

EXECUTIVE SUMMARY

Recommend Approval of a 10-year lease with US/MMS for Outer Continental Shelf Sand required for the Beach Renourishment Project No. 90527.

OBJECTIVE: Obtain approval of a lease with US/MMS for Outer Continental Shelf Sand required for the Beach Renourishment Project.

CONSIDERATIONS: Execution of a lease with US/MMS is required to obtain the 673,000 CY of sand that the City of Naples/County beach re-nourishment will require.

COUNTY ATTORNEY FINDING: The County Attorney has reviewed and approved this lease.

ADVISORY COMMITTEE RECOMMENDATIONS: At the October 14, 2005 Coastal Advisory Committee Meeting this item was unanimously recommended for approval 5-0.

FISCAL IMPACT: If this lease is rejected, considerably more fund will be required to obtain and permit a new sand source. In addition, the project will be delayed.

GROWTH MANAGEMENT IMPACT: There is no impact to the Growth Management Plan related to this action.

RECOMMENDATION: Recommend approval to the Board of County Commissioners for a 10-year lease with US/MMS for Outer Continental Shelf Sand required for the Beach Renourishment Project No. 90527.

PREPARED BY: Gary McAlpin



United States Department of the Interior

MINERALS MANAGEMENT SERVICE
Washington, DC 20240



Mr. Gary McAlpin
Coastal Projects Manager
Collier County Public Utilities Engineering Department
3050 Horseshoe Drive, Suite 218
Naples, Florida 34104

SEP 27 2005

Dear Mr. McAlpin:

Please find along with this cover letter, a draft final lease agreement and lease stipulations to allow for the Minerals Management Service to enter into a Noncompetitive Lease for the Collier County, Florida, Beach Renourishment Project. We understand that the proposed project will place approximately 673,000 cubic yards of OCS sand on 8.6 miles of beach to restore Vanderbilt Beach, Park Shore, Pelican Bay and the City of Naples public beaches. The sand source is a sand ridge identified as Borrow Area T1. The project will provide the County with storm protection for the upland properties, provide sea turtle nesting and shorebird habitat, and increase areas for beach recreation.

Please review the draft lease as soon as possible and provide your comments to me at the address below:

Minerals Management Service
Marine Minerals Branch
381 Elden Street
Mail Stop 4010
Herndon, Virginia 20170

Once we have your comments in hand, we will evaluate any suggested changes you might have. Upon completion of a final lease agreement approved by all parties, we will send three copies to you for signature by the Collier County, Board of Commissioners and subsequent signature by our Associate Director. A final agreement with all signatures will be provided to you for your records.

Please do not hesitate to contact Tony Giordano of my staff at (703) 787-1283 if you have any questions.

Sincerely,

Barry S. Drucker
Acting Chief, Marine Minerals Branch

cc: GOMR—Joe Christopher

TAKE PRIDE
IN AMERICA 

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

Office

Washington, DC

**NEGOTIATED NONCOMPETITIVE LEASE FOR
SAND, GRAVEL AND SHELL RESOURCES ON THE
OUTER CONTINENTAL SHELF**

Lease number

This form does not constitute an information collection as defined by
44 U.S.C. 3502 and therefore does not require approval by the Office of
Management and Budget.

This lease, is made under the authority of Section 8(k)(2)(A)(i) of the Outer Continental Shelf Lands Act of August 7, 1953 (43 U.S.C. 1331 et seq.), P.L. 95-372, as amended by P.L. 103-426, (hereinafter called the "Act"), between the United States of America (hereinafter called the "Government"), acting through the Minerals Management Service (hereinafter called the "Lessor"), and the Collier County, Board of County Commissioners, Florida (hereinafter called the "Lessee"). In consideration of the promises, terms, conditions, covenants, and stipulations contained herein or attached hereto, the parties mutually agree as follows:

Section 1. Lease Area. Under the terms and conditions of this lease, the Government hereby authorizes the removal of up to 673,000 cubic yards of sand only for exclusive use in the beach re-nourishment of a portion's of Collier County beaches. The sand will be placed on 8.6 miles of beach to restore Vanderbilt Beach, Park Shore, Pelican Bay and the City of Naples public beaches. The sand source is a sand ridge identified as Borrow Area T1 which is located 33 miles from the beaches to be re-nourished between DNR monument (R-20) in the north and (R-80) in the south. This authorization includes the right of the Lessee to remove and place sand on these beaches prior to the expiration of this lease from the Federal Outer Continental Shelf (OCS) areas within the T1 Borrow Area within the following coordinates:

**Borrow Area T1 Corner Coordinates
Collier County Renourishment Project**

Northing	Easting	Lat. (Degrees)	Long. (Degrees)	Lat. (Decimal)	Long (Decimal)
749905	208557	26 23 24.9	82 22 02.1	26.39024	82.36726
749869	201944	26 23 23.8	82 23 14.9	26.38995	82.38746
751879	201928	26 23 43.7	82 23 15.3	26.39548	82.38757
752285	201026	26 23 47.6	82 23 25.2	26.39657	82.39034
753862	201762	26 24 03.3	82 23 17.3	26.40093	82.38814
753843	205279	26 24 03.5	82 22 38.7	26.40098	82.37740
753667	205452	26 24 01.8	82 22 36.7	26.40050	82.37687
753155	206055	26 23 56.8	82 22 30.0	26.39911	82.37501
752686	206711	26 23 52.2	82 22 22.8	26.39784	82.37299
751716	206583	26 23 42.6	82 22 24.1	26.39517	82.37335
751137	207313	26 23 36.9	82 22 16.0	26.39360	82.37110
751145	207800	26 23 37.1	82 22 10.6	26.39363	82.36962
749905	208557	26 23 24.9	82 22 02.1	26.39024	82.36726

Section 2. Statutes and Regulations. This lease is issued subject to the Act (43 U.S.C. 1337(k)(2)(A)(i)), all regulations, orders, guidelines, and directives issued pursuant to the Act and in existence upon the Effective Date of this lease, all regulations, orders, guidelines, and directives subsequently issued pursuant to the Act that provide for the prevention of waste and conservation of the natural resources of the OCS and the protection of correlative rights therein, and all other applicable statutes and regulations.

Section 3. Effective/Expiration Date of Lease. The lease will be effective upon signature by both parties. This lease will expire one hundred eight (180) calendar days from the effective date if the Lessee does not issue a Notice to Proceed to a dredging contractor during that time. If a timely Notice to Proceed is issued, then the lease will expire three hundred sixty five (365) days from the date the dredging contractors receive notice, or upon completion of the project, whichever occurs first. A written request for an extension of time may be submitted to MMS by the Lessee not less than thirty (30) days or more than ninety (90) days prior to the expiration of the lease.

Section 4. Notice of Operations. The Lessee shall immediately notify the Lessor of commencement or termination of operations after the Lessee receives such notification from its contractor.

