

Oceans Domain Task Areas

Task Area 1: Studies, Analyses, and Reports

The Contractor shall conduct studies, numerical modeling, assessments, analyses, and reporting, which focus on current and future programs in an effort to understand outcomes, define issues, or highlight problems and areas for improvement. Program studies and analyses will involve developing, evaluating, analyzing, and reviewing coastal and oceans programs and policies that develop strategies and contribute to the state-of-the-science assessments of the climate. Specific emphasis will be focused on identifying and mitigating any Organizational Conflict of Interest (OCI) concerns for any contractors that assist the Government in conducting special studies of NOS operations. The program studies, analyses, and reports will identify and promote the use of best practices in coastal and ocean habitat planning and may be used to inform program modification and redesign. The Contractor shall develop new analytical and quantitative tools, analyze data, and develop a final report of results and recommendations. Program studies, analyses and reports may include, but are not limited to, the following:

- 1.1 Provide collection of coastal and ocean data and information products and perform time series, harmonic, spectral, and other statistical analyses of field data and model-generated data.
- 1.2 Perform 24x7 real-time monitoring and quality control of oceanographic, navigation, and meteorological data collected by sensors deployed in the field to ensure the availability, accuracy, and quality of tide, water level, current and other marine environmental information.
- 1.3 Provide services to investigate and report data problems (inconsistent or questionable readings, changes in sensor status, etc.) utilizing appropriate oceanographic principles, such as inter-comparisons (neighbor checks, observations vs. predictions, etc.).
- 1.4 Provide services to collect, analyze, evaluate, correct, and spectrally combine terrestrial, marine, airborne, and satellite gravity data and support creation of a geoid for use in geodetic control and modeling. Support publishing terrestrial and airborne gravity data for use in geodetic control and modeling.
- 1.5 Provide scientific support to analyze satellite data in support of Coastal and Ocean programs.
- 1.6 Provide data entry, manipulation, verification, quality control, and evaluation of oceanographic, meteorological data, and nautical charting systems.
- 1.7 Process, analyze, control quality, and disseminate data (to include data categorized as sensitive) and derived products from oceanographic, navigation and nautical charting systems, and meteorological data collected by sensors deployed in the field or space.
- 1.8 Develop and support routine state-of-the-science assessments of the climate system for informed decision-making; and provide archeology support to coastal and ocean programs.
- 1.9 Analyze and report on deficiencies in operational systems, evaluate system enhancements, and provide insight into new sensor behavior.
- 1.10 Provide scientific expertise support in of ocean science, biology, physical science, science policy, science project management, and natural resource management disciplines.

Task Area 2: Applied Research, Development, Engineering, and Operations

The Contractor shall provide scientific and engineering expertise to conduct applied research, development, engineering, consulting, and operations to support oceanic and atmospheric research for program managers and policymakers in developing state-of-the-science models, selecting new technologies for development, and determining if further program performance information is needed. The Contractor shall identify and apply appropriate methodologies and research designs needed to test particular technologies or answer a specific research question. The Contractor shall analyze data and develop a final report of results and recommendations. Applied research, development, engineering, consulting, and operations support may include, but are not limited to, the following:

- 2.1 Provide oceanic and atmospheric research support delineating regional ecosystems, promote partnerships at the ecosystem level, and implement cooperative strategies to improve regional ecosystem health to include diving operations.
- 2.2 Provide modeling and analysis, research and development, experiments, data management, findings and interpretive products, coastal ocean assessments and reports, ocean observing, and technical feasibility studies for Coastal and Ocean programs.
- 2.3 Enhance partner development and system engineering to advance integration across participating federal agencies and the Integrated Ocean Observing System (IOOS) Regional Associations.
- 2.4 Provide services for field operations of Remote Operation Vehicles, drop camera, benthic grabs or other technology to characterize the seafloor and associated biota.
- 2.5 Provide scientific services for development and evaluation of new simulation and predictive models to predict species habitat utilization patterns and the advancement of understanding of ecosystems.
- 2.6 Provide advanced technology monitoring and observing systems to expand and enhance the capabilities, such as weather and oceanographic observations, ice forecasts and newscasts, geodetic, hydrographic and topographic surveys, to provide accurate, up-to-date information.
- 2.7 Provide system-wide boat planning and use management; assistance to the Government on new boat construction and acquisition.
- 2.8 Maintain a boat inventory and database; develop safe-operation guidelines and operation manuals; boat maintenance, repair, and services; day-to-day boat operation in near-shore and offshore waters.
- 2.9 Provide vessel support, transportation services and small boats operations related to special science and exploratory expeditions, data collection and ecosystem monitoring in the coastal ocean for all field office operations and on-the-water operations.
- 2.10 Provide installation and maintenance of mooring buoys, boundary markers, instrument moorings, and instrumentation packages, and technical support to the buoy team in preparation, field deployment, field maintenance and retrieval of ReCon System components.
- 2.11 Transfer ReCon data and integrate real-time sensor data into web displays; technical support to the engineering design process based on field and lab data analysis; and conduct sensor interoperability testing comparing ease of integration of existing software to interoperability software.

2.12 Provide Geographic Information System (GIS) services for coastal and ocean resource management and navigation and nautical charting systems.

2.13 Provide technical and analytical services for remote sensing support for coastal and ocean resource management and navigation.

