

UNOLS CHARTER

Effective October 15, 2010

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1. INTRODUCTION

Recognizing the need for coordinated use of federally supported oceanographic facilities, the community of academic oceanographic institutions, that uses and operates those facilities, by virtue of this Charter, does hereby establish an organization of academic oceanographic institutions. The organization shall be named the University-National Oceanographic Laboratory System (UNOLS). UNOLS is solely an advisory body.

Execution and enforcement of its recommendations are matters for member institutions and for agencies, which fund the construction and operation of UNOLS facilities.

2. OBJECTIVES

An objective of UNOLS is to coordinate and review the access to and utilization of facilities for academic oceanographic research, and the current match of facilities to the needs of academic oceanographic programs. UNOLS makes appropriate recommendations of priorities for replacing, modifying or improving the numbers and mix of facilities for the community of users. Another objective is to foster federal and other support for academic oceanography, thereby continuing and enhancing the excellence of this nation's oceanographic program. Emphasis is placed on ships and other seagoing facilities.

3. MEMBERSHIP

a.) Eligibility: Membership in UNOLS is open to those institutions that use, or operate and use, sea-going facilities and maintain an academic program in marine science. It is intended that UNOLS institutions make substantial contributions to the national oceanographic program. Both individual institutions and consortia of such institutions may be members of UNOLS for purposes of attending UNOLS meetings, receiving UNOLS information, and other non-voting UNOLS activities. However, on any matter

requiring a vote of the UNOLS membership either the member consortium may cast a ballot or individual member institution(s) within the consortium may cast ballot(s), but not both. In the event that any consortium and one or more of its constituent institutions disagree as to the voting option to be exercised in any matter, only the ballots of individual institutions within that consortium shall be accepted on that matter. The choice of individual or consortium voting may be exercised independently on each voting matter and by each consortium and its constituent institutions. In the remainder of this charter the word "institution" means "individual member institution or member consortium" except where otherwise noted. Each UNOLS institution shall designate a representative with authority to speak and act for the institution in UNOLS matters. UNOLS representatives may authorize alternates. Addition of members shall be by application to and majority action by the existing membership. Membership may be voluntarily terminated by any member on written notice to the Chair. In extraordinary instances, an institution's membership may be involuntarily terminated by two-thirds vote of the UNOLS membership. The UNOLS Council periodically shall review the list of UNOLS institutions. It shall recommend to UNOLS additions, status changes, and terminations. Changes shall be considered at a regular UNOLS meeting and require a vote of the UNOLS membership present or by proxy if absent.

b.) Operator Institutions: All institutions, having satisfied the criteria for membership and having been selected, are designated as UNOLS institutions. Those UNOLS institutions that operate UNOLS vessels or National Oceanographic Facilities (Annex II) are, in addition, designated as operator institutions. UNOLS vessels and National Oceanographic Facilities are designated by the UNOLS Council. UNOLS vessels are those United States research vessels generally operated in support of national oceanographic research programs, by academic or other non-profit institutions and are significantly funded by the federal government. They are operated in accordance with UNOLS safety standards, subject to regular, recognized ship inspection programs, scheduled by established UNOLS procedures and meet cruise reporting, cruise assessment, cost accounting and performance standards according to UNOLS uniform practices. UNOLS vessels and National Oceanographic Facilities are regularly available to users outside of the operator institution provided that funding is available from the sponsor of the research or from the user. The list of designated UNOLS vessels shall be reviewed regularly for additions or deletions by the UNOLS Council giving consideration to the above criteria and taking into account the objectives of UNOLS in section 2.

If the Council denies an application for UNOLS vessel or National Oceanographic Facility designation, the applicant shall be notified. They shall have the opportunity to reapply in accordance with the procedures described in the "Guidelines for Requesting/Becoming a UNOLS Vessel."

4. ORGANIZATION

a.) Overview: The UNOLS organization shall include an elected Chair and Chair-Elect, a UNOLS Council, and Committees for ship scheduling, fleet improvement, research vessel operations, and other committees as required and established by the UNOLS Council and the UNOLS Office.

b.) UNOLS Chair: The Chair represents UNOLS throughout the oceanographic community, calls and presides over UNOLS meetings, chairs the UNOLS Council and Executive Committee, in consultation with the UNOLS Council, appoints other committees and provides direction and oversight to the Executive Secretary and the UNOLS Office.

c.) Chair-Elect: The Chair-Elect supports the Chair in representing UNOLS throughout the oceanographic community and acts, in the Chair's absence, in calling and presiding over meetings, in the UNOLS Council and with regard to UNOLS appointments, direction and oversight. The duties of the Chair-Elect shall include preparing to assume the office of Chair under the schedule set forth in section 5b.

d.) Immediate Past Chair: The office of Immediate Past Chair is to be occupied by the previous Chair under the schedule set forth in section 5b. The post of Immediate Past Chair is intended to bring the experience of that individual to bear on UNOLS issues. The Immediate Past Chair participates in UNOLS activities and meetings with the same rights and responsibilities as a regular Council member.

e.) Council: The UNOLS Council represents and acts on behalf of the UNOLS membership as the operating and governing body of UNOLS. It monitors UNOLS activities, giving attention to the effective use of available oceanographic facilities and determining the performance of UNOLS institutions in providing access to federally supported facilities for scientists from other institutions. It evaluates the need for replacement and additional facilities and assesses whether facilities are outmoded or in excess of current needs. It considers and makes recommendations to funding agencies regarding the needs for specialized facilities or new concepts in facilities and the balance between facilities and funded research programs. It accepts charges from funding agencies for special studies and reviews, and shall make recommendations based on its findings. It assists funding agencies in efforts to obtain adequate and uniform financial data and post-cruise reporting of ship operations. It counsels in the formation of and appointments to UNOLS committees, and provides oversight to them. The UNOLS Council shall fully and faithfully report to the UNOLS membership and to sponsoring agencies on its actions, activities and plans. Reports shall include an annual summary report delivered at the annual UNOLS meeting, reports of Council meetings and special reports on important actions or activities.

The UNOLS Council consists of ten elected members, including the UNOLS Chair, Chair-Elect, Immediate Past Chair, two members from UNOLS operator institutions, two from UNOLS institutions other than facility operators, and three from among candidates affiliated with any UNOLS institutions. The Chairs of the Ship Scheduling Committee, the Fleet Improvement Committee, the DEep Submergence Science Committee, the Research Vessel Operators' Committee, the Research Vessel Technical Enhancement Committee, the Arctic Icebreaker Coordinating Committee, the Scientific Committee for Oceanographic Aircraft Research, Marcus Langseth Science Oversight Committee, and the Ocean Observing Science Committee (Annexes I-X) serve, ex-officio, as fully participating, voting members of the Council. No more than one elected member of the UNOLS Council shall serve from any one institution. If, during an elected member's term, that individual's status changes so that the eligibility criteria are no longer satisfied, that individual shall lose membership on the Council. If any elected member of the UNOLS Council misses three consecutive meetings, that individual shall lose membership on the Council.

The UNOLS Council shall meet in-person as well as by web/phone conferencing. A quorum for the UNOLS Council meetings (in-person and web/phone) requires one more than half of all Council members and must include at least five elected members. Council decisions are reached by majority vote of members voting, provided a quorum is represented at the time of the vote.