Section 5. Plans and Performance. All operations in the leased area shall be conducted in accordance with the final approved project plan and all conditions as referenced in Attachment 1: Collier County Lease Stipulations, and all applicable regulations, orders, guidelines and directives.

The Lessee shall provide the Lessor with a copy of the Project's "Construction Solicitation and Specifications Plan" (herein referred to as the Plan) for review and approval. Notwithstanding any other provision of this lease, no activity or operation authorized by it at the designated offshore borrow sites shall be carried out until the Lessor has determined that each such activity or operation described in the Plan will be conducted in a manner that is in compliance with the provisions and requirements of the lease. Any modifications to the Plan which affect the designated offshore borrow sites must be approved by the Lessor prior to implementation of the modification.

The Lessee acknowledges and assumes primary responsibility for all lease activities conducted by the Lessee, its employees, contractors or other persons or entities acting on the Lessee's behalf, and agrees to expressly require compliance with the terms and provisions of this lease in any contract entered into by the Lessee with such parties. The U.S. does not warrant the content or quality of the sand for the purposes for which it is intended. The Lessee further agrees to conduct periodic reviews and inspections of such activities to ensure compliance with the terms and conditions of the approved plan and this lease. Any modifications to the approved project plan shall be approved by the Lessor prior to implementation. The Lessee further agrees that no activities authorized by the approved plan or this lease will be carried out in a manner that (1) interferes with or endangers operations under any lease issued or maintained pursuant to the Act, (2) causes any undue harm or damage to aquatic life, (3) causes pollution, (4) creates hazardous or unsafe conditions, (5) unreasonably interferes with or harms other uses of the leased area, or (6) disturbs cultural resources.

Section 6. Safety Requirements. The Lessee shall require that all necessary steps be taken to assure that their Contractor: (1) maintains all operations within the leased area in compliance with regulations, orders, guidelines, and directives intended to protect persons, property, and the environment, including mineral deposits and formations of mineral deposits not leased hereunder, and (2) allows prompt access, at the site of any operation subject to safety regulations, to any authorized Federal inspector and shall provide any documents and records that are pertinent to occupational or public health, safety, or environmental protection as may be requested. This lease is valid only if such steps are incorporated in the contract between the Contractor and the Lessee.

Section 7. Violations, Suspensions and Cancellations. If the Lessee violates any provisions of this lease, the Lessor may, after giving written notice, suspend any further operations of the Lessee under this lease, except such operations as may be necessary to remedy any violations. If the Lessee fails to remedy all violations within thirty (30) days after receipt of suspension notice, the Lessor may, by written notice, cancel this lease and take appropriate action to recover all damages suffered by the Government by reason of such violations.

Section 8. Responsibility for Damages Suffered, Costs, or Expenses Incurred by the Government. The Lessor does not warrant that the sand to be used in this project is suitable for the purpose for which it is intended. If the Lessor incurs any damages, costs, or liabilities resulting from the use of such sand, or through the negligence of the Lessee or its agents, contractors, or employees in relation to any operations conducted under this lease, the Lessee shall indemnify the Lessor for such costs, damages, or expenses incurred. Such indemnification is not to be construed as a further waiver of sovereign immunity in excess of the legislative waiver of sovereign immunity in Section 768.28, Florida Statutes.

Section 9. Assignment or Transfer of Lease. This lease may not be assigned or transferred without written approval of the Lessor.

Section 10. Surrender of Lease. The Lessee may surrender this lease by filing with the Lessor a written relinquishment that shall be effective on the date of filing.

Section 11. Stipulations. The Lessee shall be subject to all the appended Stipulations to this Lease.

THE UNITED STATES OF AMERICA, Lessor

Collier County – Board of County
Commissioners

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

Fred Coyle, Chairman
Collier County, Board of County
Commissioners

(Title)

(Date)

Attested: Corporation Secretary

(Date)

(Address of Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

Associate Director
for Offshore Minerals Management

(Title)

(Date)

If this lease is executed by a corporation, it must bear the corporate seal

**UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE**

**NEGOTIATED NONCOMPETITIVE LEASE FOR
SAND, GRAVEL AND SHELL RESOURCES
ON THE OUTER CONTINENTAL SHELF**

COLLIER COUNTY, FLORIDA STIPULATIONS

STIPULATION NO. 1 - Post-Dredging Hydrographic Surveys of the Ocean Borrow Site

Dredged excavations within the ocean borrow site shall not exceed maximum slide slopes of 2:1 and shall not result in the creation of a deep pit or hole. A hydrographic survey is required by the Lessee after the dredging is completed. This data shall be submitted to the Lessor within two (2) weeks after receipt by the Lessee. The hydrographic data shall be in a format that is compatible with pre-dredging hydrographic data to enable the latter to be subtracted from the former to calculate the volume of sand removed and the shape of the excavation.

STIPULATION NO. 2 - Endangered and Threatened Species Under the National Oceanographic Atmospheric Administration (NOAA) Fisheries Jurisdiction

Under the terms of section 7(b)(4) and section 7(o)(2) of the Endangered Species Act, taking that is incidental to and not intended as part of the agency action is not considered a prohibited taking provided that such taking is in compliance with the terms and conditions set forth below. The documented incidental take, by injury or mortality, of three (3) Kemp's Ridley's, three (3) green turtles, one (1) hawksbills, five (5) loggerhead turtles, and one (1) shortnose sturgeon is set per fiscal year for all channel dredging and sand mining by hopper dredge in the United States Army Corps of Engineers (USACE), Jacksonville District west of Key West by the November 22, 2003 Gulf of Mexico Regional Biological Opinion pursuant to section 7(b)(4) of the ESA. This take level represents the total authorized take per year for hopper dredging projects conducted and permitted by the USACE Jacksonville District.

The Lessee shall ensure that the following standards shall be met:

1. *Hopper Dredging*: Hopper dredging activities in Gulf of Mexico waters from the Mexico-Texas border to Key West, Florida up to one mile into rivers shall be completed, whenever possible, between December 1 and March 31, when sea turtle abundance is lowest throughout Gulf coastal waters. The Lessee or its agent shall discuss with the Lessor and National Oceanographic Atmospheric Administration (NOAA) Fisheries why a particular project cannot be done within the December 1-March 31 "window."
2. *Observers*: The Lessee or designated representative shall arrange for NOAA Fisheries-approved observers to be aboard the hopper dredges to monitor the hopper spoil, screening, and drag-heads for sea turtles and Gulf sturgeon and their remains.
 - a. Observer coverage of hopper dredging of sand mining areas shall ensure 50% monitoring (i.e., one observer).

