

1. STATEMENT OF WORK

A. Purpose

This Statement of Work (SOW) describes the tasks that are to be performed in support of the Department of the Interior, Bureau of Ocean Energy Management (BOEM) Environmental Studies Program (ESP) on the project entitled, "Sandbridge Highly Migratory Species: Fish Distribution on a Dredged Shoal." BOEM has identified the need to better understand how federally managed fish in the highly migratory species (HMS) group use Sandbridge Shoal off Virginia Beach, VA for BOEM's Marine Minerals Program (MMP) to inform and evaluate the use of sand borrow areas in federal waters.

B. Background

BOEM is charged with the environmentally responsible management of Outer Continental Shelf (OCS) resources (e.g., oil and gas, sand and gravel, renewable energy). Federal jurisdiction starts at 3 nautical miles (nm) offshore of most states, except off Texas and the Gulf coast of Florida, where it starts at 9 nm. BOEM has the sole authority to negotiate, on a noncompetitive basis, the rights to OCS sand, gravel, and shell resources for shore protection, beach or wetlands restoration projects, or for use in construction projects funded in whole or part by, or authorized by, the federal government. These agreements (or leases) are issued through BOEM's MMP.

Better understanding fishes' use of habitats and sand features is important for BOEM's Marine Minerals Program (MMP) to evaluate the use and management of sand borrow areas in federal waters. Most federal waters also serve as Essential Fish Habitat (EFH), which are waters important to fish for growing and reproducing. One federally managed group known as highly migratory species, or HMS, include fish such as tunas, sharks, swordfish, and billfish; these species have EFH throughout the Atlantic OCS. Before dredging occurs, BOEM consults with the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS), which designates and manages EFH, on potential impacts.

One particular lease area of interest is Sandbridge Shoal off Virginia, that has been used by multiple stakeholders to rebuild beaches. Several species from the HMS group have designated EFH on Sandbridge Shoal, though EFH characteristics for many HMS life stages are still unknown (NMFS 2017). HMS often fill an important ecological role near the top of food webs; many are also important to recreational, charter, and commercial fishing industries. In a 2018 consultation on dredge impacts to EFH at Sandbridge Shoal, NMFS emphasized the need for more research on the potential effects to HMS, including reproductive behaviors. Currently, there are 12 species from the HMS group that have EFH designated on Sandbridge Shoal (Table 1). Of these, BOEM has identified a subset of "high priority" HMS that may be more vulnerable to dredging due to their direct or indirect dependence on the benthic environment; these species are shown in bold in Table 1.

Table 1. HMS with EFH on Sandbridge Shoal, with “High Priority” in Bold

<i>Species</i>	<i>Neonates</i>	<i>Juveniles</i>	<i>Adults</i>
High Priority HMS			
Angel Shark¹		X	X
Atlantic Sharpnose Shark			X
Dusky Shark	X	X	X
Sand Tiger Shark	X	X	X
Sandbar Shark	X	X	X
Smooth Dogfish¹	X	X	X
<i>Lower Priority HMS</i>			
Albacore Tuna	# ²	X	
Bluefin Tuna		X	X
Thresher Shark ¹	X	X	X
Skipjack Tuna		X	X
Tiger Shark	X	X	X
Yellowfin Tuna		X	

¹Insufficient information to differentiate lifestages; ²Insufficient information to designate EFH

Since dredging is expected to continue at Sandbridge Shoal, research on biological activity and biophysical coupling will strengthen NEPA analyses that consider the potential effects of dredging on both marine resources and the fishing industry.