If a matter requires a discussion and vote by the Council but sooner than the next scheduled meeting, a discussion and vote of the matter by correspondence (e.g., electronic mail) may be held. A vote taken by correspondence will require a quorum (as defined in the previous paragraph) and will be in accordance to the same voting rules as for regular votes except that the motion introduced for voting will not require a second to the motion. Ballots may be submitted by correspondence, fax or email to the UNOLS Office, where the count shall be compiled by the Executive Secretary and reported to the Council.

f.) Unexpired terms: If a Council member fails to complete his/her term for any reason, a replacement member meeting the same eligibility requirements shall be appointed by the Chair, subject to approval by a majority vote of the Council, with a quorum participating. This vote may be conducted by correspondence unless a scheduled Council meeting is to take place within one month of the vacancy arising, in which case the vote shall be conducted at that meeting. Should the unexpired term be that of the Chair, the Chair-Elect shall become Chair for the remainder of the Chair's term and shall then appoint a new Chair-Elect under the foregoing procedure. Persons filling an unexpired term shall not have the duration of the unexpired term counted toward any term limits specified elsewhere in this charter.

g.) Committees: Committees are established for such special purposes as decided by the UNOLS Council. These Committees address issues as set out in their terms of reference. Their recommendations to funding agencies shall be delivered through the UNOLS Council or Executive Committee. All such committees are UNOLS committees. Permanent or standing committees shall be established by vote of UNOLS members, and then formed by the UNOLS Chair in consultation with the UNOLS Council. Special purpose or temporary committees may be established and formed by the UNOLS Chair and Council on their own authority. Committees function under terms of reference adopted by the Council.

Committee Chairs and members are appointed by the UNOLS Chair with approval of the Council, unless otherwise specified in a Committee's terms of reference. Terms of reference for permanent or standing Committees are adopted as annexes to the Charter.

UNOLS Committees shall remain in effect for no longer than three years, after which time they shall be dissolved unless they are reaffirmed by the UNOLS Council. The Council shall review all Committee's terms of reference and activities as a basis for affirmation, change or dissolution.

h.) UNOLS Office and Executive Secretary: A UNOLS Office shall be established for the purposes of providing staff support and secretariat services to UNOLS, the UNOLS Chair, Council, Executive Committee and other Committees as directed. The Office shall serve as a focal point for UNOLS correspondence and for central files on facilities, schedules, user requirements and related information. The Office shall advertise, arrange, support and report on UNOLS, Council and Committee meetings. It shall arrange and manage contracts for blanket services to the UNOLS fleet and UNOLS institutions under guidance from the Chair and Council, and at the behest of sponsoring agencies.

The UNOLS Office shall normally be established at a UNOLS operator institution. It is expected that the UNOLS Office will rotate among UNOLS institutions. The UNOLS Chair, with the UNOLS Council, shall review UNOLS Office performance and activities prior to the completion of the first five-year term (or at intervals controlled by the duration of funding grants or agreements). Based on this review, the Council shall recommend whether or not to renew the host institution for a second term. The Office may, if so suggested by review, be moved after five years. The Office should not remain at a single institution for more than ten years, except under extraordinary circumstances.

The UNOLS Office shall be headed by the Executive Secretary, an employee of the institution hosting the UNOLS Office. The Executive Secretary, while administratively an employee of the host institution, shall act under direction from the UNOLS Chair and Council. If it is necessary to select or replace the Executive Secretary, open competition for a host institution shall be held concurrently. The Executive Secretary is responsible for all UNOLS Office functions and other UNOLS duties as directed by the UNOLS Chair and Council. It is expected that the Executive Secretary will be thoroughly familiar with the operation and scheduling of academic research vessels and with UNOLS and Federal policies related to research vessel and facility operations.

Selection of an institution to host the UNOLS Office and of Executive Secretary shall be by open, competitive process. These selections ordinarily will be made concurrently. The UNOLS Chair shall invite all UNOLS institutions to submit letter proposals identifying their candidate for Executive Secretary and advancing their capabilities for hosting the Office. The Chair, with advice from the UNOLS Council, shall appoint an Evaluation Committee, organized with due regard for UNOLS institutions' interests, for the purpose of recommending the best proposals for host institution and executive secretary. The recommendation from the Evaluation Committee, with the review and consent first of the Council and then of the UNOLS membership, shall be transmitted to the agencies administering the UNOLS Office cooperative agreements and grants. It shall then be necessary for the institution recommended as UNOLS Office host to submit a proposal to the administering agencies. Contractual obligations between the UNOLS institution hosting the UNOLS Office and the funding agencies shall be the responsibility of those organizations.

Costs of operating the UNOLS Office will be federally funded and should be prorated among the funding agencies in accordance with their participation in contract and grant programs with the institutions, or by such other arrangements as may be agreed to by the Federal agencies.

5. PROCEDURES

a.) Membership Voting: Election of UNOLS Officers and UNOLS Council members shall be on the basis of one vote for each UNOLS institution represented. On issues coming before the membership for vote, each UNOLS institution shall also exercise one vote. Except as otherwise specified (e.g., for involuntary termination of membership), matters voted on shall be decided by a simple majority of UNOLS institutions casting votes in person or by proxy. Voting by the membership will ordinarily take place at UNOLS meetings. Two-thirds of the UNOLS operator institutions must be represented to

establish a quorum. Because of the option for consortia or their member institutions to vote as in section 3a, the number that constitutes a quorum may be different for different votes. In extraordinary circumstances, matters may be submitted for vote by the membership at times other than UNOLS meetings. These matters will be submitted by mail or electronic mail, and shall be governed by the same rules for decision and quorum that apply at meetings.

b.) Officers: The UNOLS Chair-Elect shall be elected from among candidates affiliated with any UNOLS member institution. Election for the Chair-Elect shall be for a single term of two years. At the completion of the two-year term, a new Chair-Elect shall be elected; the outgoing Chair-Elect shall become Chair; and the outgoing Chair shall become Immediate Past Chair.

c.) Council: Members of the UNOLS Council shall be elected for three-year terms, staggered so that two or three terms begin each year. Individuals may serve not more than two consecutive terms. Two members shall be elected from among designated representatives of UNOLS operator institutions, two from designated representatives of UNOLS institutions other than operators, and three shall be elected from among candidates affiliated with any UNOLS institution.

d.) Nominations: A slate of candidates shall be prepared for distribution at least 30 days in advance of elections consisting of at least two candidates for each position being considered. This slate of candidates shall be formed by a Nominating Committee, appointed and announced by the UNOLS Chair. The Nominating Committee members shall consist of three members, one from a UNOLS operator institution, one from an institution other than an operator and one from any UNOLS institution.

The Nominating Committee shall issue a call for nominations enumerating the positions to be filled and summarizing the qualifications required for each position. Nominations for the slate may be submitted by anyone affiliated with a UNOLS institution, in writing, to the UNOLS Office or the Nominating Committee. In forming the slate, the Nominating Committee shall give due consideration to the qualifications required for each position, as having different kinds of facilities. Individuals should be chosen to achieve a balance among scientific user disciplines. The Nominating Committee shall also choose individuals who have experience in research at sea, and they will seek to maintain an even representation of scientific user disciplines on the Council. Nominations of additional candidates may also be made from the floor during meetings. Such nominations may be made only by designated representatives of UNOLS institutions, and must be accompanied by the nominee's concurrence and qualifications.

e.) Elections: Ballots for each office on a slate shall be marked by voters in priority order with 1 for first choice, 2 for second choice, etc. If an individual is shown in #1 position on a majority of votes cast, that person is elected. If no individual gains such a majority, the name(s) with the smallest number of #1 marks is eliminated, ballots showing that name in #1 position are renumbered with #2 shifted to #1, #3 to #2, etc., and the entire set of ballots is then recounted. This renumbering and recount process shall be repeated as often as necessary to determine that an individual appears in #1 position on a majority of votes cast. At any iteration of this process, any ballots from which all names have been dropped shall be set aside and not counted as votes cast for purposes of determining the majority. A tie shall be broken by toss of a coin. The Chair shall designate two persons in attendance at the meeting, neither of them a candidate for any office at that election, one to toss the coin and the other to call it in the air.

f.) Meetings: The UNOLS Chair shall convene an annual meeting of UNOLS institutions. The Chair shall form and distribute 30 days in advance an agenda to include annual reports of UNOLS Council and Committee activities and other issues and matters of importance to UNOLS.

