

**US Army Corps of Engineers
Management Protocol for Effective Implementation of the
National Marine Fisheries Service
Regional Biological Opinion for Hopper Dredging
Gulf of Mexico**

29 December 2006

1. General.

a. **Purpose.** This management protocol was developed to effectively implement the Gulf Regional Biological Opinion (GRBO) for the Gulf of Mexico issued by National Marine Fisheries Service (NMFS), SE Region, on 19 November 2003, and subsequently revised on 24 June 2005 (Revision Number 1) and 9 January 2007 (Revision Number 2).

b. **Applicability.** This management protocol applies to all hopper dredging conducted within the Gulf of Mexico region, for US Army Corps of Engineers (COE) conducted dredging and COE permitted dredging under a Clean Water Act (CWA) Section 10/404 permit or Marine Protection, Research, Sanctuaries Act (MPRSA) Section 103 permit.

c. **District Points of Contact.** Each COE District under the GRBO will designate a single primary point of contact (POC) to ensure full day-to-day coordination of all relevant sea turtle related issues (as well as other protected species issues associated with the GRBO) across functional elements for COE conducted dredging and COE permitted dredging within his/her organization. At the beginning of each fiscal year (FY), each District will be responsible for preparation of its annual Protocol Management Plan. The District POC will coordinate the plan with his/her counterpart in the four Gulf Districts and with the Executive Advisory Group (EAG) for the Gulf Region.

d. **Executive Advisory Group - Gulf Region.** A Gulf Regional Biological Opinion Executive Advisory Group (EAG) composed of the Chiefs of Operations from Southwestern Division, Mississippi Valley Division, and South Atlantic Division will provide oversight and implementation of this Protocol. The EAG will make recommendations involving policy and oversight for the implementation of the GRBO and this Management Protocol. The EAG will collectively make recommendations on whether or not hopper dredging operations for COE conducted and COE permitted projects should continue or be permanently stopped based on an overall view of the Corps' compliance with the GRBO. The EAG will communicate its collective recommendations through the respective Gulf District POCs. After considering the recommendations of the EAG, the District Commander will make the final decision on whether or not dredging will cease or continue. Each Gulf District POC will be responsible for managing their District's "trigger" limits in the GRBO (paragraph 2c) and informing all relevant elements within his/her District of EAG recommendations. The

EAG will regularly communicate and will conduct meetings (formal or informal) to review progress under the GRBO and with related sea turtle and Gulf sturgeon protection initiatives.

e. **Coordination of Incidental Take Information.** All reporting of sea turtles and Gulf sturgeon takes (both lethal and non-lethal takes) from dredging activities and relocation trawling within each District will be reported immediately by the District POC to NMFS (SE Region) and the Engineer Research and Development Center (ERDC) staff which maintains the Sea Turtle Database Warehouse. The Sea Turtle Warehouse Website is: <http://el.erdc.usace.army.mil/seaturtles/index.cfm>. Non-lethal takes from relocation trawling will be compiled and reported at least weekly to the same entities or more frequently if appreciable numbers of turtles are being captured and relocated.

f. **Implementation of Reasonable and Prudent Measures (RPM).** Each Gulf District covered under the GRBO, ERDC, and the EAG will work together to foster application of contract specifications and/or permit conditions that consistently and effectively implement the Reasonable and Prudent Measures to avoid/minimize take of protected species as specified in the GRBO.

g. **Annual Sea Turtle Report.** Each Gulf District POC will prepare an annual sea turtle report covering dredging during the previous Fiscal Year (FY) within its jurisdiction by 30 November of each year. In addition to project specifics (location, duration, amount dredged) and endangered/threatened (E/T) species take data, the report will include data on sea turtle relocation trawling per project, summary totals by District and Gulf-wide total relocation trawling captures, and other data required by the GRBO. ERDC, with the assistance of the Gulf District POCs, is responsible for consolidating District reports and developing a brief Gulf-wide summary report to be forwarded to NMFS, SE Region, by 31 December, for the previous FY.

h. **Annual Review of Protocol.** This protocol will be reviewed annually (formal or informal) by the EAG and the Gulf Districts before the end of each FY to determine whether revisions/updates are required. Revisions or updates will be scheduled to be implemented the following FY.

i. **Dispute Resolution.** Disagreements and unresolved issues relating to implementation of specific provisions of this protocol by the staffs of pertinent COE Divisions and Districts will be quickly elevated to the EAG for resolution. Disputes that cannot be resolved by the EAG will be elevated to the Senior Executive Management Group comprised of a Senior Executive Service (SES) member from each of the three Gulf Divisions.

j. **Period of Coverage.** This management protocol will be in effect for a period of five years unless terminated prior to that time by mutual consent. At the end of the five-year period, this protocol may be extended by mutual consent of the affected COE Divisions.