C. Goals and Objectives

Goals include obtaining data on the diversity and abundance of HMS on Sandbridge Shoal and nearby areas. The study will initially review all 12 HMS with EFH at Sandbridge but will focus field efforts on the “high priority” HMS. Field research should monitor how a variety of HMS and lifestages distribute on and around Sandbridge Shoal seasonally, and how environmental factors may drive these distributions. Factors may be abiotic (e.g., currents, temperature, dissolved oxygen) or biotic (e.g., physiology, prey distribution). Relevant factors should then be described seasonally for Sandbridge Shoal. Investigations should aim to characterize the reproduction, rearing, and foraging behaviors of HMS on Sandbridge Shoal. If dredging occurs during the study, efforts should attempt to track behavior and distribution in response to construction.

The overarching hypotheses are that:

- (1) Sandbridge Shoal supports HMS throughout the year, though composition and abundance varies temporally;
- (2) Sandbridge Shoal is a site of reproductive and foraging activity for multiple HMS; and
- (3) Principally, HMS distribute according to both biotic (i.e., prey resources) and abiotic (e.g., temperature) factors; these factors change seasonally and annually at Sandbridge Shoal.

Description of Work

Task 1: Project and data management

The recipient shall hold a kickoff meeting with BOEM at the BOEM Sterling office or via webinar within thirty (30) days of award. Personnel present at this meeting shall include the Project Manager and Study Principal Investigators (PIs). The Project Manager shall have specific experience managing projects, including overseeing progress, ensuring quality deliverables, meeting deadlines, and staying within budget. An agenda for the meeting and draft PMP shall be provided to the Contracting Officer's Representative (COR) at least ten (10) days before the meeting, or 20 days after award, to allow for review. At the kickoff meeting, the draft Project Management Plan (PMP) shall be reviewed and, if any, remaining technical or managerial issues shall be resolved. Within two (2) weeks following the meeting, the recipient shall prepare and distribute to the parties listed in Section 7 a summary detailing the discussions and any mutually agreed to decisions along with the final PMP. Any agreed-to changes that might affect the agreement are subject to approval in writing by the BOEM Contracting Officer (CO) via a modification. BOEM and the recipient shall conduct monthly calls; frequency may be adjusted as needed. The recipient shall submit quarterly status reports summarizing work via e-mail to the BOEM contacts listed in Section 7. These shall be letter reports in BOEM's format and shall include a summary of work completed, overall project status, any issues, and itemized expenditures that match invoices.

No originals shall be mailed without prior backups. Reports and products will remain secure within the recipient and BOEM, with any public release or access approved by BOEM. If distributed, the recipient shall include language to the data recipient that ensures that the data are not distributed further, and that no publication is done without opportunity for PIs to be co-authors and/or giving acknowledgement to BOEM. The preferred format of files shall be determined based on an agreement between the COR and the recipient at the kickoff meeting; any changes in data formats during the contract period of performance must be agreed upon in advance by BOEM and the recipient.

The recipient shall provide a method for the safe storage and easy retrieval of all results, acquired data, photographs, and video. The recipient shall ensure that no loss of information occurs in any processing step taking place prior to archiving. The Project Manager shall inventory the data and verify the presence of any and all necessary documentation prior to archiving. The recipient shall retain a copy of the information collection logs and information delivered to the BOEM for a period of one year from the award completion date. The recipient shall be responsible for the submission of the data to BOEM according to the schedule in Section 7.

Task 2: Review research and information for HMS distribution on Sandbridge Shoal

The recipient shall identify data and information on the distribution of all HMS with designated EFH on Sandbridge Shoal (Table 1). This review shall identify factors contributing to HMS distribution when possible; BOEM SMEs will provide input into relevant variables as well. It should also highlight species' behaviors associated with the shoal (e.g., reproduction, foraging, transiting). The review shall also summarize recreational, charter, and commercial fisheries that target HMS on Sandbridge Shoal and in the surrounding region. The review shall summarize

previous methods used to study HMS. Based on the results of reviewing data and methods, the recipient will then describe methods proposed for use in the current field effort (Task 3), including any suggested changes to species identified as “high priority” or “lower priority,” as currently outlined in Table 1. After completing searches, the recipient will compile and summarize research in a brief report (targeting <50 pages), using tables, visuals, and infographics when possible.

