using repetitive 15-30 minute (total time) tows in the channel. Tows will be made in the center, green and red sides of the channel such that the total width of the channel bottom is sampled. Positions at the beginning and end of each tow will be determined from GPS Positioning equipment. Trawl speeds shall not exceed 3.5 knots. Tow speed will be recorded at the approximate midpoint of each tow.

6. Methods and equipment will be standardized including data sheets, nets, trawling direction to tide, length of station, length of tow, and number of tows per station. Water temperature measurements will be taken at the water surface each day using a laboratory thermometer. Data on each tow, including weather conditions, air temperature, wind velocity and direction, sea state-wave height, and precipitation, will be recorded on the Relocation Trawling Report Form.
7. Before trawling begins, the necessary state permits for trawling in Virginia state waters must be obtained from the appropriate party (e.g., State of Virginia, Virginia Marine Resources Commission).

## **Turtle Trawl Nets Specifications**

**DESIGN:** 4 seam, 4 legged, 2 bridal trawl net

**WEBBING:** 4 inch bar, 8 inch stretch  
top - 36 gauge twisted nylon dipped  
side - 36 gauge twisted nylon dipped  
bottom - 84 gauge braided nylon dipped

**NET LENGTH:** 60 ft from cork line to cod end

**BODY TAPER:** 2 to 1

**WING END HEIGHT:** 6 ft

**CENTER HEIGHT:** Dependent on depth of trawl 14 to 18 ft

**COD END:** Length 50 meshes x 4" = 16.7 ft  
Webbing 2 inch bar, 4 inch stretch, 84 gauge braid nylon dipped, 80 meshes around, 40 rigged meshes with 1/4 x 2 inch choker rings, 1 each 1/2 x 4 inch at end  
cod end cover - none  
chaffing gear – none

**HEAD ROPE:** 60 ft 1/2 inch combination rope (braid nylon with stainless cable center)

**FOOT ROPE:** 65 ft 1/2 inch combination rope

**LEG LINE:** top - 6 ft, bottom 6 – ft

**FLOATS:** size - tuna floats (football style), diameter - 7 inch length - 9 inch, number - 12 each, spacing - center on top net 2 inches apart

**MUD ROLLERS:** size 5 inch diameter 5.5 inch length, number - 22 each, spacing - 3 ft attached with 3/8 inch polypropelene rope (replaced with snap on rollers when broken)

**TICKLER CHAINS:** NONE (discontinued- but previously used 1/4 inch x 74 ft galvanized chain)

**WEIGHT:** 20 ft of 1/4 inch galvanized chain on each wing, 40 ft per net looped and tied

**DOOR SIZE:** 7 ft x 40 inches (or 8 ft x 40 inches), Shoe - 1 inch x 6 inch, bridles - 3/8 inch high test chain

**CABLE LENGTH** (bridle length, total): 7/16 inch x 240-300 ft varies with bottom conditions

**FLOAT BALL:** none

**LAZY LINES:** 1 inch nylon

**PICKUP LINES:** 3/8 inch polypropelene

**WHIP LINES:** 1 inch nylon