3. *Operational Procedures:* During periods in which hopper dredges are operating and NOAA Fisheries-approved observers are *not* required, the Lessee must:
 - a. Advise inspectors, operators and vessel captains about the prohibitions on taking, harming, or harassing sea turtles
 - b. Instruct the captain of the hopper dredge to avoid any turtles and whales encountered while traveling between the dredge site and offshore disposal area, and to immediately contact the Lessee or its agent if sea turtles or whales are seen in the vicinity.
 - c. Notify NOAA Fisheries if sea turtles are observed in the dredging area, to coordinate further precautions to avoid impacts to turtles.
 - d. Notify NOAA Fisheries and immediately by phone (727/570-5312) or fax (727/570-5517) and if a sea turtle or Gulf sturgeon is taken by the dredge.
4. *Screening:* When sea turtle observers are required on hopper dredges, 100% inflow screening of dredged material is required and 100% overflow screening is recommended. If conditions prevent 100% inflow screening, inflow screening may be reduced gradually, as further detailed in the following paragraph, but 100% overflow screening is then required. NOAA Fisheries must be consulted prior to the reductions in screening and an explanation must be included in the dredging report.
 - a. *Screen Size:* The hopper's inflow screens should have 4-inch by 4-inch screening. If the Lessee or its agent, in consultation with observers and the drag-head operator, determines that the drag-head is clogging and reducing production substantially, the screens may be modified sequentially: mesh size may be increased to 6-inch by 6-inch, then 9-inch by 9-inch, then 12-inch by 12-inch openings. Clogging should be greatly reduced with these flexible options; however, further clogging may compel removal of the screening altogether, in which case effective 100% overflow screening is mandatory. The Lessee or its agent shall notify NOAA Fisheries beforehand if inflow screening is going to be reduced or eliminated, and provide details of how effective overflow screening will be achieved.
 - b. *Need for Flexible, Graduated Screens:* NOAA Fisheries believes that this flexible, graduated-screen option is necessary, since the need to constantly clear the inflow screens will increase the time it takes to complete the project and therefore increase the exposure of sea turtles to the risk of impingement or entrainment. Additionally, there are increased risks to sea turtles in the water column when the inflow is halted to clear screens, since this results in clogged intake pipes, which may have to be lifted from the bottom to discharge the clay by applying suction.
5. *Dredging Pumps:* Standard operating procedure shall be that dredging pumps shall be disengaged by the operator when the drag-heads are not firmly on the bottom, to prevent impingement or entrainment of sea turtles within the water column. This precaution is especially important during the cleanup phase of dredging operations when the drag-head frequently comes off the bottom and can suck in turtles resting in the shallow depressions between the high spots the drag-head is trimming off.
6. *Sea Turtle Deflecting Drag-head:* A state-of-the-art rigid deflector drag-head must be used on all hopper dredges in all Gulf of Mexico channels and sand mining sites at all times of the year.
7. *Dredge Take Reporting:* Observer reports of incidental take by hopper dredges must be faxed to NOAA Fisheries Southeast Regional Office (727-570-5517) and the Lessor (703-787-1165) by onboard endangered species observers within 24 hours of any sea turtle, Gulf sturgeon, or other listed species take observed.

A report summarizing the results of the hopper dredging and any documented sea turtle or Gulf sturgeon takes must be submitted to the Lessor and NOAA Fisheries within 30 working days of completion of the dredging project. Reports shall contain information on project location specific area dredged, start-up and completion

dates, cubic yards of material dredged, problems encountered, incidental takes and sightings of protected species, mitigative actions taken (if relocation trawling, the number and species of turtles relocated), screening type (inflow, overflow) utilized, daily water temperatures, name of dredge, names of endangered species observers, percent observer coverage, and any other information deemed relevant.

8. *Sea Turtle Strandings*: The Lessee or designated representative shall notify the Sea Turtle Stranding and Salvage Network (STSSN) state representative (contact information available at: <http://www.sefsc.noaa.gov/seaturtleSTSSN.jsp>) of the start-up and completion of hopper dredging operations and bed-leveler dredging operations and ask to be notified of any sea turtle/sturgeon strandings in the project area that, in the estimation of STSSN personnel, bear signs of potential drag-head impingement or entrainment, or interaction with a bed-leveling type dredge.

Information on any such strandings shall be reported in writing within 30 days of project end to NOAA Fisheries Southeast Regional Office. Because of different possible explanations for, and subjectivity in the interpretation of potential causes of strandings, these strandings will not normally be counted against the USACE Jacksonville District's take limit; however, if compelling STSSN observer reports and evidence indicate that a turtle was killed by a hopper dredge or a bed-leveling type dredge, that take will be deducted from the ITS' anticipated take level for that USACE Jacksonville District where the take occurred.

9. *Reporting - Strandings*: The Lessee or its representative shall provide NOAA Fisheries Southeast Regional Office and the Lessor with a report detailing incidents, with photographs when available, of stranded sea turtles and Gulf sturgeon that bear indications of drag-head impingement or entrainment. This reporting requirement may be included in project report required in Term and Condition No. 7, above.
10. *Conditions Requiring Relocation Trawling*: Handling of sea turtles captured during relocation trawling in association with hopper dredging projects in Gulf of Mexico navigation channels and sand mining areas shall be conducted by NOAA Fisheries-approved endangered species observers. Relocation trawling shall be undertaken where any of the following conditions are met.
 - a. Two or more turtles are taken in a 24-hour period in the project.
 - b. Four or more turtles are taken in the project.
 - c. 75% of the USACE, Jacksonville District's sea turtle species quota for a particular species has previously been met
11. *Relocation Trawling Waiver*: The Lessee or designated representative may request to the USACE Jacksonville district and NOAA Fisheries a waiver of part or all of the relocation trawling requirements. NOAA Fisheries will consider these requests and decide favorably if the evidence is compelling.
12. *Relocation Trawling - Annual Take Limits*: The November 2003 Opinion authorizes the annual (by fiscal year) take of 300 sea turtles (of one species or combination of species) and eight Gulf sturgeon by duly-permitted, NOAA Fisheries-approved observers in association with all relocation trawling conducted or contracted by the four Gulf of Mexico USACE Districts to temporarily reduce or assess the abundance of these listed species during (and in the 0-3 days immediately preceding) a hopper dredging project in order to reduce the possibility of lethal hopper dredge interactions, subject to the following conditions:
 - a. *Trawl Time*: Trawl tow-time duration shall not exceed 42 minutes (doors in - doors out) and trawl speeds shall not exceed 3.5 knots.
 - b. *Handling During Trawling*: Sea turtles and sturgeon 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). Resuscitation guidelines are attached (Attachment 2).