The UNOLS Council shall meet in conjunction with each UNOLS meeting and at least one other time annually.

Other UNOLS Committees shall meet as specified in their terms of reference or as necessary to conduct their business within the limitations of available funding.

Notwithstanding any statements specifying numbers and types of meetings in this article of the charter or in other articles or annexes thereof, the UNOLS Council, under its regular voting procedure, may authorize the Executive Secretary to fund a larger or smaller number or extent of meetings of the Council

or of any UNOLS Committee in any given operating year in order to operate within available funds, to respond to support of specific meetings by one or more funding agencies, or to accommodate other such fiscal constraints or opportunities. If in any given year the Executive Secretary finds that the set of meetings enumerated in the charter and its annexes will require more support than is likely to be available, the Secretary shall alert the Council to this situation and recommend appropriate cost reductions or supplemental funding efforts for Council consideration and approval.

Notification of UNOLS, Council and Committee meetings shall be given broad, advance distribution sufficient to assure open response and participation.

g.) Reports: Reports shall be made of the proceedings of all UNOLS, Council and Committee meetings and shall be distributed to UNOLS institutions, Council and Committee participants and funding agencies.

6. AUTHORITY AND POWERS

Recommendations and decisions by UNOLS or any sub-organization thereof are not binding on any member or interested participant thereof. No legal, fiscal or contractual authority is intended, granted or implied under the terms of this Charter.

7. IMPLEMENTATION, AMENDMENTS AND TERMINATION

a.) Amendments: This Charter may be amended, or operative annexes added or deleted, by a vote of two-thirds of UNOLS institutions voting on the matter provided that a quorum as defined in 5a is present or, in case of mail or e-mail votes, submits votes by those methods. The voting matter shall have been submitted to the membership at least thirty days prior to the vote.

b.) Termination: This Charter shall remain in effect for a period of three years after which time it shall be dissolved unless modified or readopted by vote of the UNOLS institutions.

Record of re-adoption and amendments

Originally adopted: September 22, 1971, Palisades, NY

Amended: July 13, 1973, by mailed ballot

Amended and readopted: May 17, 1974, Washington, DC

Amended: May 26, 1976, Washington, DC

Amended and readopted: May 13, 1977, Washington, DC

Amended: May 18, 1979, Washington, DC

Amended: May 29, 1981, Washington, DC

Readopted: October 21, 1981, Washington, DC

Amended: October 26, 1983, Washington, DC

Amended and readopted: May 25, 1984, Washington, DC

Amended: October 23, 1985, Washington, DC

Amended and readopted: October 23, 1987, Washington, DC

Revised and adopted: October 28, 1988, Washington, DC

Readopted: September 15, 1989, Washington, DC

Readopted: September 17, 1992, Washington, DC

Readopted: September 14, 1995, Arlington, VA

Revised and adopted: February 8, 1999, Narragansett, RI

Amended and readopted September 21, 1999, Arlington, VA

Revised and adopted: September 22, 2000, Arlington, VA

Revised and adopted: November 15, 2001, Washington, D.C.

Revised and adopted: October 15, 2004, Arlington, VA

Amended (added Annex IX): October 14, 2005, Arlington, VA

Revised and adopted: October 12, 2007, Arlington, VA

Revised, amended (added Annex X) and adopted: October 15, 2010, Arlington, VA

ANNEX I TO THE UNOLS CHARTER

Ship Scheduling Committee (SSC)

1. INTRODUCTION

An important facet of the UNOLS' activities is the provision of a mechanism to coordinate the use of available facilities. The coordination of ship schedules is the most obvious area where immediate benefits might be gained. An underlying principle of UNOLS is that control of facility operations and scheduling remain the responsibility of the operating institution, with the understanding that UNOLS and UNOLS operating institutions shall make serious efforts to assure that ships and facilities are fully available to all federally-funded users. To assure that ships and facilities are broadly available and that their use is effectively scheduled and coordinated, it is critically important that records of ship-time requests, ships and facilities available, the funding status of proposed ship use and tentative schedules be broadly disseminated in a timely fashion. Ship schedulers and agency representatives shall review the tentative schedules to identify and eliminate double bookings, assure accommodation of all funded science, enhance the effectiveness of facility support and improve the efficiency and economy of the overall fleet schedule. It shall be a responsibility of the UNOLS Council to assess and report on the effectiveness of facility utilization. The Ship Scheduling Committee (SSC) shall serve as the focal point for this coordinating role of UNOLS.

2. PURPOSE

The purpose of the Committee is to serve as a mechanism for the development and coordination of ship schedules in order to assure the most effective, efficient and economic utilization of ships and associated facilities. The Ship Scheduling Committee has its own terms of reference.

3. ORGANIZATION/MEMBERSHIP

The Ship Scheduling Committee membership consists of representatives from each UNOLS operator institution. Representatives of NSF, ONR, NOAA and other sponsoring agencies shall participate in the SSC meetings (in-person and web/phone meetings).

Nominations for the SSC Chair and the SSC Chair-Elect will be reviewed and voted on by the standing SSC. The standing SSC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the SSC Chair and SSC Chair-Elect from the nominations put forward by SSC. Normally the Chair and Chair-Elect will be from opposite coasts (Atlantic/Gulf and Pacific). Terms of office shall be for three years. Under normal circumstances the Chair-Elect will serve one three-year term and then serve one three-year term as Chair for a total of six years maximum. If either cannot fulfill their duties, a substitute will be appointed to finish the term.

The Ship Scheduling Committee Chair, Chair-Elect, UNOLS Executive Secretary and funding agency representatives comprise the membership of the Schedule Review Group.

The Ship Scheduling Committee may establish subcommittees to meet and function on a regional basis, reporting then to the main committee.

4. SPECIFIC TASKS

The Ship Scheduling Committee, supported by the UNOLS Office shall pursue an annual process of schedule development. The process is executed so as to assure effective ship and facility

support to federally-funded investigators, efficient and economic operating schedules for individual ships and the UNOLS fleet and to provide timely information for fleet management to funding agencies, UNOLS ship operators and the research vessel user community. Procedures for schedule development include:

- Collection of ship-time requests both at the operating institutions and at the UNOLS Office
- Exchange of ship-time requests and summaries among all UNOLS institutions and the UNOLS Office
- Development of tentative ship schedules by operating institutions and dissemination among all institutions and the UNOLS Office and the sponsoring agencies
- Meetings to consolidate knowledge of science project and funding status, to compile institution estimates of operating costs, to coordinate ship and equipment schedules and to assure all funded science programs are scheduled

a. Ship-time requests should be submitted electronically using the form available on the UNOLS homepage < <http://www.unols.org> >. This permits automatic distribution to the appropriate operator(s), funding agency and the UNOLS Office. An e-mail copy shall be returned to the PI submitting the request. This form can be printed from the Web and appended to research proposals requesting ship time. Ship-time requests must be completed for all science requiring ship time and submitted as a part of their research proposals to NSF or to notify ONR, NOAA or other sponsoring agencies of their ship time requirements. Whenever practical, requests are filled using the ship requested by the investigator. Institutions encourage submission of ship-time requests as early as practical, hopefully in January or February, prior to the operating year. Electronic filing of the ship-time request form will enter the submitted data into a centralized UNOLS database. Requests in the database can be filtered by geographic area, year, ships, agencies, and ancillary facilities and instruments requested, helping to facilitate scheduling and permitting investigators to collaborate with other programs that might be compatible. The database of ship-time requests shall be the principal mechanism for the exchange of ship-time information.

b. Tentative schedules are generated by each UNOLS institution for their ships. Tentative schedules are generated as soon as operators have a basis for credible ship-time requests (routinely in the spring). These schedules are posted on the UNOLS homepage to permit coordination with other ship operators and to prompt negotiations for eliminating double bookings, assure accommodation of all funded science, enhance effectiveness of facility support and to improve the efficiency and economy of the overall fleet schedule. These negotiations are a critical part of the UNOLS scheduling process.

