



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Coastal Services Center
2234 South Hobson Avenue
Charleston, South Carolina 29405-2413

MEMORANDUM FOR: File NA17RJ1231 (JIMO) - SCCOOS

FROM: Margaret Davidson
Director, NOAA Coastal Services Center

SUBJECT: Categorical Exclusion for the Southern California Coastal Ocean Observing System (SCCOOS) Project, an amendment to Grant Award NA17RJ1231, awarded to Scripps Institution of Oceanography through the Joint Institute for Marine Observations (JIMO)

DATE: 1 July 04 (update of 14 June 04 file memo)

Introduction-

NOAA's Environmental Review Procedure, NAO Section 216, requires all proposed projects to be reviewed with respect to environmental consequences on the human environment in accordance with the National Environmental Policy Act (NEPA, 40 CFR 1500-08). This memorandum addresses the application and requirements of NAO Section 216 and NEPA and the appropriate issuance of grant award number NA17RJ1231 to Dr. Orcutt, of the Scripps Institution of Oceanography.

Description of project-

Grant number NA17RJ1231 would award the Scripps Institution of Oceanography approximately \$1,949,217 to conduct and manage a pilot project entitled, "Southern California Coastal Ocean Observing System (SCCOOS): Shelf to Shoreline Observatory Development". The goals of SCCOOS are to develop and coordinate individual institutional and state and federal efforts to create an integrated, multidisciplinary coastal observatory in the Southern California Bight. The SCCOOS consortium consists of eleven Southern California universities and laboratories that surround the Southern California Bight. In its present form, Scripps Institution of Oceanography is acting as the central contracts, grants, and management office for SCCOOS. Information collected through the most reliable and most efficient technologies for monitoring and predicting vital characteristics of the state's coastal waters will be provided to the public for the benefit of improving the management of the state's coastal regions. The pilot project proposed by members of SCCOOS will be to collect, integrate, and make available valuable oceanographic data that is presently being collected and managed by multiple agencies interested in the marine environment and

implement and evaluate new sensor technologies. The SCCOOS pilot project is designed to supplement the data where needed and to improve the utility of the collected data.

The SCCOOS objective is to integrate the extensive data taking by dischargers, regulators, managers, and researchers, to utilize the data more efficiently, and to create models that will describe and predict ocean characteristics. The benefits from SCCOOS will include real-time observations, model/data-based forecasts, and a flexible information distribution system, which will provide critical information to users.

A. *Data Provided by Consortium Members*

A growing number of consortium members are maintaining programs that will contribute to the SCCOOS Program. These programs include compliance monitoring efforts driven by local NPDES permit holders, local health agencies, the California Cooperative Oceanic Fisheries Investigations (CALCOFI), the Coastal Data Information Program (CDIP), the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), HF radar networks, shore stations, and mooring arrays operated by SCCOOS partners, and federally sponsored backbone activities such as the National Data Buoy Center (NDBC) and National Weather Service (NWS).

Data resulting from consortium members' efforts will contribute to outreach programs and for assisting state and federal needs concerning, for example, water quality, safety, and coastline management.

B. *Proposed Data Collection*

The SCCOOS pilot project will undertake the following tasks for collecting new data over the 3-year period of performance outlined in the proposal:

- (1) Install and maintain three (3) shallow-water, multidisciplinary moorings off Santa Barbara, Santa Monica, and La Jolla for the testing and evaluation of new bio-optical sensors. In addition, the existing physical oceanographic moorings designed for measurement of currents and ocean temperatures will be supported by the pilot project in the Santa Barbara Channel.
- (2) Deploy and recover commercially available GPS tracked drifters in the field of view of existing and proposed HF current mapping radars.
- (3) Observe nearshore surf-zone circulation and wave transformation modeling.
- (4) Build and deploy buoyancy controlled underwater gliders on two transect lines. The lines will be offshore San Diego and Los Angeles.
- (5) Deploy a REMUS AUV in the nearshore region of Southern California with optical sensors.
- (6) Deploy a commercially available, 150 kHz side scan sonar from a mooring to test methods of fish stock assessment and recruitment rates.
- (7) Purchase and operate two (2) long-range HF radar systems from the CODAROS Company. Tentative sites identified for this effort include San Diego and San Clemente Island.
- (8) Operate a commercially available 500Hz – 16kHz 'chirp' sonar in regions where data collection is required.

- (9) Extend the CALCOFI program inshore to complement discharge agency hydrography. In addition, the genetic analysis of Rockfish will be conducted to assess species distribution.