2. Conditions Applicable to COE Conducted Hopper Dredging.

a. **Federal Activities.** COE conducted dredging, as defined for the GRBO, includes any hopper dredging conducted in the Gulf of Mexico by the COE to maintain federally authorized navigation channels, for sand mining to construct federally authorized hurricane/storm damage reduction projects, or to restore coastal habitat restoration projects. New Congressionally authorized Federal navigation dredging projects and authorized navigation channel improvements are not covered by the GRBO. Separate Section 7 consultations are required for any such activity.

b. **Gulf-wide Incidental Takes.** The GRBO assigns incidental takes for Federal activities by FY for Threatened (T) and Endangered (E) protected species as follows:

Loggerhead sea turtles (T): thirty-two (32)

Kemp's ridley sea turtles (E): sixteen (16)

Green sea turtles (T): eleven (11)

Hawksbill sea turtles (E): three (3)

Gulf sturgeon (E): three (3)

c. **District Trigger Points.** The GRBO does not assign specific take allowances by species by District. However, for management purposes, each District will be asked to work within identified "Trigger Points" or limits by species. The EAG will be engaged when identified Trigger Points are reached by any given District. The Trigger Points for each District, by species, are:

District	Loggerhead	Kemp's ridley	Green	Hawksbill	Total Turtles	Gulf sturgeon
SAJ (FL West Coast)	4	3	3	1	11	1
SAM (MS, AL, FL Panhandle)	4	3	2	0	9	2
MVN (LA)	12	4	2	1	19	0
SWG (TX)	12	6	4	1	23	0
Totals	32	16	11	3	62	3

Note that these are trigger points to engage the EAG and are not take limit allocations by Districts.

d. MSC Oversight and Responsibilities - COE Conducted Dredging.

(1) Each District will implement all Reasonable and Prudent Measures to minimize incidental take on COE conducted dredging. As takes occur and are reported, the District POC and the assigned Project Manager for the particular project on which the take occurs will assess potential causes for the take and potential risk for additional takes for each project. All incidental takes associated with the dredging activity and relocation trawling will be reported as specified in paragraph 1e above by the District POC.

(2) Each District will be responsible for monitoring trigger point limits for all listed turtle species (or Gulf sturgeon as applicable) for COE conducted dredging projects and keeping the EAG informed. The EAG will be notified when any of the following occurs:

(a) four sea turtles are taken on any single project,

(b) seventy-five percent (75%) of the District trigger point limit for any protected species as listed in the table above is approached/taken, or

(c) any single take of a Gulf sturgeon.

(3) The EAG will make a recommendation on whether dredging operations will continue or be permanently stopped based on an overall view of the Corps compliance with the GRBO. The District Commander, in consultation with the EAG, will make the final decision on whether or not dredging will cease or continue. E-mail notification of recommendations will be sufficient. The District POC will be responsible for communication and coordination among the various functional elements within each District.

e. Operational Protocol for COE Conducted Projects.

(1) A hopper dredge inspection will be performed using the "COE Sea Turtle Inspection Checklist for Hopper Dredges for COE Projects or COE/Army Permitted Project" (attachment 1). The District POC will be responsible for ensuring that the hopper dredge inspection has been performed and that all recommendations have been implemented or addressed prior to giving the project approval to proceed.

(2) Silent Inspector (SI) will be activated and operational in accordance with CECW-CO memorandum, 17 April 2006, subject: Implementation of Automated Dredging Quality Assurance Monitoring.

(3) Sea turtle deflecting dragheads, sea turtle observers, and inflow and overflow screens will be used during all dredging operations. Variations from these provisions may be granted by the MSC, but any approved variation must be justified from a technical perspective. All corrective actions proposed during the hopper dredge inspection will be made prior to initiation of dredging.

(4) Based on project conditions, pre-trawling condition and abundance surveys may be performed prior to initiation of dredging in accordance with the GRBO. The need for relocation trawling during the project may include assessments of pre-trawling surveys and conditions as found in paragraph 4 below, and/or historical records for the project.