- c. *Captured Turtle Holding Conditions*: Captured turtles shall be kept moist, and shaded whenever possible, until they are released.
- d. *Weight and Size Measurements*: All turtles shall be measured (standard carapace measurements including body depth) and tagged, and weighed when safely possible, prior to release; Gulf sturgeon shall be measured (fork length and total length) and—when safely possible—tagged, weighed, and a tissue sample taken prior to release. Any external tags shall be noted and data recorded into the observers log. Only NOAA Fisheries-approved observers or observer candidates in training under the direct supervision of a NOAA Fisheries-approved observer shall conduct the tagging/measuring/weighing/tissue sampling operations.
- e. *Take and Release Time During Trawling - Turtles*: Turtles shall be kept no longer than 12 hours prior to release and shall be released not less than three nautical miles (nmi) from the dredge site. If two or more released turtles are later recaptured, subsequent turtle captures shall be released not less than five nmi away. If it can be done safely, turtles may be transferred onto another vessel for transport to the release area to enable the relocation trawler to keep sweeping the dredge site without interruption.
- f. *Take and Release Time During Trawling - Gulf Sturgeon*: Gulf sturgeon shall be released immediately after capture, away from the dredge site or into already dredged areas, unless the trawl vessel is equipped with a suitable (not less than: 2 ft high by 2 ft wide by 8 ft long), well-aerated seawater holding tank where a maximum of one sturgeon may be held for not longer than 30 minutes before it must be released or relocated away from the dredge site.
- g. *Injuries and Incidental Take Quota*: Any protected species injured or killed during or as a consequence of relocation trawling shall count toward the USACE, Jacksonville District's incidental take quota. Minor skin abrasions resulting from trawl capture are considered non-injurious. Injured sea turtles shall be immediately transported to the nearest sea turtle rehabilitation facility.
- h. *Flipper Tagging*: All sea turtles captured by relocation trawling shall be flipper-tagged prior to release with external tags which shall be obtained prior to the project from the University of Florida's Archie Carr Center for Sea Turtle Research. This Opinion serves as the permitting authority for any NOAA Fisheries-approved endangered species observer aboard these relocation trawlers to flipper-tag with external tags (e.g., Inconel tags) captured sea turtles. Columbus crabs or other organisms living on external sea turtle surfaces may also be sampled and removed under this authority.
- i. *Gulf Sturgeon Tagging*: Tagging of live-captured Gulf sturgeon may also be done under the permitting authority of this Opinion; however, it may be done only by personnel with prior fish tagging experience or training, and is limited to external tagging only, unless the observer holds a valid sturgeon 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.
- j. *PIT-Tag Scanning*: All sea turtles captured by relocation trawling (or dredges) shall be thoroughly scanned for the presence of PIT tags prior to release using a scanner powerful enough to read dual frequencies (125 and 134 kHz) and read tags deeply embedded deep in muscle tissue (e.g., manufactured by Biomark or Avid). Turtles which scans show have been previously PIT tagged shall never-the-less be externally flipper tagged. The data collected (PIT tag scan data and external tagging data) shall be submitted to NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov.
- k. *CMTTP*: External flipper tag and PIT tag data generated and collected by relocation trawlers shall also be submitted to the Cooperative Marine Turtle Tagging Program (CMTTP), on the appropriate CMTTP form, at the University of Florida's Archie Carr Center for Sea Turtle Research.

1. *Tissue Sampling:* All live or dead sea turtles captured by relocation trawling or dredging shall be tissue-sampled prior to release, according to the protocols described in (Attachment 3). Tissue samples shall be sent within 60 days of capture to: NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov. The November 2003 Opinion serves as the permitting authority for any NOAA Fisheries-approved endangered species observers aboard relocation trawlers or hopper dredges to tissue-sample live- or dead-captured sea turtles, without the need for a section 10 permit.
 - m. *PIT Tagging:* PIT tagging is not required or authorized for, and shall not be conducted by, Endangered Species Observers (ESO) who do not have 1) section 10 permits authorizing said activity and 2) prior training or experience in said activity; however, if the ESO has received prior training in PIT tagging procedures and is also authorized to conduct said activity by a section 10 permit, then the ESO must PIT tag the animal prior to release (in addition to the standard external flipper tagging). PIT tagging must then be performed in accordance with the protocol detailed at NOAA Fisheries' Southeast Science Center's webpage: <http://www.sefsc.noaa.gov/seaturtlefisheriesobservers.jsp>. (See Appendix C on SEC's "Fisheries Observers" webpage). PIT tags used must be sterile, individually wrapped tags to prevent disease transmission. PIT tags should be 125 kHz, glass-encapsulated tags - the smallest ones made. Note: If scanning reveals a PIT tag and it was not difficult to find, then do not insert another PIT tag; simply record the tag number and location, and frequency, if known. If for some reason the tag is difficult to detect (e.g., tag is embedded deep in muscle, or is a 400 mHz tag), then insert one in the other shoulder.
 - n. *Other Sampling Procedures:* All other tagging and external or internal sampling procedures (e.g., PIT tagging, blood letting, laparoscopies, anal and gastric lavages, mounting satellite or radio transmitters, etc.) performed on live sea turtles or live sturgeon are not permitted under The November 2003 Opinion unless the observer holds a valid sea turtle or sturgeon research permit (obtained pursuant to section 10 of the ESA, from the NOAA Fisheries' Office of Protected Resources, Permits Division) authorizing the activity, either as the permit holder, or as designated agent of the permit holder.
 - o. *Handling Fibropapillomatose Turtles:* Observers handling sea turtles infected with fibropapilloma tumors shall either: 1) clean all equipment that comes in contact with the turtle (tagging equipment, tape measures, etc.) with mild bleach solution, between the processing of each turtle or 2) maintain a separate set of sampling equipment for handling animals displaying fibropapilloma tumors or lesions. Tissue/tumor samples shall be sent within 60 days of capture to: NOAA Fisheries, Southeast Fisheries Science Center, Attn: Lisa Belskis, 75 Virginia Beach Drive, Miami, Florida 33149. All data collected shall be submitted in electronic format within 60 working days to Lisa.Belskis@noaa.gov. This Opinion serves as the permitting authority for all NOAA Fisheries-approved endangered species observers aboard a relocation trawler or hopper dredge to tissue-sample fibropapilloma-infected sea turtles without the need for a section 10 permit.
13. *Hard-ground Buffer Zones:* All dredging in sand mining areas will be designed to ensure that dredging will not occur within a minimum of 400 feet from any significant hard-ground areas or bottom structures that serve as attractants to sea turtles for foraging or shelter. NOAA Fisheries considers (for the purposes of this see the November 2003 Opinion only) a significant hard-ground in a project area to be one that, over a horizontal distance of 150 feet, has an average elevation above the sand of 1.5 feet or greater, and has algae growing on it. The Lessee or its agent shall ensure that sand mining sites are adequately mapped to enable the dredge to stay at least 400 feet from these areas. If the Lessee or designated representative is uncertain as to what constitutes significance, it shall consult with NOAA Fisheries' Habitat Conservation Division and NOAA Fisheries' Protected Resources Division for clarification and guidance.
 14. *Training - Personnel on Hopper Dredges:* All contracted personnel involved in operating hopper dredges (whether privately-funded or federally-funded projects) receive thorough training on measures of dredge operation that will minimize takes of sea turtles. It shall be the goal of each hopper dredging operation to establish operating procedures that are consistent with those that have been used successfully during hopper dredging in other regions of the coastal United States, and which have proven effective in reducing turtle/dredge interactions. Therefore,

COE Engineering Research and Development Center experts or other persons with expertise in this matter shall be involved both in dredge operation training, and installation, adjustment, and monitoring of the rigid deflector drag-head assembly.