These enumerated methods of data collection, which will be funded under this grant award, will be managed by SIO and/or a number of SIO subcontractors.

C. Data Utilization

In addition to data collection, the SCCOOS pilot project will undertake the following tasks for utilizing new data over the 3-year period of performance outlined in the proposal:

- (1) Develop and operate a real-time, data assimilation and modeling system for the Southern California Bight.
- (2) Continually acquire, distribute, and generate new products from remote sensing data from NASA and NOAA satellites.
- (3) Assemble and integrate existing bathymetry and sub-bottom data sets for Southern California Bight.
- (4) Develop and deploy a data management and data distribution system to integrate both SCCOOS and non-SCCOOS consortia data for open and rapid distribution.

Effects of the Project-

The environmental effects of the SCCOOS pilot program project will be limited to the deployment system of three (3) moored sensors. The mooring systems, each consisting of a steel chain and railroad wheel, will not significantly damage the environment and collectively, would cover no more than twenty-two square feet of bottom area.

A moored, 150 kHz side scan sonar and two (2) Doppler radars for monitoring ocean currents and waves in the California Bight will emit ultrasonic sound waves which have never been known to cause significant effects in the environment. The chirp sonar emits audible sound, which also is not known to significantly affect the environment. The remaining sensors and radars, such as the GPS and depth meters, which may utilize radio-frequency signals, likewise have never been known to pose any environmental effect and are considered standard oceanographic equipment routinely used by NOAA and other federal agencies.

Autonomous platforms (gliders, drifters, AUV) will carry environmentally benign sensors such as current, temperature, and depth meters that do not affect the environment. Deployed equipment and sensors will be recovered upon the respective completion of data collection. All instruments, platforms, and deployable machinery will be operated and deployed in a manner consistent with local and State rules and regulations.

Addition to File Memo (1 July 04)

A 14 June 04 version of this letter and NEPA CE checklist was sent to Steve Kokinakis for review. A request was returned for additional information regarding operating characteristics of the moored side scan sonar and the chirp sonar. In addition, the FPO also requested that

the applicant supply information regarding existing permits relevant to work proposed in the application. In response, the applicant provided the following:

- Copy of a Sept 2002 letter from the US Coast Guard granting approval to the University of California for a “private” mooring in Santa Monica Bay;
- Performance characteristics of the side scan sonar and chirp sonar (see table and associated text below)
- A proposal from the US Geological Survey to the National Marine Fisheries Service to use an acoustic sediment profiler in waters around the Hawaiian Islands (includes descriptions of potential incidental harassment of marine mammals in the Hawaii region);
- Copy of a Sept 2001 letter from Donald Knowles, Office of Protected Species (NOAA/NMFS), granting approval to Walter Barnhardt of the US Geological Survey to operate an acoustic sediment profiler (a boomer system) in Hawaiian waters;
- Copy of a October 2002 letter from Dave Hogg (USGS) to Donald Knowles, Office of Protected Species (NOAA/NMFS), requesting permission to use the chirp sonar system (and other) off the California Coast in the area of San Diego (letter include description of chirp sonar operating characteristics reproduced in table below)

The following table and provides performance characteristics of the side scan sonar and the chirp sonar proposed for use in the application:

Type of Acoustic Device	Type of Deployment (Mooring, AUV, etc)	Operating Frequency Spectra	Source Level	Operational Cycle (time)	Deployment Duration	Location
Acoustic Scanning Fish Finder	1 Mooring	200 kHz	210 dB	1 Hz	3 Years	La Jolla
Chirp Sonar	Ship Transects (MELVILLE RV)	3.5 - 12 kHz	198 dB	10-50 ms pulse widths; 0.2-1 second reps.	Month-long (2x)	Between Dana Point and La Jolla

The following text provides additional description of the performance characteristics of the chirp sonar proposed for use in the application (from a October 2002 letter from Dave Hogg (USGS) to Donald Knowles, Office of Protected Species (NOAA/NMFS), requesting permission to use the chirp sonar system (and other devices) off the California Coast in the area of San Diego):

“The Edgetech 512I Chirp is a high resolution seismic system. The system is towed either at the water surface or slightly submerged, depending on the application and water depth. The 512I has a sound pressure level (SPL) of 198 dB re 1_ Pa-m RMS. It has a frequency range of 500hz to 16kHz with pulse widths from 5 ms to 50 ms depending on the application. Using

the center frequency of 5.75 kHz the estimated zone of impact at 160 dB including absorption calculations (Richardson et al., 1995, p.73) is 75 meters and at 180 dB is 8 meters.”