BOEM will provide data from a BOEM-funded, six-receiver acoustic telemetry array that was deployed on Sandbridge Shoal from 2016-2018. If BOEM-funded studies are directly relevant, BOEM will provide the recipient with additional information as possible. As needed, the recipient should seek additional input from other state or local agencies, and academic institutions. Sources of information include the National Marine Fisheries Service (NMFS), Virginia Marine Resources Commission (VMRC), Virginia Institute of Marine Sciences (VIMS), University of Maryland – Chesapeake Biological Laboratory, and the Atlantic Cooperative Telemetry (ACT) Network among others; source types include technical reports from government agencies or scientific research groups, working papers from research groups or committees, white papers, preprints, and published peer reviewed literature. In addition to academic and governmental data sources, this review shall solicit input from regional fishermen that target HMS off the mid-Atlantic to learn about distribution trends, as well as the economic context of these fishes. Both qualitative and quantitative information from fishermen should be summarized. These expert fishermen should also be leveraged to support the field effort (Task 3), particularly in accessing HMS.

A draft of this review, and proposed field methods, shall be provided for BOEM review and approval within six (6) months of award in an editable format (i.e., Microsoft Word document). BOEM will solicit input from other program areas (e.g., the Office of Renewable Energy Programs) and the regional NMFS EFH managers to further refine survey methods and leverage resources. The report will be a cumulative document that details all background, methods, data, analyses, and interpretation in fulfillment of the SOW. The Final Report (Task 5) will add to this document. The recipient shall follow the guidelines provided by the BOEM Environmental Studies Program (ESP), available at: <http://www.boem.gov/Environmental-Studies-Program-Report-Specifications/>.

BOEM will review the Draft Report and provide any necessary written comments or suggested edits within 30 days of receipt of the document. The review will evaluate all documents for completeness, content, general structure, and compliance to the terms of the task order. If necessary, BOEM may require that authors participate in a teleconference to discuss any remaining questions or concerns prior to the submission of the Final Report. The Draft Report (Task 5), with comments addressed, will be due within three years, 9 months of award.

Additionally, all literature (i.e., formatted citations and PDFs) shall be compiled in an EndNote X9 library, formatted according to BOEM ESP specifications. This library will be submitted with the Final Report (Task 5).

Task 3: Survey high-priority HMS at Sandbridge Shoal

Field surveys shall aim to identify factors that influence distribution of high-priority HMS with EFH on Sandbridge Shoal. While surveys will focus on HMS, they must also consider other

environmental factors that may drive HMS distribution. Factors include biological, chemical, and physical drivers, like prey distribution, temperature and salinity, and geomorphology. Existing datasets should be leveraged when possible. Data shall be collected and managed such that it can be modeled with abiotic factors to identify any correlations among HMS taxa, as well as correlations among taxa occurrence and environmental factors (Task 4).

Surveys should be performed every season for three years. These surveys shall target all high-priority species and lifestages to gather a more comprehensive understanding of HMS shoal occurrence. Depending on the timing of potential dredge events, sampling of fish distribution, composition, and biomass should occur before, during, and after dredging to investigate changes. The recipient should partner with local fishermen when possible, to leverage access to HMS as well as gain insight into the industry. The recipient shall arrange for BOEM scientists to assist in field efforts when possible.

Monitoring approaches could include, at varying frequencies: biological sampling via plankton net, long-line, trolling, hook-and-line, and trawl surveys; water column profiles to measure current flow and direction and water chemistry (e.g., temperature, salinity, pH, dissolved oxygen, turbidity, chlorophyll); direct observation using video cameras or remotely operated vehicles; acoustic surveys; and tagging. Trophic interactions may also be investigated using stomach content analysis and stable isotope analysis. The recipient should also utilize environmental DNA (i.e., eDNA) to identify species/taxa and sub-networks at Sandbridge Shoal. Methods and results for eDNA should be ground-truthed, including estimates for residency time or latency.