5. MEETINGS/REPORTS

Meetings of the Ship Scheduling Committee are held as necessary, at least annually. Practically, the timing for meetings is dictated by the flow of ship-time requests and of their science funding decisions and by the submission date for Ship Operations Proposals. Regional meetings and phone/web conferences may be necessary to refine schedules. Schedules should be as firm as possible by early summer, after agency funding decisions have been made. One or more meetings of the full Ship Scheduling Committee may be necessary to optimize ship operating schedules and to accommodate fleet operating costs to the total funding available and to the needs of sponsored science projects.

The Ship Scheduling Committee shall, as a part of each meeting report, with the input of the Federal sponsoring agencies, make comprehensive recommendations regarding effective utilization of the UNOLS fleet based on criteria for ship scheduling, the ship needs of sponsored science programs and other aspects of ship management. Recommendations should include the need for additions to or deletions from the UNOLS fleet, temporary periods out of service for

individual ships, or modification to schedules for individual ships or groups of ships. Recommendations should be reached through an open process and transmitted to the UNOLS Council.

6. DOCUMENT HISTORY

Originally adopted: September 22, 1971, Palisades, NY
Amended and readopted: May 16, 1974, Washington, DC
Amended and readopted: May 13, 1977, Washington, DC
Readopted: October 21, 1981, Washington, DC
Readopted: May 25, 1984, Washington, DC
Amended and readopted: October 23, 1987, Washington, DC
Readopted: October 28, 1988, Washington, DC
Readopted: September 15, 1989, Washington, DC
Amended: October 17, 1991, Washington, DC
Readopted: September 14, 1995, Arlington, VA
Revised and adopted: February 8, 1999, Narragansett, RI
Readopted: October 15, 2004, Arlington, VA
Revised and adopted: October 12, 2007, Arlington, VA
Revised and adopted: October 15, 2010, Arlington, VA

ANNEX II TO THE UNOLS CHARTER

National Oceanographic Facilities

1. INTRODUCTION

In addition to regular institutional UNOLS facilities, there may be identified National Oceanographic Facilities, defined as those facilities, specialized and otherwise, that are made available for the use of qualified scientists from any institution and the use of which shall be recommended by a UNOLS Advisory Committee.

2. PURPOSE

The purpose of National Oceanographic Facilities is:

- To provide oceanographic vessel and other facility support to scientists who do not operate or have available the required facilities.
- To provide for the support and use in academic research of specialized and unique facilities.

3. DESIGNATION

A research vessel or other research facility may be designated a National Oceanographic Facility upon the approval of the UNOLS Council, with the concurrence of the owner and operator of the facility and with reasonable assurance of support. National Oceanographic Facilities may be multi- or special-purpose facilities and may be designated for the entire annual operating period or any significant period thereof.

If the Council denies an application for UNOLS designation, the applicant will be notified as to the specific reasons for the denial. They would then have two options:

OPTION 1: The applicant may reapply to the Council after addressing the specified deficiencies.

OPTION 2: If the applicant so desires, they may submit their modified re-application, along with the Council's notification, for reconsideration by the UNOLS membership. Designation would then be determined by a vote at the next annual meeting in accordance with the procedures described in Section 5a of the UNOLS charter.

4. ADVISORY COMMITTEE/ORGANIZATION

An Advisory Committee is established to provide recommendations for each facility or for a group of facilities of similar mission. The Chair and members of the Committee are appointed by the UNOLS Chair, from nominations made by the Committee, and in consultation with the UNOLS Council. Members serve for terms of three years on a rotating basis, for no more than two consecutive terms. Each institution operating a National Oceanographic Facility may designate an ex-officio member (or members) in addition to those members appointed by UNOLS.

5. FACILITY SCHEDULING

Operational scheduling of the facility is the function of the operating institution. The time frame for scheduling generally is in accordance with Annex I of the UNOLS Charter.

Receipt, acknowledgment, collating and structuring of requests for facility use shall be the function of the operating institution in consultation with the UNOLS Office.

6. FACILITY INFORMATION

Information and announcements advertising the availability of a National Oceanographic Facility are a joint function of the operating institution and the UNOLS Office.

7. REPORTS

An annual report on the use of each National Oceanographic Facility is prepared by the appropriate institution in cooperation with the Advisory Committee and the UNOLS Office.

8. FACILITY FUNDING

Requests for funding the operation of the facility are the responsibility of the operating institution.

9. FACILITY DESIGNATION REVIEW

If a National Oceanographic Facility ceases to meet the criteria above, especially with respect to being specialized or unique, a recommendation may be made by the UNOLS Council to the funding agencies that such designation be discontinued.

10. UNOLS NATIONAL OCEANOGRAPHIC FACILITIES:

- a. The name of the Advisory Committee for National Deep Submergence Facilities is the DEep Submergence Science Committee (DESSC) and its Chair serves as an ex-officio member of the UNOLS Council.
- b. The Center for Interdisciplinary Remotely-Piloted Aircraft Studies is designated as a National Oceanographic Aircraft Facility under Annex II of the UNOLS Charter. The name of its Advisory Committee is the Scientific Committee for Oceanographic Aircraft Research (SCOAR) and its Chair serves as an ex-officio member of the UNOLS Council.
- c. The Advisory Committee for the National Oceanographic Seismic Facility, R/V *Marcus Langseth*, is the Marcus Langseth Science Oversight Committee and its Chair serves as an ex-officio member of the UNOLS Council.

11. DOCUMENT HISTORY

Approved & adopted: May 5, 1972, College Station, TX
Readopted: May 17, 1974, Washington, DC
Amended and readopted: May 13, 1977, Wash., DC
Readopted: October 21, 1981, Washington, DC
Amended: October 26, 1983, Washington, DC
Readopted: May 25, 1984, Washington, DC
Readopted: October 23, 1987, Washington, DC
Readopted: October 28, 1988, Washington, DC
Readopted: September 15, 1989, Washington, DC
Readopted: September 14, 1995, Arlington, VA
Revised and adopted: February 8, 1999, Narragansett, RI
Revised and approved: September 27, 2002, Arlington, VA
Revised and readopted: October 15, 2004
Revised and adopted: October 12, 2007, Arlington, VA
Revised and adopted: October 15, 2010, Arlington, VA

ANNEX III TO THE UNOLS CHARTER

Research Vessel Operators' Committee (RVOC)

1. INTRODUCTION

The Research Vessel Operators' Committee (RVOC), having been established and operative since 1962, and having interests and goals in common with UNOLS, is, by mutual consent of both organizations, made part of the University-National Oceanographic Laboratory System. The RVOC functions as a UNOLS Committee.

2. ORGANIZATION/MEMBERSHIP

a. The Research Vessel Operators' Committee elects its own officers. The RVOC Chair is appointed by the UNOLS Chair as an ex-officio member of the UNOLS Council. The terms of office for the RVOC Chair and Chair-Elect shall be three years.

b. Membership in the RVOC is based on representation from UNOLS operator institutions. Membership is also open to all UNOLS institutions or non-UNOLS institutions that operate research vessels for purposes similar to UNOLS, and in accordance with RVOC bylaws. Each UNOLS operator institution shall designate a representative to RVOC. Institutions other than operators may designate representatives in accordance with RVOC bylaws.

c. Ex-officio representation on the RVOC by a RVTEC representative is encouraged.