15. *Dredge Lighting*: From May 1 through October 31, sea turtle nesting and emergence season, all lighting aboard hopper dredges and hopper dredge pump-out barges operating within three nmi of sea turtle nesting beaches shall be limited to the minimal lighting necessary to comply with U.S. Coast Guard and/or Occupational Safety and Health Administration requirements. All non-essential lighting on the dredge and pump-out barge shall be minimized through reduction, shielding, lowering, and appropriate placement of lights to minimize illumination of the water to reduce potential disorientation effects on female sea turtles approaching the nesting beaches and sea turtle hatchlings making their way seaward from their natural beaches.

STIPULATION NO. 3 - Endangered and Threatened Species Under the Fish and Wildlife Service (FWS) Jurisdiction

The Service anticipates 13.2 miles of nesting beach habitat could be taken as a result of this proposed action. The take is expected to be in the form of: (1) destruction of all nests that may be constructed and eggs that may be deposited from March 1 through April 30 and from September 1 through September 30 and missed by a nest survey and egg relocation program within the boundaries (footprint) of the proposed project; (2) destruction of all nests deposited from November 1 through February 28 (or 29 as applicable) when a nest survey and egg relocation program is not required to be in place within the boundaries (footprint) of the proposed project; (3) reduced hatching success due to egg mortality during relocation and adverse conditions at the relocation site; (4) harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities; (5) misdirection of hatchling turtles on beaches adjacent to the construction area as they emerge from the nest and crawl to the water as a result of project lighting; (6) behavior modification of nesting females due to escarpment formation within the project area during a nesting season, resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs; and (7) destruction of nests from escarpment leveling within a nesting season when such leveling has been approved by the Service.

Incidental take is anticipated for only the 8.7 miles of beach that has been identified for sand placement, as well as the interstitial beaches (totaling 13.2 miles). The Service anticipates incidental take of sea turtles will be difficult to detect for the following reasons: (1) the turtles nest primarily at night and all nests are not found because [a] natural factors, such as rainfall, wind, and tides may obscure crawls and [b] human-caused factors, such as pedestrian and vehicular traffic, may obscure crawls and result in nests being destroyed because they were missed during a nesting survey and egg relocation program; (2) the total number of hatchlings per undiscovered nest is unknown; (3) the reduction in percent hatching and emerging success per relocated nest over the natural nest site is unknown; (4) an unknown number of females may avoid the project beach and be forced to nest in a less than optimal area; (5) lights may misdirect an unknown number of hatchlings and cause death; and (6) escarpments may form and cause an unknown number of females from accessing a suitable nesting site. However, the level of take of these species can be anticipated by the disturbance and renourishment of suitable turtle nesting beach habitat because: (1) turtles nest within the project site; (2) beach renourishment may occur during a portion of the nesting season; (3) the renourishment project will modify the incubation substrate, beach slope, and sand compaction; and (4) artificial lighting will deter and/or misdirect nesting females and hatchlings. The amount or extent of incidental take for sea turtles will be considered exceeded if the project results in more than a one-time placement of sand on the 8.7 miles of beach that have been identified for sand placement. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring re-initiation of consultation and review of the reasonable and prudent measures provided. The FWS believes the following reasonable and prudent measures are necessary and appropriate to minimize take of loggerheads, greens, hawksbill, or kemp's ridley sea turtles.

The Lessee shall ensure that the following standards shall be met:

1. All fill material placed must be sand similar to a native beach in the vicinity of the site that has not been affected by prior renourishment activities. The fill material must be similar in both coloration and grain size distribution

(sand grain frequency, mean and median grain size, and sorting coefficient) to the native beach and shall not contain:

- A. Greater than 10 percent, by weight, silt, clay, or colloids passing the #200 sieve;
 - B. Greater than 5 percent, by weight, fine gravel or cobbles, exclusive of shell material (retained by the #4 sieve);
 - C. The more restrictive of 5 percent coarse gravel, cobbles, or material retained on the #10 sieve, or in a percentage or size greater than found on the native beach; and
 - D. Construction debris, toxic material or other foreign matter; and not result in contamination of the beach.
2. Beach nourishment shall be started after October 31 and be completed prior to May 1. During the May 1 through October 31 period, no construction equipment or pipes shall be stored on the beach;
 3. If the beach nourishment project will be conducted before May 1, daily early morning surveys for sea turtle nests must be conducted from March 15 through April 30 or until completion of the project (whichever is earliest). In the event a sea turtle nest is excavated during construction activities, all work shall cease in that area immediately and the permitted person responsible for egg relocation for the project should be notified so the eggs can be relocated per the following requirements:
 - A. Nesting surveys and egg relocations will only be conducted by personnel with prior experience and training in nesting survey and egg relocation procedures. Surveyors must perform under the supervision of a qualified professional with a valid FWC Marine Turtle Permit. Nesting surveys must be conducted daily between sunrise and 9 a.m. Surveys must be performed in such a manner so as to ensure construction activity does not occur in any location prior to completion of the necessary sea turtle protection measures; and
 - B. Only those nests that may be affected by construction activities will be relocated. Nests requiring relocation must be moved no later than 9 a.m. the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Nest relocations in association with construction activities must cease when construction activities no longer threaten nests. Nests deposited within areas where construction activities have ceased or will not occur for 65 days must be marked and left in place unless other factors threaten the success of the nest. Any nests left in the active construction zone must be clearly marked, and all mechanical equipment must avoid nests by at least 10 feet.
 4. If the beach nourishment project will be conducted during the period from November 1 through November 30, daily early morning surveys for sea turtle nests must be conducted until the last nest hatches. In the event a sea turtle nest is excavated during construction activities, all work shall cease in that area immediately and the permitted person responsible for egg relocation for the project should be notified so the eggs can be relocated per the requirements in 3A and 3B above;
 5. Immediately after completion of the beach nourishment project and prior to March 15 for 3 subsequent years, if placed sand still remains on the beach, the beach shall be tilled as described below to a depth of 24 in. All tilling activity must be completed prior to March 15. If the project is completed during the nesting season, tilling shall not occur in areas where nests have been left in place or relocated unless authorized by the Service in an Incidental Take statement;
 6. Visual surveys for escarpments along the project area must be made immediately after completion of the beach nourishment project and prior to March 15 for 3 subsequent years if placed sand still remains on the beach. All scarps shall be leveled, or the beach profile shall be reconfigured, to minimize scarp formation. In addition, weekly surveys of the project area shall be conducted during the 2 nesting seasons following completion of fill placement as follows:

- A. The number of escarpments and their location relative to DEP reference monuments shall be recorded during each weekly survey and reported relative to the length of the beach surveyed (*e.g.*, 50 percent scarps). Notations on the height of these escarpments shall be included (0 to 2 feet, 2 to 4 feet, and 4 feet or higher) as well as the maximum height of all escarpments; and
- B. Escarpments that interfere with sea turtle nesting or that exceed 18 in high for a distance of 100 feet must be leveled to the natural beach contour by April 15. Any escarpment removal shall be reported relative to R-monument locations. The Fish and Wildlife Service must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18 in high for a distance of 100 feet occurs during the nesting and hatching season (May 1 to October 31) to determine the appropriate action to be taken. If it is determined escarpment leveling is required during the nesting or hatching season, the Fish and Wildlife Service will provide a brief written authorization that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken must be submitted to the Service. (NOTE: Out-year escarpment monitoring and remediation are not required if placed material no longer remains on the dry beach.)
7. The lessee or designated representative must arrange a meeting between representatives of the contractor, the Fish and Wildlife Service, the FWC, and the permitted person responsible for egg relocation at least 30 days prior to the commencement of work on this project. At least 10 days advance notice must be provided prior to conducting this meeting. This will provide an opportunity for explanation and/or clarification of the sea turtle protection measures;
8. From March 15 through April 30 and November 1 through November 30, staging areas for construction equipment must be located off the beach to the maximum extent practicable. Nighttime storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities during this period. In addition, all construction pipes placed on the beach must be located as far landward as possible without compromising the integrity of the existing or reconstructed dune system. Temporary storage of pipes must be off the beach to the maximum extent possible. Temporary storage of pipes on the beach must be in such a manner so as to impact the least amount of nesting habitat and must likewise not compromise the integrity of the dune systems (placement of pipes perpendicular to the shoreline is recommended as the method of storage);
9. From March 15 through April 30 and November 1 through November 30, all on-beach lighting associated with the project must be limited to the immediate area of active construction only and must be the minimal lighting necessary to comply with all safety requirements. Lighting on offshore equipment must be minimized through reduction, shielding, lowering, and appropriate placement of lights to avoid excessive illumination of the water, while meeting all U.S. Coast Guard and Occupational Safety and Health Administration (OSHA) requirements. Shielded low pressure sodium vapor lights are recommended for lights on offshore equipment that cannot be eliminated, and for illumination of the nesting beach and nearshore waters. Light intensity of lighting plants must be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect sea turtles. Shields must be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area (Figure 1);
10. A lighting survey shall be conducted from the nourished berm prior to April 15 of the first nesting season following nourishment and action taken to ensure no lights or light sources are visible from the newly elevated beach. A report summarizing all lights visible, using standard survey techniques for such surveys, shall be submitted to the Service by May 15 and documenting all compliance and enforcement action. Additional lighting surveys shall be conducted monthly through August and results reported by the 15th of each month of the first nesting season after project completion;

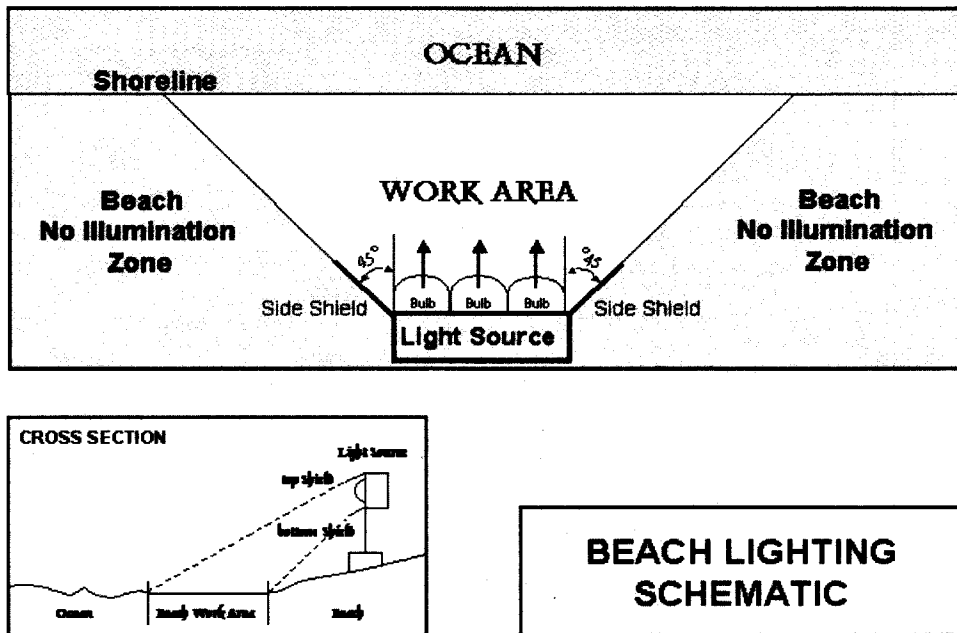


Figure 1. Lighting diagram.

11. All reports describing the actions taken to implement the terms and conditions of this incidental take statement must be submitted to the Lessor and the South Florida Ecological Services Office, Vero Beach, Florida, within 60 days of completion of the proposed work. Types of reporting will include, but is not limited to, that related to tilling, scarp reduction, nest and hatching data, lighting, and egg relocation, and shall include details such as dates of actual construction activities, names, and qualifications of personnel involved in nest surveys and relocation activities, descriptions and locations of self-release beach sites, nest survey and relocation results, and hatching success of nests;
12. In the event a sea turtle nest is excavated during construction activities, all work shall cease in that area immediately and the permitted person responsible for egg relocation for the project must be notified so the eggs can be moved to a suitable relocation site;
13. Upon locating a dead, injured, or sick endangered or threatened sea turtle specimen, initial notification must be made to the FWC at 1-888-404-3922, the South Florida Ecological Services Office, Vero Beach and the Lessor. Care should be taken in handling sick or injured specimens to ensure effective treatment and care and in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure evidence intrinsic to the specimen is not unnecessarily disturbed; and
14. In the event a hopper dredge is utilized for sand excavation, all conditions in the NOAA Fisheries *Biological Opinion for Dredging of Gulf of Mexico Navigation Channels and Sand Mining Borrow Areas Using Hopper Dredges by COE Galveston, New Orleans, Mobile, and Jacksonville Districts* (Consultation Number F/SEW2000/01287) must be followed, and the Service shall be sent copies of the reports specified in the Biological Opinion.

STIPULATION NO. 4 - Calculation of the Volume of Sand Placed

To ascertain the total volume of sand placed, the Lessee will require that the contractor forward copies of the data employed to make this determination, the methodology used, and the calculations to the Lessor within two (2) weeks after receipt by the Lessee.

STIPULATION NO. 5 - National Oil and Hazardous Substances Pollution Contingency Plan

The Lessee must require that the construction solicitation and specifications contract use language which its contractors and subcontractors prepare for and take all necessary precautions to prevent discharges of oil and releases of hazardous materials. In event of an occurrence, notification and response will be in accordance with 40 CFR 300 and applicable regulations of the State of Florida. The Lessee shall notify the Lessor of any occurrences and remedial actions, and provide copies of reports of the incident and resultant actions.