During field surveys, the recipient shall capture high-resolution photos (i.e., at least 300 dpi) and high-definition videos (i.e., at least 1080p) for the Final Report (Task 5) and outreach materials.

Field surveys shall be complete within three years, six months of project award (i.e., three years after the review and methods are complete). Updates on field progress shall be provided on regularly scheduled phone calls and quarterly progress reports. No additional deliverables are required; however, raw or processed data used in analyses (Task 4) shall be made available to BOEM, as requested.

Task 4: Data analysis and modeling

The recipient shall analyze the results of the field survey, and leverage existing/historical data as applicable, to identify how factors influence HMS distribution on Sandbridge Shoal. Species distribution models and network analysis could identify statistical correlations among taxa, as well as correlations of taxa with environmental variables. It is then important to characterize those factors on Sandbridge Shoal, since that may influence its habitat suitability for HMS. For example, if a temperature minimum drives one high-priority species' distribution, the occurrence of that temperature threshold on Sandbridge Shoal should be identified. The results should include seasonal species distribution models represented in GIS layers. The recipient should also analyze ecologically meaningful metrics, such as community composition, lifestage occurrence, water column distribution, trophic interactions, and seasonality, as data allows. These metrics will be determined by the recipient, with input from the COR and BOEM SMEs, and based on the availability of data. Network analysis should be informed by eDNA and considered in the context

of other seasonal and environmental variables (e.g., Djurhuus et al. 2020).

The economic dependence of recreational, charter, and commercial fishing industry on Sandbridge Shoal HMS shall be analyzed. This may include the local or regional fishery effort, landings data, or the economic importance of species found on Sandbridge Shoal.

BOEM should be able to use these analyses when assessing potential impacts to habitat, fish, and fisheries due to dredge projects.

Task 5: Final Report

The results of the survey, data analysis, and modeling shall be incorporated into the review (Task 2) to create a Draft Report. The Draft Report shall also summarize potential impacts and vulnerabilities of HMS from dredging at Sandbridge Shoal, considering seasonality, spatial extent, and frequency of events. Distribution of HMS and potential impacts should be discussed relative to regional HMS occurrence, particularly on nearby shoals, when possible. The recipient should consider innovative and succinct ways to present results such that they are easy to understand, access, and apply.

The Draft Report shall be delivered to BOEM within three (3) years, nine (9) months of project award. BOEM shall provide comments within 30 days. The recipient shall make edits and return the Final Report 60 days later (i.e., four (4) years from project award). All compiled literature, both formatted citations and PDFs, shall be provided in an EndNote X9 library with the Final Report.

The final deliverables will be published by BOEM in the ESP Information System available at: <http://www.boem.gov/ESPIS/> and <http://marinecadastre.gov/epis/#/>. All materials shall be considered proprietary until BOEM releases the report to the public. The recipient shall deliver one electronic copy of each deliverable (i.e., report and field data), containing both editable and non-editable formats (i.e., Microsoft Word documents and PDFs).

Task 6: Presentation of results

The recipient shall present the results of this study at one professional conference. The results should also be shared to relevant stakeholders, for example through peer-reviewed publications, webinars, and workshops. The recipient shall also convey the results of the study to regional fishermen. The recipient should consider innovative and creative ways to share results. An abstract and any content would be developed together with the BOEM COR.

Task 7: Education

Throughout the study, the recipient should hire, train, or teach individuals or groups traditionally underrepresented in STEM fields (science, technology, engineering, and math), such as women or minorities. This may be achieved through employment, internships, partnerships, or outreach.

The recipient shall develop educational materials to support a 45-minute class plan that meets science education standards for a grade between 7-12 to share information on HMS and any

relevant study results. This class plan shall be provided to regional schools, including those with a higher proportion of minorities, and measured for effectiveness as possible.