3. REPORTS

The Research Vessel Operators' Committee shall prepare a report of its activities for the annual UNOLS meeting.

5. SPECIFIC TASKS.

The Research Vessel Operators' Committee shall enact its own bylaws:

BYLAWS OF THE RESEARCH VESSEL OPERATORS' COMMITTEE

A. PURPOSE

1. The purpose of the Research Vessel Operators' Committee shall be to promote cooperation, fleet standards, marine safety, efficiency, and quality of service among marine science research and educational institutions. The RVOC provides members a forum to address issues of interest such as federal regulations, security, technology, procedures, and public relations as those affect their research fleets.

B. MEMBERSHIP

1. Membership in the RVOC shall be based on representation from UNOLS operator institutions. Membership shall also be open to all UNOLS institutions or non-UNOLS institutions that operate research vessels for purposes similar to UNOLS.

C. REPRESENTATION

1. The RVOC shall hold at least one general Annual Meeting, each calendar year. Each UNOLS operator institution shall designate a representative to RVOC. Institutions other than operators may send observers to RVOC meetings. All member institutions shall be entitled to send as many individuals as desired to the Annual Meeting. RVOC sub-committees may hold meetings or teleconferences as required for the accomplishment of their missions.
2. Each member institution shall be notified of the Annual Meeting by the Chair of the Committee at least one month prior to the Annual Meeting.
3. UNOLS operator institutions shall be entitled one vote on matters at the Annual Meeting. In extraordinary circumstances, matters may be submitted for vote by the Chair, at times other than the Annual Meeting. These matters will be voted on by mail or electronic mail. Matters voted on will be decided by a simple majority of UNOLS operator institutions casting votes. Two-thirds of the UNOLS operator institutions must be represented to establish a quorum.
4. A UNOLS operator institution, which is temporarily without a vessel due to replacement through construction, new acquisition, major refit, or in lay-up, may continue to have a voting representative on the RVOC, as long as that institution is actively engaged in resuming operational status.

D. OFFICERS

1. The Research Vessel Operators' Committee shall have a Chair and Chair Elect. The Chair Elect will be elected by a majority vote at the Annual Meeting. Under normal circumstances the Chair Elect will serve one three-year term and then serve one three-year term as Chair for a total of six years maximum. Date of office shall commence at the close of the Annual Meeting.
2. The Chair shall represent the Committee in all matters stipulated in the purpose of these bylaws and in all matters deemed necessary in the interest of the Committee. The Chair shall implement the programs enumerated by the Committee and shall conduct the Annual Meeting and whatever special meetings are deemed necessary by the Chair or the members.
3. The Chair Elect shall be responsible for recording the business of the Committee. The Chair shall be responsible for dissemination of information through a newsletter or other media to all members of the Committee.
4. If the Chair or Chair Elect are unable to fulfill their duties of office, the Chair shall appoint a successor to act with authority until the succeeding Annual Meeting.

E. WORKING GROUPS AND PANELS

1. Upon the recommendation of the Chair, and with a majority vote of the Committee at the Annual Meeting, various working groups, subcommittees, or panels, as necessary to the work of the Committee, may be constituted. The duration of action of such working groups and panels shall be stipulated at the time of inception.

2. Special working groups or panels may be established if required between the Annual Meetings, but they must be confirmed by vote.

F. ANNUAL MEETING AND OTHER MEETINGS

1. A general meeting of the Committee shall be held at least once yearly. The Chair shall preside over this Annual Meeting. The business of this meeting shall encompass reports of any active working groups and panels, and discussions of projects and actions of the Committee. Speakers from the federal agencies and the marine community may also be included on the agenda. Workshops for projects of general interest are encouraged.
2. Passage of projects and actions shall be by vote, in accordance with the voting procedures set forth in Section C. REPRESENTATION, paragraph 3.
3. The various working groups and panels shall each meet at least once yearly, at the Annual Meeting. The Annual Meeting location shall be rotated among the various UNOLS member institutions, preferably at alternating coasts, in order to better facilitate the purpose of the committee as outlined in Section A of this charter.

G. FINANCES

1. UNOLS will provide limited funding when approved as part of the UNOLS budget for the Committee to include the following:
 - a. Travel expenses for the Chair to attend UNOLS Meetings.
 - b. Meeting facilities, when required.
 - c. Travel and meeting expenses for panels, workshops or the Annual Meeting when appropriate.

H. DOCUMENT HISTORY

Approved and adopted at the RVOC Meeting in New Orleans, Louisiana on 9 October 1990--As amended, 15 January 2004.

Approved and adopted: May 16, 1974, Washington, DC

Readopted: May 13, 1977, Washington, DC

Readopted: October 21, 1981, Washington, DC

Readopted: May 25, 1984, Washington, DC

Readopted: October 23, 1987, Washington, DC

Revised and readopted: October 28, 1988, Washington, DC

Amended and readopted: September 15, 1989, Washington, DC

Readopted: September 14, 1995, Arlington, VA

Revised and adopted: February 8, 1999, Narragansett, RI

Revised and readopted: October 15, 2004

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX IV TO THE UNOLS CHARTER

Fleet Improvement Committee (FIC)

1. INTRODUCTION.

One UNOLS objective is to assess the match between seagoing academic oceanographic facilities and the needs of oceanographic research programs, and then to make recommendations for replacing, modifying or improving the number and mix of facilities. It has long been recognized that maintenance of a fleet of modern, capable research vessels is essential to the outstanding success of the U.S. program in academic oceanographic research. A Fleet Improvement Committee (FIC) is established to address this UNOLS objective.

2. PURPOSE.

The Fleet Improvement Committee works to assure the continuing excellence of the UNOLS fleet, to improve the capability and effectiveness of individual ships and to assure that the number, mix and overall capability of ships in the UNOLS fleet match the science requirements of academic oceanography in the U.S.

3. ORGANIZATION / MEMBERSHIP.

The FIC membership shall be comprised of a Chair and seven additional members. Applications/nominations for membership on the FIC and the FIC Chair will be reviewed and voted on by the standing FIC members. The standing FIC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the FIC members and FIC Chair from the nominations put forward by FIC. Those appointed should be experienced in ship operations or in shipboard science activities, and from institutions, which are either operators or users of UNOLS research vessels. At least three members shall be from UNOLS operator institutions, at least three members shall be from institutions or organizations other than operators, and two members may be from any UNOLS institution. Ex-officio representation on FIC by RVOC and RVTEC representatives is encouraged. The FIC Chair is an ex-officio member of the UNOLS Council. Terms for all members are three years, for no more than two consecutive terms. Demands on the Fleet Improvement Committee may be intense, and the development of ship plans may require significant financial management. With the approval of the UNOLS Chair and UNOLS Council, the FIC may arrange for staff and financial support for their activities. Proposals and grants for such support may be through the UNOLS Office or a UNOLS institution, as appropriate.

4. SPECIFIC TASKS.

The Fleet Improvement Committee serves as a liaison and planning body as well as an information source for federal agency representatives and the scientific community concerning long range planning, and funding for design, construction or renovation of vessels for the UNOLS fleet. The FIC may also provide oversight and make recommendations for improvements of specialized fleet capabilities such as load handling systems, seismic facilities and long coring.

To communicate its findings the FIC works to maintain a current, informative and forward-looking UNOLS Fleet Improvement Plan. The plan, updated periodically and made available through the UNOLS Office and website includes:

- Assessment of the number and mix of ship capabilities needed in the UNOLS fleet,

- Description of future science mission requirements for all size/capability-classes of research ships
- Definition of roles and the need for innovative research platforms including contributions to oceanographic education and outreach
- Assessment of the number and mix of UNOLS facilities required for support of ocean observing facilities
- Consideration of means for acquiring the needed vessels, including new construction, modification to existing UNOLS ships, conversions, private acquisition and leasing
- Development of conceptual or preliminary plans for ships to fill the needs identified
- Development of a schedule for improvement and replacement of vessels so as to assure continuing fleet excellence

The FIC may also be called upon to review and make recommendations concerning design and outfitting specifications of new and future vessels.