STIPULATION NO. 6 - Archaeological Reporting Requirement Plan

If the Lessee or any contractor operating on the Lessee's behalf discovers any archaeological resource while conducting dredging operations in any of the offshore borrow areas the Lessee or contractor operating on the Lessee's behalf shall immediately halt operations within the area of the discovery and report the discovery to the Chief, Leasing Division, MMS. If investigations determine that the resource is significant, the Chief, Leasing Division, will inform the lessee how to protect it.

STIPULATION NO. 7 - Use of Electronic Positioning System on Dredge and Transmittal of Location and Production Information to the Lessor

Use of Electronic Positioning System and Transmittal of Location Information to MMS:

To ensure the accuracy of the dredge relative to the borrow area specifications denoted in this lease agreement, during all phases of the offshore operation conducted within the borrow area, the Lessee will ensure that the dredge is equipped with an on-board differential global positioning system (DGPS) capable of maintaining and recording the location of the dredge within an accuracy range of no more than plus or minus 3 meters. The specific system will be approved by the Lessor prior to the conduct of any dredge procedures within the borrow area.

Location information (latitude and longitude) in NAD83 must be supplied on CD-ROM on a weekly basis to Minerals Management Service, Chief, Marine Minerals Branch (MMB), 381 Elden Street, MS 4010, Herndon, Virginia 20170.

Submittal of Production and Volume Information to the Lessor:

The Lessor will ensure the accuracy of cut depths and widths, cut slopes, and site production (sand volumes removed) within the borrow area as specified in the project's operational plan and this lease agreement. This information is routinely collected continuously throughout the period of dredge operation at a borrow site. The Lessor shall retain all access rights to all operational data at any time during which dredging is occurring within the designated Federal borrow area.

The Lessee will submit a "certified" summary of all operational, production, and survey activity data to the MMS Chief, MMB at the address above on CD-ROM on a weekly basis, in a format and method agreed to between the Lessor, the Lessee, and the dredge operator prior to the commencement of operations at the borrow site. Any maps and/or profiles submitted to the Lessor will be provided in digital spatial format compatible with Arc GIS. Information pertaining to the volume of material removed must be provided with explanatory text outlining each preceding day's activities and production values.

Following completion of all activities within the lease area, the Lessee, in cooperation with the dredge operator, shall submit to the Lessor, a "certified" copy of the complete operational data set (dredge tracklines, cut slope angles, cut depth, etc.), outlining any deviations from the original operational design plan. This report should be in MS Word format and should be sent to the Chief, MMB at the address above.

STIPULATION NO. 8 – Submittal of Project Completion Report to the MMS

Upon final completion of the project authorized under the terms and conditions of this lease, the Lessee shall submit to Minerals Management Service, Chief, Marine Minerals Branch, 381 Elden Street, MS 4010, Herndon, Virginia 20170, one (1) paper copy and one (1) electronic copy of a project completion report. The report shall contain, at a minimum, the following information:

- the names and titles of the project managers overseeing the effort (both for the Lessee and the dredging/engineering firm), including contact information (phone numbers, mailing addresses, and email addresses),
- the location and description of the project, including the final figures relative to the total volume of material extracted from the borrow site and the volume of material actually placed on the beach or shoreline (including a description of the volume calculation method used to determine these volumes),
- a narrative describing the final, as-built features, boundaries, and acreage, including the restored beach width and length,
- a table, an example of which is illustrated below, showing the various key project cost elements,

	Project Cost Estimate (\$)	Cost Incurred as of Construction Completion (\$)
Construction		
Engineering and Design		
Inspections/Contract Administration		
Total		

- a table, an example of which is illustrated below, showing the various items of work construction, final quantities, and monetary amounts,

Item No.	Item	Estimated Quantity	Unit	Unit Price	Estimated Amount	Final Quantity	Bid Unit Price	Final Amount	% Over/Under
1	Mobilization and Demobilization								
2	Beach Fill								
3	Any beach or offshore hard structure placed or removed								

- a listing of construction and construction oversight information, including the prime and subcontractors, contract costs, etc.,
- a list of all major equipment used to construct the project,
- a narrative discussing the construction sequences and activities, and, if applicable, any problems encountered and subsequent solutions,
- a list and description of any construction change orders issued, if applicable,
- a list of any pipelines or other oil/gas-related infrastructure in the project area, the owners, and any contacts made,
- a list and description of any safety-related issues or accidents reported during the life of the project,

- a narrative and any appropriate tables describing any environmental surveys/efforts associated with the project and costs associated with these efforts,
- any additional pertinent comments,
- a table listing significant construction dates beginning with bid opening and ending with final acceptance of the project by the Lessee,
- An appendix containing the as-built drawings, beach-fill cross-sections, and survey data.

The report shall be submitted within 120 days following completion of the project.

STIPULATION NO. 9- Submittal of all Copies of Project Data to the Lessor required under Florida's Joint Coastal Permit No. 0222355-001-JC

The Lessee is required to submit to the Lessor copies of all information mandated under Florida's Joint Coastal Permit for the Collier County Beach Nourishment Project.

SEA TURTLE HANDLING AND RESUSCITATION GUIDELINES

Any sea turtles taken incidentally during the course of fishing or scientific research activities must be handled with due care to prevent injury to live specimens, observed for activity, and returned to the water according to the following procedures:

- A) Sea turtles that are actively moving or determined to be dead (as described in paragraph (B)(4) below) must be released over the stern of the boat. In addition, they must be released only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels.
- B) Resuscitation must be attempted on sea turtles that are comatose or inactive by:
1. Placing the turtle on its bottom shell (plastron) so that the turtle is right side up and elevating its hindquarters at least 6 inches (15.2 cm) for a period of 4 to 24 hours. The amount of elevation depends on the size of the turtle; greater elevations are needed for larger turtles. Periodically, rock the turtle gently left to right and right to left by holding the outer edge of the shell (carapace) and lifting one side about 3 inches (7.6 cm) then alternate to the other side. Gently touch the eye and pinch the tail (reflex test) periodically to see if there is a response.
 2. Sea turtles being resuscitated must be shaded and kept damp or moist but under no circumstance be placed into a container holding water. A water-soaked towel placed over the head, carapace, and flippers is the most effective method in keeping a turtle moist.
 3. Sea turtles that revive and become active must be released over the stern of the boat only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels. Sea turtles that fail to respond to the reflex test or fail to move within 4 hours (up to 24, if possible) must be returned to the water in the same manner as that for actively moving turtles.
 4. A turtle is determined to be dead if the muscles are stiff (rigor mortis) and/or the flesh has begun to rot; otherwise, the turtle is determined to be comatose or inactive and resuscitation attempts are necessary.

Any sea turtle so taken must not be consumed, sold, landed, offloaded, transshipped, or kept below deck.

These guidelines are adapted from 50 CFR ' 223.206(d)(1). Failure to follow these procedures is therefore a punishable offense under the Endangered Species Act.