(5) A risk assessment will be performed after each incidental take up to three sea turtles on a particular project. While the risk assessments are being performed dredging may continue. The risk assessments will include a review of the circumstances which contributed to the take, a review of the Silent Inspector (SI) data, and a physical inspection of the dredge and its operating procedures. A risk management plan will be developed after each take. This plan will address what occurred and suggested changes to the hopper dredge operations. This plan will be provided to the contractor (or the dredge Captain for Corps-owned hopper dredges) for implementation in order to minimize the likelihood of additional sea turtle takes and to ensure compliance with the terms and conditions of the GRBO. E-mail notification of recommendations and documentation will be sufficient. Additionally, the District findings will be provided to the EAG for information.

(6) At the first take of a Gulf sturgeon on a particular project, a risk assessment will be performed and a risk management plan prepared. Results will be implemented. While the risk assessment is being performed dredging may continue. The results of the risk assessment and recommendations in the risk management plan will be provided to the EAG for information.

(7) Should a total of four sea turtle on a particular project, a risk assessment will be performed and a risk management plan prepared. Results will be implemented. While the risk assessment is being performed dredging may continue. The EAG will be engaged in dialogue and remain engaged until such time as the project is completed or the District Commander, in consultation with the EAG, makes a decision to stop work on that project.

f. **Reinitiation of Consultation.** If the overall allotted takes assigned to COE conducted dredging projects for one or more species are reached in any given FY for federal projects, the Executive Advisory Group will reinitiate formal Section 7 consultation with NMFS. Formal reinitiation documentation in draft form will be coordinated with each Gulf Division/District. During reinitiation of consultation, the COE is not necessarily required to suspend dredging or relocation trawling operations pending the conclusion of the reinitiated consultation so long as the continuation of operations (by all Districts) would not violate Sections 7(a)(2) or 7(d) of the Endangered Species Act (ESA). The COE will document its determination that these provisions will not be violated by continuing activities covered by the GRBO during the reinitiation period and will notify NMFS of its findings.

3. Conditions Applicable to COE Permitted Dredging. COE permitted hopper dredging, as defined in the GRBO, includes any dredging conducted under a Department of the Army Permit (Section 10/404 permits or Section 103 permit) authorizing dredging for sand mining to construct hurricane/storm damage reduction projects or for coastal habitat restoration. All applicable requirements for COE permitted projects will be conducted through the respective District Regulatory Project Manager for the Department of the Army Permit.

a. The EAG involvement for COE permitted activities will be more frequent than COE conducted activities because of the variability in the number of Department of the Army permit projects being conducted annually and the number of allocated takes assigned to these activities per FY.

b. **Incidental Take Allowance.** The GRBO assigns incidental takes for COE permitted projects by FY for Threatened (T) and Endangered (E) protected species as follows:

Loggerhead sea turtles (T): eight (8)

Kemp's ridley sea turtles (E): four (4)

Green sea turtles (T): three (3)

Hawksbill sea turtles (E): one (1)

Gulf sturgeon (E): one (1)

c. **Incidental Take Limits.** For COE permitted dredging, the GRBO assigns an overall incidental take allowance for the entire Gulf of Mexico. There are no assigned "Trigger Points" for COE permitted dredging. Each District Regulatory Division will be expected to monitor takes for the FY using the ERDC Sea Turtle warehouse. The EAG will be consulted in all discussions when and after fifty percent (50%) of the allotted COE permitted dredging takes for any protected species are reached during the FY. Dredging may continue during the reinitiation period in accordance with Sections 7(a)(2) and 7(d) of the ESA in compliance with the RPMs and Terms and Conditions of the Incidental Take Statement, and so long as continuing the activity would not violate Sections 7(a)(2) and 7(d) of the ESA.

d. **Coordination with NMFS.** The Regulatory Project Manager assigned to the permit application will be responsible for initiating contact with NMFS on behalf of permit applicants. Each Regulatory Project Manager will be responsible for coordinating their actions with their District POC using the Engineer Research and Development Center (ERDC) Sea Turtle Database Warehouse webpage. NMFS will respond to a District's permit application within 15 days. E-mail and other forms of electronic notification are acceptable.

e. **Individual Consultation.** Where a permit applicant so desires and requests in writing, the Regulatory Project Manager responsible for the permit application will initiate consultation on their permit application with the NMFS.

f. **Project Schedules.** Where a Permittee cannot demonstrate that it intends to commence construction within 30 days of permit issuance, the permit will be conditioned to require the Permittee to return to the District within 30 days prior to construction, and sufficiently in advance to allow for NMFS to approve authorization of the permit conditions.