4. DOCUMENT HISTORY

Adopted: October 28, 1988, Washington, DC

Readopted: September 15, 1989, Washington, DC

Readopted: September 14, 1995, Arlington, VA

Revised and adopted: February 8, 1999, Narragansett, RI

Readopted: October 15, 2004, Arlington, VA

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX V TO THE UNOLS CHARTER

Research Vessel Technical Enhancement Committee (RVTEC)

1. INTRODUCTION

The Research Vessel Technical Enhancement Committee (RVTEC) held their first organizational meeting in October 1992. The RVTEC provides a forum for discussion among the technical support groups of the National Oceanographic Fleet. The Committee's by-laws were adopted in 1993 as Annex V to the UNOLS Charter and revised in 2007.

2. PURPOSE

The purpose of the Research Vessel Technical Enhancement Committee (RVTEC) shall be to promote the scientific productivity of research programs that make use of research vessels and oceanographic facilities and to foster activities that enhance technical support for sea-going scientific programs.

3. MEMBERSHIP / ORGANIZATION

a. Membership - Membership in the RVTEC shall be extended to UNOLS member institutions.

Participation shall be open to technical and scientific personnel at UNOLS and non-UNOLS organizations.

Ex-officio representation on RVTEC by RVOC representatives is encouraged.

b. Representation

- 1) Each institutional UNOLS representative may designate a representative to RVTEC.
- 2) Each UNOLS member institution shall be entitled to one vote on matters at RVTEC meetings. However, the Chair may submit matters for vote at other times. These matters shall be voted on by mail or electronic mail, and votes shall be collected for a period of two weeks.
- 3) A simple majority of all UNOLS operator institutions must be represented to establish a quorum.

c. Officers

- 1) Research Vessel Technical Enhancement Committee shall have a Chair and Vice Chair/Chair Elect. Nominations for the RVTEC Chair and Vice Chair/Chair-Elect will be reviewed and voted on by the standing RVTEC members. The standing RVTEC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the RVTEC Chair and Vice Chair/Chair-Elect from the nominations put forward by RVTEC. Under normal circumstances the Vice-Chair/Chair-Elect will serve one three-year term and then serve one three-year term as Chair for a total of six years maximum. Date of office shall commence at the close of the Annual Meeting.

2) The Chair shall represent the Committee in all matters stipulated in the purpose of these bylaws and in all matters deemed necessary in the interest of the Committee. The Chair shall implement the programs enumerated by the Committee and shall conduct the Annual Meeting and whatever special meetings are deemed necessary by the Chair or the members.

3) The Vice Chair/Chair-Elect, who shall function as Chair in the absence of the Chair, shall be responsible for recording the business of the Committee and for dissemination of information as stipulated in these bylaws to all members of the Committee.

4) If the Chair or Vice Chair/Chair-Elect is unable to fulfill their duties of office, the Chair shall appoint a successor to act with authority until the succeeding Annual Meeting.

d. Working Groups and Panels - Upon the recommendation of the Chair, and with a majority vote of the Committee, various working groups and panels, as necessary to the work of the Committee, may be constituted. The charge and duration of action of such working groups and panels shall be stipulated at the time of inception.

e. Liaison with other UNOLS committees – RVTEC will establish and maintain liaisons with other UNOLS committees such, but not limited to RVOC, the safety committee, AICC, SCOAR, MLSOC and FIC.

4. SPECIFIC TASKS

a. Promote the exchange of technical information.

b. Enhance the technical skills of available technical support personnel in the UNOLS community.

c. Review new instrumentation development and application of new technologies

5. MEETINGS

a. A general meeting of the Committee shall be held at least once yearly. The Chair shall preside over this Annual Meeting. The business of this meeting shall encompass reports of any active working groups and panels, and discussions of project and actions of the Committee. Research scientists and others from the marine community may also be included on the agenda. Workshops for projects of general interest are encouraged.

b. Passage of projects and actions shall be by vote, in accordance with the voting procedures set forth in Section 3.b, Representation, paragraph 2.

c. The various working groups and panels shall each meet in person or electronically as necessary to accomplish their task at least once yearly.

d. Suggestions for the place and time of the next RVTEC annual meeting shall be identified at the close of the previous RVTEC meeting and formalized shortly thereafter. The Annual Meeting location shall be rotated among the various UNOLS member Institutions, preferably at alternating coasts, in order to better facilitate the purpose of the committee as outlined in Section 2 of this Annex.

6. FINANCES

UNOLS shall provide limited funding for the Committee to include the following:

a) Travel expenses for the Chair to attend UNOLS meetings;

- b) Meeting facilities, when required;
- c) Travel and meeting expenses for panels, workshops, or the Annual Meeting when appropriate.
- d) Travel support for RVTEC representatives to other UNOLS committees.

7. DOCUMENT HISTORY

Approved and adopted on 18 October 1992 at the RVTEC Organizational Meeting in Washington, DC.

Amended and Readopted: September 19, 1996, Arlington, VA

Revised and adopted: February 8, 1999, Narragansett, RI

Readopted: October 15, 2004, Arlington, VA

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX VI TO THE CHARTER

Arctic Icebreaker Coordinating Committee (AICC)

1. INTRODUCTION

The U.S. Coast Guard, NSF and UNOLS have established a UNOLS Committee that shall address research support for U.S. academic science investigators carrying out arctic research aboard U.S. Coast Guard icebreakers. Particular concerns of this Committee are the USCG icebreakers *Polar Sea*, *Polar Star* and *Healy*. It is envisioned that these vessels shall represent the major focus of the Committee.

The Arctic Icebreaker Coordinating Committee shall operate pursuant to appointment by the UNOLS Chair with approval of the Council and in accordance with the UNOLS Charter. This annex shall be incorporated as Annex VI to the Charter.

2. PURPOSE

The purpose of the AICC is to provide polar science projects with planning assistance and to liaise and facilitate communications between scientists, funding agencies and facility providers. Specifically, the AICC is to provide oversight and advice to the U.S. Coast Guard for the purpose of enhancing facilities and science aboard their icebreaker fleet. Incumbent in this is the requirement that AICC solicit, synthesize and present the needs of the arctic science community to the Coast Guard, fulfilling an ombudsman role when necessary, to facilitate efficient and effective utilization of U.S. icebreakers. It is also the responsibility of the AICC to promote new technology for arctic assets in order to maintain cutting edge capability for these facilities.

The purpose of AICC is also to promote the best utilization of arctic icebreaker facilities, provide sufficient lead time for planning purposes, and provide information to the scientific community to organize research projects. The AICC shall work with the user community, Federal sponsors and the operators of other polar facilities to encourage expeditions using U.S. Coast Guard icebreakers in a phased manner that meets the needs of a wide spectrum of arctic scientists. Additionally, the AICC shall encourage the advancement of cooperative international programs for the enhancement of multidisciplinary arctic science throughout the academic community.

3. MEMBERSHIP

The Committee shall include eight polar scientists with diverse disciplines serving three year-terms. Applications/nominations for membership to the AICC and the AICC Chair will be reviewed and voted on by the standing AICC. The standing AICC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the AICC members and the AICC Chair from the nominations put forward by the AICC. Individuals may not serve more than two consecutive terms. Representatives from agencies including, but not necessarily limited to, the USCG, NSF, ONR, NOAA and the Arctic Research Commission shall be expected to participate in the Committee's meetings and activities. The Chair of this Committee shall be an ex-officio member of the UNOLS Council and shall keep the Council and the UNOLS membership informed of its activities.