Option for Task 8: Survey lower priority HMS at Sandbridge Shoal

BOEM supports research on “lower priority” HMS (i.e., species not in bold in Table 1). The recipient may include these species if BOEM believes the results of additional field and/or lab work justifies the expense. To minimize costs, BOEM encourages opportunistic access (e.g., if a “lower priority” HMS is captured during “high priority” field work) or through partnerships (e.g., a state or federal survey shares data). While BOEM has characterized some species as “lower priority” for cost effectiveness, an understanding of behaviors and movement of all HMS with EFH at Sandbridge Shoal will benefit both the species as well as sand management decisions.

Option for Task 9: Compare Sandbridge Shoal with a control site

BOEM is interested in how the behavior and movements of HMS on Sandbridge Shoal compares to other regional sand bodies along the DE/MD/VA/NC coast. It can be extremely difficult to detect any changes among habitats, however, due to natural environmental variability. To determine the efficacy of comparing the results on Sandbridge Shoal with an undisturbed shoal, the recipient should complete an *a priori* power analysis to assess the level of effort needed to detect similarities or differences at a given spatial and temporal scale. Depending on the results of the power analysis, the recipient may then propose additional survey sites and methods to capture distribution trends among regional sand shoals. If available and relevant, a similar habitat not subject to dredging could be sampled as a control site, either following a Before-After-Control-Impact (BACI) or Before-After-Gradient (BAG) design.

Citations

Djurhuus, A., Closek, C.J., Kelly, R.P. et al. 2020. Environmental DNA reveals seasonal shifts and potential interactions in a marine community. *Nature Communications*. 11 (254).

<https://doi.org/10.1038/s41467-019-14105-1>

National Marine Fisheries Service (NMFS). 2017. Final amendment 10 to the 2006 consolidated Atlantic highly migratory species fishery management plan: essential fish habitat and environmental assessment. NOAA Fisheries Office of Sustainable Fisheries, Atlantic Highly Migratory Species Management Division. September 1, 2017. 442 pp.

6. DELIVERABLES

A. Quarterly Reports

Quarterly reports shall be provided at the end of each Fiscal quarter beginning in FY–2020, as noted in the Schedule of Deliverables, to include work completed (both as tasks and percentage), an itemized budget spent that matches invoices, and any areas of concern. An annual report shall accompany the 4th quarter report and summarize information from work and preliminary analysis of the respective year.

B. Project Management Plan (Task 1)

Based on this SOW, a draft Project Management Plan (PMP) shall be prepared for review ten (10) days before the kickoff meeting, or within 20 days. A final PMP, with any edits incorporated, shall be available within 2 weeks after the meeting.

C. Literature Review and Methods Proposal (Task 2)

A draft of the literature review shall be provided for BOEM review and approval within six (6) months of award. BOEM shall provide comments within 30 days. Revisions shall be incorporated into the Final Report.

D. Data and Models (Task 4)

Unless specifically approved by BOEM, only non-proprietary, open-source software shall be used and all code developed as part of this contract, which will be publicly available in repositories such as GitHub. Raw data from the field work will be provided, as requested. Data and models (and associated products, such as GIS layers) will be provided within three (3) years, nine (9) months.

BOEM ESP requires the best scientific quality animal telemetry data from its research efforts to be curated and made publicly accessible through the Animal Telemetry Network (ATN). The ATN is the authoritative data service for animal telemetry data of the Integrated Ocean Observing System of the United States subsystem for Data Management and Communications (US-IOOS-DMAC), which is implemented in partnership with the Global Ocean Observing System's Ocean Tracking Network International Data Management Committee (GOOS-OTN-IDMC). This requirement addresses BOEM ESP's obligations to provide public access to scientific research results, enhance the integrity of BOEM's scientific findings, maximize the benefits of its research contributions to the broader scientific community, and support a shared data infrastructure for biological oceanographic observing that is part of BOEM's cumulative effects assessment and long-term monitoring goals. This requirement also satisfies BOEM ESP's continued commitment to archive its best scientific quality observational data at the NOAA National Centers for Environmental Information.