Categorical Exclusion-

A categorical exclusion (NAO 216-6) is appropriate in the implementation of the SCCOOS Program because the proposed action has been evaluated and determined to fall into a category of action that will not individually or cumulatively have significant impact on the quality of the human environment as defined in the NEPA (40 CFR 1508.27). Furthermore, the proposed action is not new, does not concern extraordinary circumstances, does not involve controversial potential environmental impacts, nor does it comprise a management plan.

As defined in Sections 6.03c3 (a) and (i) of NAO 216-6, the proposed action is, in part, a “Research Program” and, in part, an “Action Not Having Significant Environmental Impact”.

A. Section 6.03c3 (a) of NAO 216-6

Those activities enumerated above under “B. Proposed Data Collection” are appropriately defined as an environmental monitoring program conducted with a variety of gear (satellite and ground-based sensors, fish nets, etc.) in the marine environment and, therefore, categorically excluded from further Environmental Assessment by Section 6.03c3 (a) of NAO 216-6, which states:

“(a) Research Programs. Programs or projects of limited size and magnitude or with only short-term effects on the environment and for which any cumulative effects are negligible. Examples include natural resource inventories and environmental monitoring programs conducted with a variety of gear (satellite and ground-based sensors, fish nets, etc.) in water, air, or land environs. Such projects may be conducted in a wide geographic area without need for an environmental document provided related environmental consequences are limited or short-term.”

The nine methods of data collection, whether considered individually or cumulatively, are limited to discrete areas of the Southern California Bight and represent brief data samplings having small magnitude. More particularly, the sensors, drifters, and radar at issue do not harm the environment significantly or produce short-term, cumulative, or long-term effects. Any possible effects will be isolated to benthic areas scanned by side scan and chirp radar and these effects will be short-lived and insignificant, as the effected benthos will withstand or rejuvenate immediately after exposure to energy of radio frequencies. Radio frequencies of the ranges proposed are not known to cause harmful effects in animals or plant structures.

B. Section 6.03c3 (i) of NAO 216-6

Those activities discussed above under “C. Data Utilization” are categorically excluded from further Environmental Assessment by Section 6.03c3 (i) of NAO 216-6:

“(i) Other Categories of Actions Not Having Significant Environmental Impacts. These actions include: routine operations and routine maintenance, preparation of regulations, Orders, manuals, or other guidance that implement, but do not substantially change these documents, or other guidance; policy directives, regulations and guidelines of an administrative, financial, legal, technical or procedural nature, or the environmental effects of which are too broad, speculative or conjectural to lend themselves to meaningful analysis and will be subject later to the NEPA process, either collectively or case-by-case; activities which are educational, informational, advisory or consultative to other agencies, public and private entities, visitors, individuals or the general public; actions with short term effects, or actions of limited size or magnitude.”

The remainder of proposed activity consists of communication and collaboration between consortium members, data manipulation and analysis, such as computer-modeling, as well as, engaging all consortium members in outreach programs and data distribution. Accordingly, the remainder of activity is technical in nature and is cumulatively, an ‘Action Not Having Significant Environmental Impacts’.

Lastly, and for clarification, those activities discussed above under “A. Data Provided by Consortium Members” are presently independently managed and funded by government and other agencies and, therefore, not governed by NAO 216.

In Conclusion-

The preparation of an Environmental Assessment or Environmental Impact Statement is required for proposed actions that would involve extraordinary circumstances, such as a geographic area with unique characteristics, are subject of public controversy based on potential environmental consequences, have uncertain environmental impacts or unique or unknown risks, establish a precedent or decision in principle about future proposals, may result in cumulatively significant impacts, or may have any adverse effects upon endangered or threatened species or their habitats. The SCCOOS Program, however, does not involve any extraordinary circumstance and does not raise the potential for significant environmental impact under NEPA (40 CFR 1508).

Accordingly, the SCCOOS Program, as presented in this application, should be categorically excluded from the need to prepare an Environmental Assessment or Environmental Impact Statement.