2.14 Provide programmatic and technical support for marine debris projects and research for oceans and coastal hazards.

Task Area 3: Field Sampling, Data Collecting, and Surveys

The Contractor shall conduct field sampling, data collection, and surveys. These services will support program managers in evaluating and employing state-of-the-art-data collection technologies and determine if further sampling and collection is required. Surveys may require Contractors to identify and apply appropriate evaluation methodologies and research designs needed for a particular program or answer a specific research question. The Contractor shall analyze data and develop final reports of results and recommendations. Additionally, collection may require accessing databases from appropriate sources, constructing databases, and consulting with other experts as required. Field sampling, data collecting, and surveys may include, but are not limited to, the following:

3.1 Provide services in the design, installation, and maintenance of field data collection and field condition monitoring platforms and programs and the collection of field data, which may include, but is not limited to, diving in relation to work in marine archeology, research coordination, scientific research, and buoy operations, and environmental monitoring. All diving must adhere to OSHA Diving Regulations.

3.2 Provide and assist in the design and implementation of coastal and ocean-related social science tools and methods, including, but not limited to, surveys, interviews, and focus groups.

3.3 Analyze (using both quantitative and qualitative methods) and report socio-economic data that results from coastal and ocean social science based inquiries.

3.4 Provide analytical and operational services to collect, process, and document full-scale coastal and ocean data. Data will be included as part literature to be published in scientific journals.

3.5 Collect, develop, integrate, map, and analyze Geospatial data for use in coastal and ocean resource management and navigation and nautical charting systems, as well as update and maintain geodetic models and classification of shoreline elements.

3.6 Collect biological and physical samples for chemical characterization and histopathological analysis.

Task Area 4: Consulting and Program and Project Management

The Contractor shall provide consulting, program and project management services to assist in program execution, improvements and measurements. Services may include redesigning and improving the quality of the performance measurement process, performance data, and the system and method by which data are collected. Activities may include collection and analysis of program data; field observation reports; advice concerning improvement of agency measurement systems, disseminating these methods to other Government agencies and interested organizations; developing assessments, reports, and plans, logistics support,

technical training, conducting independent reviews and education and outreach activities. The consulting, and program and project management services may include, but are not limited to, the following:

- 4.1 Provide services to the Government with strategic planning, policy development, project programming, congressional affairs, and budgeting system support to designated programs.
- 4.2 Provide assistance to the Government with planning, developing, and implementing Government quality assurance programs and/or Quality Management Systems. Develop strategies for improving the quality of climate observations, analyses, interpretation, and archiving.
- 4.3 Provide quality assurance support for acquiring, describing, and maintaining archived coastal and ocean data and data products, metadata, and related information.
- 4.4 Provide assistance to the Government with developing and coordinating NOAA's homeland security-related plans, programs, and policies to enhance NOAA-wide program response, risk management, continuity of operations, and other contingency planning and program infrastructure.
- 4.5 Provide assistance to the Government with evaluation, analysis and review of Coastal and Oceans programs, management policies and guidance, technical assistance, review and comment for ongoing or planned environmental assessments National Environmental Policy Act (NEPA).
- 4.6 Develop instructions, guides, procedures, and processes for operating, maintaining, and configuring oceanographic, navigation and nautical charting systems, and meteorological systems.
- 4.7 Develop, test, implement, and quality control of processes and procedures for collecting coastal and ocean data.
- 4.8 Support document development for requirements, business analysis, and design specifications for oceanographic, navigation, and meteorological systems.
- 4.9 Provide assistance to the Government with administrative and technical support to the formulation and management of multi-year budgets, development of budget strategies, collection and analysis of financial data, cost collection and estimating, and developing spend plans, cost tracking and reporting systems.
- 4.10 Support the development and maintenance of software for the operation of budget formulation databases and for producing tracking and reports.
- 4.11 Provide assistance to the Government with financial services support to NOAA programs including but not limited to Interagency Agreements, grants, and other federal funding opportunities.
- 4.12 Provide assistance to the Government with coordinating facility access and security requirements.
- 4.13 Provide communication, external requests for information, and outreach projects support including document development, editing and graphic art services. Services may include design, layout, word processing, copy-editing and photocopying of reports, materials, brochures, or other printed or electronic materials. Graphic services, including graphic artists, preparation of graphs based on the analysis of technical data and in the preparation of flyers, posters, pamphlets, covers, logos, promotional materials, and end-to-end video services.

4.14 Provide assistance to the Government with programmatic and financial technical assistance to place-based Coastal and Oceans programs.

4.15 Provide assistance to the Government with the development of economic guidelines and standards, and points of view used in forecasting trends and formulating economic policy. Formulate recommendations, policies, or plans to address economic problems or to interpret relevant markets.

Task Area 5: Capacity Building

The Contractor shall provide products and services to support enhancing external coastal audiences' knowledge and skills.

5.1 Provide technical training for coastal professional audiences, including instructional design and materials to incorporate adult learning theory and technologies.

5.2 Provide education information focused on ocean and estuarine literacy related to NOS mission, for K-12, community members and teacher audiences, including learning networks, and instructional design to incorporate educational and instructional theory and technologies.

5.3 Provide technical assistance to address coastal and ocean management issues, providing support on products and services and working directly with local communities.

5.4 Provide logistical and programmatic support for designing and delivering collaborative processes and facilitation support.

5.5 Develop, implement and coordinate NOAA fellowship programs.