PIs will adequately format and document data to specifications of the US-IOOS-DMAC and/or GOOS-OTN-IDMC, and submit the data by visiting the DAC portal at <http://atn.ioos.us/>. If standards are not available, extramural researchers will have the option to format their data

according to the developing DAC standards and conventions. PIs can opt for additional services provided by any node of the ATN in lieu of DAC data submission, but the node must have a publication service that the DAC has approved for harvest. Invoices for any additional expenses for comparable services by any other organization or institution that is not recognized on the DAC website as an approved node will be scrutinized before being approved by the BOEM COR.

1) Animal Telemetry Metadata:

BOEM requires telemetry metadata to be submitted to the ATN, documenting the scientific, technical, and administrative information for each coherent unit of scientific data, including the physical medium, file information, volume, and access URL, if applicable. For example, the Platform transmitter terminal (PTT) numbers assigned to individual satellite tags are required as part of a metadata submission for satellite tag data. Metadata must be submitted to the DAC or through an approved node. Proof of submission including details on when data were submitted and their status (whether they are in good standing) in the ATN systems, must be available to BOEM via the DAC before invoices and payments will be approved for this deliverable, as indicated by the milestones and deliverables table below. BOEM may also withhold payments subject to review of the metadata in order to ensure planned availability of the scientific dataset (see deliverable on Availability of the Scientific Dataset below), and to verify any measures that have been taken or are planned for archiving datasets at NCEI, including links to archived data and associated discovery metadata, if available.

2) Availability of the Scientific Dataset

All animal telemetry data will be made publically accessible through data submission to the DAC or approved node of the Animal Telemetry Network. The PI will initiate data submission on a schedule detailed in the agreement. Periodic submission of tag data may be required prior to the release of incremental funding of multi-year projects. Complete data submission is required prior to the completion of the study, as final invoicing/ payment for this deliverable may be withheld until the DAC or the approved node has signed off on the dataset's completeness. The PI is entitled to require that access to the data that is uploaded to ATN DAC be initially restricted (i.e. password protected) to only individuals who are approved by that contractor/grantee at their sole discretion. These data are referred to as 'restricted data', and can remain restricted for a period of 18 months after the completion of the study unless otherwise agreed upon by the PI and the Contracting Officer's Representative (COR). Even though restricted access prohibits the public from downloading the data, restricted access data are still open data and therefore cannot be kept from disclosure in all cases. Summaries of track and detection data for satellite, archival and acoustic tags will be displayed on the DAC web portal to enable public discovery and anticipate the public availability of publicly funded open data.

E. Final Report (Task 5)

Results, including any data analyses, shall be incorporated into the Review (Task 2) to create a Final Report. The Draft Report shall be submitted within three years, nine months. BOEM shall provide comments within 30 days. The Final Report with all revisions shall be due within four years. An EndNote library will be submitted with the Final Report. A technical summary will

accompany final deliverables.

F. Presentation of Results (Task 6)

In collaboration with the BOEM principal investigator, the recipient must present the results of this study at an appropriate scientific conference before the end of the agreement.

G. Education (Task 7)

A classroom lesson and materials will be prepared and distributed to regional schools before the end of the agreement.