g. **Standard Permit Terms and Conditions.** Each COE permit will include standard terms and conditions to implement the terms and conditions of the GRBO. Prior to issuing a permit allowing the use of hopper dredges, the District Navigation Section or the Dredging Function in Operations Division will be consulted to ensure that the project can be executed using such equipment. The navigation "expert" will evaluate the project conditions, particularly the borrow site, to ensure that there are no technical reasons that preclude the use on hopper dredges. For COE permitted dredging, permits will include the permit condition that dredging will cease anytime a take occurs and a risk assessment is being performed. Dredging may resume after any corrections, as determined by the risk assessment and included in the risk management plan as necessary to reduce lethal takes, have been implemented.

h. **MSC Oversight and Responsibilities - COE Permitted Dredging.**

(1) Each District will implement all Reasonable and Prudent Measures to minimize incidental take on COE permitted dredging. As takes occur and are reported, the respective District, the District POC, and the assigned Project Manager for the particular project on which the take occurs will assess potential causes for the take and potential risk for additional takes for each project. All incidental takes associated with the dredging activity and relocation trawling will be reported as specified in paragraph 1e above by the District POC.

(2) The EAG will make a recommendation on whether dredging operations will continue or be stopped based on an overall view of the Corps' compliance with the GRBO. The District Commander, in consultation with the EAG, will make the final decision on whether or not dredging will cease or continue. E-mail notification of recommendations will be sufficient. The District POC will be responsible for communication and coordination among the various functional elements within each District.

i. **Operational Protocol for COE Permitted Projects.**

(1) A hopper dredge inspection will be performed using the "COE Sea Turtle Inspection Checklist for Hopper Dredges for COE Projects or COE/Army Permitted Projects" (attachment 1). The Regulatory Project Manager will be responsible for ensuring that the hopper dredge inspection has been performed and that all

recommendations have been implemented or addressed, prior to giving the Permittee approval to proceed.

(2) Silent Inspector (SI) will be activated and operational in accordance with Regulatory Guidance Letter No. 06-04, 2 October 2006, subject: Guidance for the Implementation of the Silent Inspector (SI) for Dredging Projects Requiring Department of the Army (DA) Permits. The Permittee or its designee will be provided the opportunity to receive SI training and be certified that they are qualified to interpret SI monitoring data.

(3) Sea turtle deflecting dragheads, sea turtle observers, and inflow and overflow screens will be used during all dredging operations. Variations from these provisions may be granted by the MSC, but any approved variation must be justified from a technical perspective. All corrective actions proposed during the hopper dredge inspection will be made prior to initiation of dredging.

(4) Based on project conditions, pre-trawling condition and abundance surveys may be performed prior to initiation of dredging in accordance with the Conservation Recommendations in the GRBO. The need for relocation trawling during the project may include assessments of pre-trawling surveys and conditions as found in paragraph 4 below, and/or historical records for the project.

(5) At the first take of a sea turtle on a particular project, work will cease and a risk assessment will be performed by the Permittee or its designated consultant and the results provided to the COE. When the risk assessment is done and the results implemented, dredging may continue with Corps concurrence. The risk assessment will include a review of the circumstances which contributed to the take, a review of the Silent Inspector (SI) data, and a physical inspection of the dredge and its operating procedures. A risk management plan will be developed. This plan will address what occurred and suggested changes to the hopper dredge operations in order to minimize the likelihood of additional sea turtle takes and to ensure compliance with the terms and conditions of the GRBO. E-mail notification of recommendations and documentation will be sufficient.

(6) If a second take of sea turtle on the same project occurs, project work will cease and a risk assessment will be performed by the Permittee or its designated consultant, and the results provided to the Corps of Engineers. When the risk assessment is completed and the results implemented dredging may continue with Corps concurrence.

(7) Should a total take of three sea turtles occur on any particular project, work will cease. A risk assessment will be performed. A risk management plan will be developed and recommendations implemented. A copy of the risk assessment plan and corrective actions taken will be transmitted to the COE. Dredging may continue with approval of the COE Regulatory Project Manager or other designated representative. Additionally, the findings will be forwarded to the EAG for information.

(8) At the first take of a Gulf sturgeon, project work will cease. A risk assessment will be performed. A risk management plan will be developed and recommendations implemented. A copy of the risk assessment plan and corrective actions taken will be transmitted to the COE. Dredging may continue with approval of the COE Regulatory Project Manager or other designated representative. The results of the risk assessment and recommendations in the risk management plan will be provided to the EAG for information.