PROTOCOL FOR COLLECTING TISSUE FROM DEAD TURTLES FOR GENETIC ANALYSIS
Method for Dead Turtles

IT IS CRITICAL TO USE A NEW SCALPEL BLADE AND GLOVES FOR EACH TURTLE TO AVOID CROSS-CONTAMINATION OF SAMPLES

- Put on a new pair of latex gloves.
- Use a new disposable scalpel to cut out an approx. 1 cm (2 in) cube (bigger is **NOT** better) piece of muscle. Easy access to muscle tissue is in the neck region or on the ventral side where the front flippers A insert near the plastron. It does not matter what stage of decomposition the carcass is in.
- Place the muscle sample on a hard uncontaminated surface (plastron will do) and make slices through the sample so the buffer solution will penetrate the tissue.
- Put the sample into the plastic vial containing saturated Na Cl with 20% DMSO *(SEE BELOW)
- Use the pencil to write the stranding ID number (observer initials, year, month, day, turtle number by day), species, state and carapace length on the waterproof paper label and place it in the vial with the sample.
EXAMPLE: For a 35.8 cm curved carapace length green turtle documented by Jane M. Doe on July 15, 2001 in Georgia, the label should read AJMD20010715-01, C. mydas, Georgia, CCL=35.8 cm. If this had been the third turtle Jane Doe responded to on July 15, 2001, it would be JMD20010715-03.
- Label the outside of the vial with the same information (stranding ID number, species, state and carapace length) using the permanent marker.
- Place clear scotch tape over the writing on the vial to protect it from being smeared or erased.
- Wrap parafilm around the cap of the vial by stretching it as you wrap.
- Place vial within whirl pack and close.
- Dispose of the scalpel.
- Note on the stranding form that a part was salvaged, indicating that a genetic sample was taken and specify the location on the turtle where the sample was obtained.
- Submit the vial with the stranding report to your state coordinator. State coordinators will forward the reports and vials to NMFS for processing and archiving.

*The 20% DMSO buffer in the plastic vials is nontoxic and nonflammable. Handling the buffer without gloves may result in exposure to DMSO. This substance soaks into skin very rapidly and is commonly used to alleviate muscle aches. DMSO will produce a garlic/oyster taste in the mouth along with breath odor. The protocol requires that you WEAR gloves each time you collect a sample and handle the buffer vials.

The vials (both before and after samples are taken) should be stored at room temperature or cooler. If you don't mind the vials in the refrigerator, this will prolong the life of the sample. DO NOT store the vials where they will experience extreme heat (like in your car!) as this could cause the buffer to break down and not preserve the sample properly.

Questions: Sea Turtle Program: NOAA/NMFS/SEFSC, 75 Virginia Beach Drive, Miami, FL 33149

Phone: 305-361-4207

A PROTOCOL FOR COLLECTING TISSUE FROM LIVE TURTLES FOR GENETIC ANALYSIS

Method for Live Turtles

IT IS CRITICAL TO USE A NEW BIOPSY PUNCH AND GLOVES FOR EACH TURTLE TO AVOID CROSS-CONTAMINATION OF SAMPLES

1. Turn the turtle over on its back.
2. Put on a new pair of latex gloves.
3. Swab the entire cap of the sample vial with alcohol.
4. Wipe the ventral and dorsal surfaces of the rear flipper 5-10 cm from the posterior edge with the Betadine/iodine swab.
5. Place the vial under the flipper edge to use the cleaned cap as a hard surface for the punch.
6. Press a new biopsy punch firmly into the flesh as close to the posterior edge as possible and rotate one complete turn. Cut all the way through the flipper to the cap of the vial.
7. Wipe the punched area with Betadine/iodine swab; rarely you may need to apply pressure to stop bleeding.
8. Use a wooden skewer to transfer the sample from the biopsy punch into the plastic vial containing saturated NaCl with 20% DMSO *(SEE BELOW)
9. Use the pencil to write the stranding ID number (observer initials, year, month, day, turtle number by day), species, state and carapace length on the waterproof paper label and place it in the vial with the sample.
EXAMPLE: For a 35.8 cm curved carapace length green turtle documented by Jane M. Doe on July 15, 2001 in Georgia, the label should read AJMD20010715-01, C. mydas, Georgia, CCL=35.8 cm. If this had been the third turtle Jane Doe responded to on July 15, 2001, it would be JMD20010715-03.
10. Label the outside of the vial with the same information (stranding ID number, species, state and carapace length) using the permanent marker.
11. Place clear scotch tape over the writing on the vial to protect it from being smeared or erased.
12. Wrap parafilm around the cap of the vial by stretching it as you wrap.
13. Place vial within whirlpak and close.
14. Dispose of the biopsy punch.
15. Note on the stranding form that a part was salvaged, indicating that a genetic sample was taken and specify the location on the turtle where the sample was obtained.
16. Submit the vial with the stranding report to your state coordinator. State coordinators will forward the reports and vials to NMFS for processing and archiving.

*The 20% DMSO buffer in the plastic vials is nontoxic and nonflammable. Handling the buffer without gloves may result in exposure to DMSO. This substance soaks into skin very rapidly and is commonly used to alleviate muscle aches. DMSO will produce a garlic/oyster taste in the mouth along with breath odor. The protocol requires that you WEAR gloves each time you collect a sample and handle the buffer vials.

The vials (both before and after samples are taken) should be stored at room temperature or cooler. If you don't mind the vials in the refrigerator, this will prolong the life of the sample. DO NOT store the vials where they will experience extreme heat (like in your car!) as this could cause the buffer to break down and not preserve the sample properly.

Questions: Sea Turtle Program, NOAA/NMFS/SEFSC, 75 Virginia Beach Drive, Miami, FL 33149
Phone: 305-361-4207

Genetic Sample Kit Materials : LIVE turtles

1. latex gloves
2. alcohol swabs
3. Betadine/iodine swabs
4. 4-6 mm biopsy punch B sterile, disposable (Moore Medical Supply 1-800-678-8678, part #0052442)
5. plastic screw-cap vial containing saturated NaCl with 20% DMSO, wrapped in parafilm
6. wooden skewer
7. waterproof paper label, 3 x 4 pencil to write on waterproof paper label
8. permanent marker to label the plastic vials
9. scotch tape to protect writing on the vials
10. piece if parafilm to wrap the cap of the vial
11. whirl-pak to return/store sample vial

Genetic Sample Kit Materials DEAD turtles

1. latex gloves
2. single-use scalpel blades (Fisher Scientific 1-800-766-7000, cat. # 08-927-5A)
3. plastic screw-cap vial containing saturated NaCl with 20% DMSO, wrapped in parafilm
4. waterproof paper label, 3 x 4 pencil to write on waterproof paper label
5. permanent marker to label the plastic vials
6. scotch tape to protect writing on the vials
7. piece of parafilm to wrap the cap of the vial
8. whirlpak to return/store sample vial