Categorical Exclusion Checklist for Non-Construction National Oceanic and Atmospheric Administration Grants

The purpose of this checklist is to assist National Oceanic and Atmospheric Administration's (NOAA) responsible program managers (RPMs) in determining if the grant(s) they are proposing qualifies for categorical exclusion status under NOAA's National Environmental Policy Act (NEPA) guidelines. Normally, NOAA grants qualify for categorical exclusion from NEPA requirements when the environmental effects are minor or negligible. However, as stated in NOAA's guidelines for implementing NEPA (NAO 216-6; <http://www.rdc.noaa.gov/~nao/216-6.html>) at 5.05.c, under certain conditions, preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) is required for proposed grants when 1) a grant program is entirely new; 2) under extraordinary circumstances in which normally excluded actions may have a significant environmental impact; or 3) potential impacts associated with the grant are highly controversial. By answering the questions in this checklist, the RPM can determine whether the effects of the grant qualify for categorical exclusion, or require further NEPA documentation in the form of an EA or an EIS. This checklist should be filled out for a grant which is not automatically determined to require an EA or EIS in order to establish compliance with administrative record requirements regarding categorical exclusions (CEs).

NOAA Grant Program: NOAA Coastal Services Center
 - Coastal Observation Technology System Projects
 - Coastal & Ocean Observing System Pilot Projects

Please provide answers to the following questions:

1. Identify:
 - NOAA Award Number: NA17RJ1231
 - Award Recipient: Dr. Orcutt, of the Scripps Institution of Oceanography
 - Project Title: Southern California Coastal Ocean Observing System: Shelf to Shoreline Observatory Development

2. Attach a brief (.5 page), but specific project description, including: geographical location, and the goal and scope of project, and activities that should be considered in a NEPA assessment.

3. Does the grant involve any federal permits, or other federal agency direct involvement, activity, oversight, or funding?
Yes () No (X)

4. Could this NOAA grant have significant effects on public health or safety?
Yes () No (X)

Specifically, will the proposed action:

- Create high levels of noise for an extended period of time?

Yes () No (X)

- Have long or short term aesthetic effects, e.g., visual effects or effects on scenery?
Yes () No (X)

- Require large amounts of outdoor lighting or create any unusual odors?
Yes () No (X)

- Require large amounts of water or electricity for an extended period or time?
Yes () No (X)

- Have long or short term effects on the transportation infrastructure, or create a significant increase in local traffic?
Yes () No (X)

5. Could this NOAA grant have significant adverse impacts on any geographic area(s) with unique characteristics? Areas to consider include coral reefs, marine protected areas, marine sanctuaries, essential fish habitat, historic or cultural resources, park or refuge lands, wild or scenic rivers, wetlands, or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks, or listed or eligible for listing on the National Register of Historic Places.
Yes () No (X)

Specifically, will the proposed action:

- Degrade or disturb coral reefs?
Yes () No (X)

- Degrade or disturb previously undisturbed areas?
Yes () No (X)

- Affect any areas such as wetlands and flood plains?
Yes () No (X)

- Disturb archaeological or historic resources?
Yes () No (X)

8. Could this NOAA grant have highly uncertain and potentially significant environmental effects or involve unique or unknown risks?
Yes () No (X)

Specifically, will the proposed action:

- Potentially result in the introduction or spread of a nonindigenous species?
Yes () No (X)

- Involve aquaculture activities that could result in the introduction or spread of invasive

or non-indigenous species?

Yes () No (X)

- Significantly impact water resources such as surface or groundwater?

Yes () No (X)

- Significantly contribute to water degradation or impairment?

Yes () No (X)

- Generate large amounts of hazardous waste or any toxic waste?

Yes () No (X)

- Emit dangerous levels of ionizing or nonionizing radiation?

Yes () No (X)

- Result (directly or indirectly) in the generation of large amounts of air pollution?

Yes () No (X)

9. Could this NOAA grant have adverse effects on species listed or proposed to be listed as Endangered or Threatened, or have adverse effects on designated critical habitats?

Yes () No (X)

10. Will this grant threaten to violate a Federal state, local, or tribal law imposed for the protection of the environment?

Yes () No (X)

11. Will this NOAA grant have highly controversial environmental effects (i.e, are the effects likely to be subject to serious scientific dispute)?

Yes () No (X)

IF YES WAS CHECKED FOR ANY OF THE ITEMS ABOVE: Please list the item number, provide additional information about anticipated effects, and contact the NEPA Coordinator at NOAA's Office of Strategic Planning (301-713-1622) as soon as possible to discuss alternatives for providing NEPA documentation.

IF NO WAS CHECKED FOR ALL OF THE ITEMS ABOVE: The grant activity may qualify for a Categorical Exclusion (CE).