4. SPECIFIC TASKS FOR THE AICC

Specific tasks of the Committee shall be:

- Provide continuing oversight for *Healy's* scientific spaces and outfitting, and scientific aspects of the potential refitting or replacement of the *Polar Star* and the *Polar Sea*.
- Assist with coordination for icebreaker scientific programs and planning arctic science projects.
- Encourage and facilitate communications, including outreach activities, among individual chief scientists and appropriate Alaskan native communities.
- Facilitate liaison between scientists, science funding agencies and the U.S. Coast Guard to support icebreaker utilization.
- Critique science operations for all USCG icebreakers.
- Provide advice on science equipment needs.
- Provide advice on technical support.
- Provide advice concerning international cooperation of scientific programs and facilities in the arctic.
- AICC will assess mechanisms for funding future arctic icebreaker assets.

5. MEETINGS

The AICC shall meet no less than twice annually to discuss issues within its charge. Funding for these meetings shall be administered similar to that of other UNOLS standing committees.

6. COORDINATION

AICC membership shall include representatives from the UNOLS Fleet Improvement Committee, the UNOLS Research Vessel Technical Enhancement Committee and the UNOLS Research Vessel Operators' Committee.

7. DOCUMENT HISTORY

Originally adopted: September 20, 1996, Arlington, VA

Revised and adopted: February 8, 1999, Narragansett, RI

Revised and adopted: October 15, 2004

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX VII TO THE UNOLS CHARTER

Deep Submergence Science Committee (DESSC) Terms of Reference

1. INTRODUCTION:

The DEep Submergence Science Committee (DESSC) is an advisory committee established in accordance with Annex II of the University-National Oceanographic Laboratory System (UNOLS) Charter. This Committee shall provide recommendations and advice to the operator of and supporting funding agencies of the UNOLS designated National Deep Submergence Facility (NDSF). The DEep Submergence Science Committee shall operate pursuant to appointment by UNOLS and in accordance with the UNOLS Charter. This annex is the DESSC Terms of Reference and shall be incorporated as Annex VII to the Charter.

2. PURPOSE:

The DEep Submergence Science Committee provides oversight responsibilities in the use of *Alvin*, the Remotely Operated Vehicle (ROV) *Jason 2*, and the Autonomous Underwater Vehicle (AUV) *Sentry* that are assets of the National Deep Submergence Facility. Incumbent in this is fulfilling an ombudsman role for the deep submergence community, insuring maximum participation in the utilization of these deep submergence assets. It is also the responsibility of the DESSC to promote new technology for *Alvin*, ROVs and AUVs to maintain cutting edge capability for the National Facility.

The DESSC shall continue to work with the user community, federal sponsors and the operator of the NDSF to encourage deep submergence research in traditional (North Pacific, North Atlantic, and Gulf of Mexico) areas and expeditions to remote geographic regions. Additionally, DESSC shall also encourage the advancement of cooperative international programs for the enhancement of multidisciplinary submersible science throughout the academic community.

3. MEMBERSHIP/NOMINATION OF DESSC:

The DESSC membership shall be comprised of individuals who can represent the various oceanographic disciplines required to advise on the effective use of submersible assets. Nominations to the DESSC and for the DESSC Chair shall be open to the research community. Vacancies shall be announced in various weekly journals and other venues as appropriate, and candidates shall be asked to submit their vitae and letters of interest. Applications for membership to the DESSC and the DESSC Chair shall be reviewed and voted on by the standing DESSC. The standing DESSC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the DESSC members and the Chair from the nominations made by DESSC. Members of the DESSC shall be appointed for three-year terms, staggered so that two or three terms begin each year. Individuals may serve not more than two consecutive terms. The operating institution may designate an ex-officio member(s) in addition to those members appointed by the UNOLS Chair. With the Council's concurrence, standing committees of UNOLS may also designate ex-officio members as appropriate to DESSC.

4. SPECIFIC TASKS FOR THE DEEP SUBMERGENCE SCIENCE COMMITTEE ARE AS FOLLOWS:

a. The UNOLS DEep Submergence Science Committee shall operate pursuant to appointment by UNOLS and in accordance with Annex II to the UNOLS Charter. In addition, each funding agency shall be invited to designate an official observer to the Committee.

b. Advise Regarding Proposals for Use of National Facility Assets: Proposals for the use of the National Facility deep submergence assets are regularly submitted for peer review through the three principal funding agencies NSF, ONR and NOAA. DESSC no longer reviews proposals. DESSC shall however provide advice regarding optimum use of the assets to maximize operational strategy for the deployment of these assets. Deliberations shall consider whether the proposed research might be enhanced by the use of ROVs, AUVs and/or other undersea research tools, or be better accomplished using other occupied or unoccupied submersibles. The committee shall work with agency representatives and staff from the operating institution to develop schedules that will most effectively utilize deep submergence assets.

c. Deep Submergence Assets Planning:

1). Annual Scheduling. Ship scheduling is based on funded projects and is done in part in consultation with the DESSC at the summer DESSC meeting. A preliminary scheduling discussion is conducted in an open forum for the user community at the winter (Dec. AGU) meeting. At that time the community is provided with an indication of the potential areas in which deep submergence assets could feasibly operate well in advance of proposal submission deadlines.

2). Global Expeditions: The DESSC shall work with the user community, federal sponsors and the operator to determine the feasibility of organizing deep submergence science expeditions to remote geographic regions. DESSC shall work with the federal funding agencies to provide timely information regarding funded projects so as to enable potential users to better evaluate the appropriateness of submission of proposals for work in remote areas.

d. Deep Submergence Science Tools: The DESSC shall, on a continuing basis, maintain awareness of new scientific tools and the needs of the users for new sensors and equipment to address important scientific questions and provide this information to the NDSF Operator, UNOLS, and the federal agencies. The technical capabilities of the deep submergence research assets shall be formally reviewed by the DESSC, with the assistance of selected outside experts, at least once every two (2) years and the results of the review shall be provided to the NDSF operator, UNOLS and the federal funding agencies. DESSC should encourage development and promote acquisition of new deep submergence sensors and tools as warranted by the scientific needs of the user communities. Some of this new equipment may have multidisciplinary use and could be considered, with appropriate resources, for inclusion into the standard suite of scientific equipment provided with NDSF vehicles. Other types of sensors may be task or research-specific and should be considered Third Party Tools. DESSC has formulated guidelines for Third Party Tool development, which have been approved by the federal agencies and UNOLS. The UNOLS Third Party Tool Guidelines can be found at the following URL:

<http://www.unols.org/committees/dessc/3rdpartytool.html>.

e. User Concerns: On a yearly basis, the committee shall review and assess comments from scientific users of deep submergence assets and identify key areas that warrant attention by the operator and recommend remedial actions as appropriate.

f. Undersea Technology: With regard to undersea technology in the broader sense, the DESSC should monitor and promote the development and application of appropriate new submersible technologies, both manned and unmanned, shallow and deep, for use in undersea scientific research. The DESSC should coordinate their efforts with the science user community,

technology developers and facility operators. The DESSC shall advise NSF, ONR, NOAA and other federal agencies on submersible technology, its evolution and applications. Additionally, the committee shall include a representative(s) with expertise in the areas of undersea engineering and technology.

In carrying out this task the DESSC may need to organize special workshops.

5. MEETINGS / REPORTS

The DESSC shall meet no less than twice annually. Funding for these meetings shall be administered similar to that of other UNOLS standing committees.

Reports of activities shall be made to UNOLS.