(9) Should a total of four sea turtles or two sturgeons occur on any particular project, work will cease. A risk assessment will be performed. A risk management plan will be developed. A copy of the risk assessment plan and corrective actions taken will be transmitted to the COE. The District Commander, in consultation with the EAG, will make the decision as to whether dredging may continue. Should permission to continue be given, the EAG will remain engaged until such time as the project is completed or the District Commander, in consultation with the EAG, makes a decision to stop work on that project.

j. **Reinitiation of Consultation.** If the overall allotted takes assigned to COE permitted dredging projects for one or more species are reached in any given FY, the Executive Advisory Group will reinitiate formal Section 7 consultation with NMFS. Formal reinitiation documentation in draft form will be coordinated with each Gulf Division/District. During reinitiation of consultation, the COE is not necessarily required to suspend dredging or relocation trawling operations pending the conclusion of the reinitiated consultation, so long as the continuation of operations (by all Districts) would not violate Section 7(a)(2) or 7(d) of the ESA. The COE will document its determination that these provisions will not be violated by continuing activities covered by the GRBO during the reinitiation period and will notify NMFS of its findings.

4. Relocation Trawling for both COE Conducted and COE Permitted Projects.

a. There is no separation between the authorized Relocation Trawling Take level between COE conducted and COE permitted projects. Relocation trawling will be initiated based on pertinent “triggers” or conditions requiring relocation trawling as contained in the Reasonable and Prudent Measures of the GRBO. When circumstances dictate that a high risk of turtle take is present at the beginning of a dredging project, a decision may be made to initiate trawling prior to reaching the GRBO “triggers.” A Plan for Sea Turtle Relocation Trawling will be submitted to the COE Project Manager by the contractor or to the Regulatory Project Manager by the Permittee, prior to initiation of trawling. The Relocation Trawling Plan must be in compliance with the Reasonable and Prudent Measures as found in the GRBO.

b. Any incidental takes associated with relocation trawling, non-lethal and injurious/lethal, will be reported as specified in paragraph 1e above.

c. **Trawling Incidental Take Limits.** The EAG will be engaged if the overall non-lethal and injurious/lethal incidental take limits assigned to relocation trawling are reached in any given FY. The EAG will take the lead in initiating formal Section 7 consultation with NMFS. Reinitiation of consultation will be coordinated with all Gulf Districts.

Approved by the Executive Advisory Group:


ELISA D. PELLICCIOTTO
Chief, Operations and Regulatory Community of Practice
Southwestern Division

Date: 17 Jan 07


JAMES R. HANNON
Chief, Operations and Regulatory Community of Practice
Mississippi Valley Division

Date: 10 Jan 07


GEORGE R. PRINCE, JR., PE, CPE
Chief, Operations and Regulatory Community of Practice
South Atlantic Division

Date: 9 Jan 07

ATTACHMENT 1

COE SEA TURTLE INSPECTION CHECKLIST FOR HOPPER DREDGES for COE Conducted or COE Permitted Projects

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 Sea Turtle Protocol if available.
3. Develop a list of inspection requirements:
 - a. 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, and turning the dredge).
 - l. Is dredging data recording, Silent Inspector, (drag elevation, slurry density and 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 observers requirements (12 or 24 hours).
4. Review turtle deflector submittal (do not allow dredging to start until submittal is approved):
 - a. Structural soundness.
 - b. Leading edge angle (90 degrees or less).
 - c. Approach angles for 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 Contractor Quality Control (CQC) performs a pre-dredging inspection. The CQC is required to review and inspect all items in paragraph 3a-n.

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 the 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 deflector is plowing at least 6" into the dredge material.

7. COE Quality Assurance (QA) should perform dredging operation inspection:

- a. Review and inspect all items in paragraph 3a-n.
- b. Inspect the turtle deflector to see if 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 deflector is plowing at least 6" into the dredge material (over penetration of the deflector will reduce production and increase fuel consumption of the dredge).
- d. Ride the dredge through at least one dredging cycle (dredging, to the dump, and back to the dredge site).
- e. Watch the drag tender to assure he is operating the dredging equipment in accordance with the plans and specs (starting/stopping dredge pump, lower dragarm angle, swell compensator, slurry specific gravity, plugging of the draghead, 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. Picked up Silent Inspector data and emailed to ERDC at least once a week or more.
- j. All pre-dredge/post-dredge and follow up inspections should be noted in the CQC Daily Reports.

Contractor CQC Inspector:

Name: _____

COE Inspector:

Name: _____

Office Symbol: _____ **Date of Inspection:** _____

COMMENTS: _____

Contractor CQC Inspector:

Name: _____

COE Inspector:

Name: _____

Office Symbol: _____ **Date of Inspection:** _____