ESPIS data will be submitted to the COR as a final deliverable of the study to include the:

- 1) Final Report and Technical Summary: the copies of the narratives of study results in both the MS Word and Adobe Acrobat (PDF/A) formats, without any password protections for open access by BOEM staff and the public, following the ESP Report Specifications.
- 2) Study Footprint: the geographic information that enables the referencing of the study using a GIS, following the study footprint specifications;
- 3) Study Footprint Metadata: the scientific attribution information required to enhance discoverability of the study in the ESPIS system and third party sites (such as data.gov), following the study footprint metadata specifications;
- 4) Study Map: the study area map embedded in the i. Final Report, and ii. Technical Summary that depicts the study footprint and that is cited in the study footprint metadata;
- 5) FGDC compliant metadata for each scientific dataset: the scientific, technical, and administrative information for each coherent unit of scientific data, including the physical medium, file information, volume, and access URL, when applicable;
- 6) Copy of related publications: the manuscripts of scholarly publications and conference presentations for research funded by this [contract/ agreement] for free and unlimited use by BOEM staff, which may take the form of a full-text, final, pre-publication copy of the related publication in cases that the publisher enforces pay for access or copyright restrictions.
- 7) Bibliographic information for related publications: the information on each related publication needed for formatting CSE bibliographies using the name-date system, including the URL and Digital Object Identifier to access the publication on the publisher's website, when applicable.

Please refer to the BOEM website for more guidance on the ESPIS requirements:

<https://www.boem.gov/ESP-Data-and-Information-Specifications/>

External communications: All external communications will be coordinated with each agencies staff.

Scientific Integrity: Scientific integrity is vital to Department of the Interior (DOI) activities under which scientific research, data, summaries, syntheses, interpretations, presentations, and/or

publications are developed and used. Failure to uphold the highest degree of scientific integrity will result not only in potentially flawed scientific results, interpretations, and applications but will damage DOI's reputation and ability to uphold the public's trust. All work performed must comply with the DOI Scientific Integrity Policy posted to <http://www.doi.gov>, or its equivalent as provided by their organization.

7. DELIVERABLES SCHEDULE AND DISTRIBUTION

Deliverable products shall be submitted to the e-mail addresses shown below in accordance with the following schedule. If the recipient encounters or anticipates difficulty in meeting the delivery schedule, the COR will be notified in writing of the reasons for the delay and the projected revised delivery dates. Any other related effects of project delay will also be summarized.

Deliverable	Distribution	Due Date
A. Quarterly Progress Reports	One electronic copy to: COR CO Chief, DES DES Contact	At the end of each fiscal quarter.
B. Project Management Plan	One electronic copy to: COR	Draft within 20 days Final within 44 days
C. Literature Review and Methods Proposal	One electronic copy to: COR	Within 6 months
D. Data and Models	One electronic copy to: COR	Within 3 years, 9 months
E. Final Report	One electronic copy to: COR Chief, DES DES Contact CO Transmittal letter only	Draft within 3 years, 9 months Final within 4 years

F. Presentation of Results	<p>Presentation at Scientific Meeting (coordination with COR; paper sent electronically to COR, CO, Chief, DES, DES Contact)</p> <p>Outreach to fishing industry</p>	Before end of agreement
G. Education	<p>One electronic copy to: COR</p> <p>DES Contact</p> <p>Outreach to K-12 school</p>	Before end of agreement

ADDRESSES FOR DELIVERABLES

<u>Contracting Officer's Representative (COR)</u> Deena Hansen Bureau of Ocean Energy Management 760 Paseo Camarillo Camarillo, CA 93010 Email: Deena.Hansen@boem.gov	<u>Contracting Officer (CO)</u> Dominique Bruce-Morton Bureau of Safety and Environmental Enforcement Acquisition Management Division 45600 Woodland Road, VAE-AMD Sterling, VA 20166 Email: dominique.bruce-morton@bsee.gov
<u>Chief, DES</u> Chief, Division of Environmental Sciences Bureau of Ocean Energy Management 45600 Woodland Road, VAM-OEP Sterling, VA 20166 EnvironmentalStudiesProgram2@boem.gov	<u>DES Contact</u> Jacob Levenson Bureau of Ocean Energy Management 45600 Woodland Road, VAM-OEP Sterling, VA 20166 Email: Jacob.Levenson@boem.gov