6. DOCUMENT HISTORY

Revised and Accepted: June 2001

Revised and adopted: October 15, 2004

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX VIII TO THE UNOLS CHARTER

Scientific Committee for Oceanographic Aircraft Research (SCOAR) Terms of Reference and Operating Procedures

1. INTRODUCTION

The Scientific Committee for Oceanographic Aircraft Research (SCOAR) is an advisory committee established in accordance with Annex II of the University-National Oceanographic Laboratory System (UNOLS) charter. This Committee shall provide recommendations and advice to the operators and supporting funding agencies of any aircraft facility designated by UNOLS as a National Oceanographic Aircraft Facility. The Scientific Committee for Oceanographic Aircraft Research shall operate pursuant to appointment by UNOLS and in accordance with the UNOLS Charter. This annex is the SCOAR Terms of Reference and shall be incorporated as Annex VIII to the Charter.

2. PURPOSE

This Committee shall provide advice and recommendations to the National Oceanographic Aircraft Facility managers and supporting federal agencies on aspects of operations, sensor development, fleet composition, utilization and data services as appropriate. In addition, SCOAR and the UNOLS Office shall provide the ocean science user community with valuable information and advice concerning experiment design, facility usage, scheduling and capabilities.

The Committee shall also promote collaborations and cooperation between facility operators, funding agencies and the scientific community to improve the availability, capabilities and quality of aircraft facilities supporting the ocean sciences. By promoting collaboration between the ocean science community, the atmospheric science community and other science communities using aircraft in support of their research, the Committee shall work to improve utilization and capabilities for all of these communities.

The SCOAR shall also recommend the designation of aircraft facilities as National Oceanographic Facilities to the UNOLS Council and membership as described in paragraph 4 below.

3. MEMBERSHIP /ORGANIZATION

The SCOAR is composed of individuals who can represent the various oceanographic disciplines with broad-based research experience in the ocean and atmospheric sciences including experience with projects that coordinate the use of aircraft with other oceanographic facilities such as research vessels and that can represent the various oceanographic disciplines required to advise on the effective use of aircraft assets in support of the ocean sciences. The composition of the Committee shall consist of a Chair and four members. The Committee may recommend additional members with the approval of the Council and the funding agencies. Appointed members will normally come from institutions other than the operating institutions of the aircraft facilities and in no case would there be more than one person from any individual institution, not counting the ex-officio representatives.

Nominations to the SCOAR and for SCOAR Chair shall be open to the research community. Vacancies shall be announced in various weekly journals or other venues as appropriate, and candidates shall be asked to submit a vita and letter of interest. Applications for membership to the SCOAR and the SCOAR Chair shall be reviewed and voted on by the standing SCOAR. The

standing SCOAR will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the SCOAR members and SCOAR Chair from the nominations made by SCOAR. Members of the SCOAR shall be appointed for three-year terms, staggered so that one or two terms begin each year. Individuals may not serve more than two consecutive terms.

The operating institution of each National Oceanographic Aircraft Facility may designate ex-officio member(s) of SCOAR to represent the operational aspects of the facility. With the Council's concurrence, other standing committees of UNOLS may also designate ex-officio members to SCOAR.

4. NATIONAL OCEANOGRAPHIC AIRCRAFT FACILITIES

A National Oceanographic Aircraft Facility is an academic organization or institution that operates one or more aircraft in support of oceanographic research or education and that is made available to qualified scientists from any institution with funding for the use of the facility. The purpose is to provide access to aircraft facilities to scientists that do not operate or otherwise have available the required aircraft facilities. UNOLS institutions that operate designated National Facilities shall be designated as UNOLS operator institutions in accordance with the UNOLS charter.

The SCOAR shall recommend to the UNOLS Council and membership, the designation of aircraft facilities as National Oceanographic Aircraft Facilities under Annex II of the UNOLS Charter. An aircraft facility may be designated a National Oceanographic Aircraft Facility upon the approval of the UNOLS membership after review by the UNOLS Council, with the concurrence of the owner and operator of the facility and with reasonable assurance of ongoing support by one or more funding agencies. National Oceanographic Aircraft Facilities may be multi- or special-purpose facilities and may be designated for the entire annual operating period or any significant period thereof. Opportunity for review and input from Federal funding agencies other than the owner of a facility should be included as part of the designation process.

Each National Oceanographic Aircraft Facility approved for designation by the UNOLS membership shall be described and listed in Section 6. Section 6 lists the dates of approval, renewal and expiration for this designation.

5. SPECIFIC TASKS FOR SCOAR

The focus of SCOAR's responsibilities in terms of providing advice and recommendations to the National Oceanographic Aircraft Facility manager and supporting funding agencies shall include but not be limited to:

Information sharing and advising National Oceanographic Aircraft Facility managers and supporting funding agencies

- Technical/scientific briefings on past and future field programs
- Information sharing and oversight on utilization and scheduling of facilities
- Facilitating the requesting of aircraft facility services
- Promoting the coordinated use of aircraft Facilities with research vessel operations and facilitating the scheduling of joint research vessel and aircraft experiments.
- Reviewing flight policies, operating procedures and regulatory and safety issues to ensure compatibility with research plans and research vessel operations.
- At the request of any funding agency or facility operator, SCOAR would review and provide advice or possible solutions regarding any technical issues that may arise during proposal or pre-proposal reviews being conducted by the agency or operator.

The focus of SCOAR responsibilities as they relate to promoting collaborations and cooperation between facility operators, funding agencies, and the scientific community shall include but not be limited to:

- Information sharing and coordination with other scientific organizations concerned with aircraft facilities such as the Interagency Working Group on Facilities (IWG-F), the Interagency Coordinating Committee for Airborne Geosciences Research and Application (ICCAGRA) and others
- Information sharing and coordination with other UNOLS standing committees.
- Staying abreast of evolving instrumentation, sensor, and technology developments including ocean observing systems.
- Promoting participation by researchers in the Ocean Sciences as partners or mentors for new instrument development projects.
- Facilitating the transition of new technologies from the military, the atmospheric sciences, space sciences and other areas to facilities supporting the ocean sciences.
- Promoting positive interactions between the atmospheric and oceanographic science communities.
- Promoting and supporting collaboration between agencies and institutions supporting research aircraft facilities for the ocean sciences.

6. NATIONAL OCEANOGRAPHIC AIRCRAFT FACILITY

The Center for Interdisciplinary Remotely-Piloted Aircraft Studies (CIRPAS) is designated a National Oceanographic Aircraft Facility. CIRPAS is operated by a mix of Naval Postgraduate School and contractor personnel. All activities are managed by the NPS staff based at the CIRPAS facility in Marina, CA. The CIRPAS primary aircraft for oceanographic support includes the CIRPAS UV-18A 'Twin Otter.' Information about the facility is available at <http://web.nps.navy.mil/~cirpas/>.

CIRPAS was designated as a National Oceanographic Aircraft Facility under Annex II of the UNOLS charter by vote of the UNOLS membership at Arlington, Va. on September 27, 2002.

7. MEETINGS / REPORTS

The SCOAR shall meet according to a schedule proposed by the committee and approved by the supporting funding agencies as part of the annual UNOLS Office proposal and budget. Typically the Committee should meet at least two times a year depending on the number of designated National Oceanographic Aircraft Facilities. The SCOAR Chair shall set the agenda for meetings in consultation with the Committee, the UNOLS Office, facility managers, funding agencies and others as appropriate.

SCOAR recommendations and reports shall be prepared with the assistance of the UNOLS office and shall be made through the UNOLS Council and Chair.

8. IMPLEMENTATION, AMENDMENT AND TERMINATION

These terms of reference shall be reviewed, amended and readopted by the Committee with the approval of the UNOLS Council as necessary and at least every three years. The Committee can be dissolved by vote of the UNOLS membership, by the UNOLS Council, due to lack of fiscal support or in the event that there are no designated National Oceanographic Aircraft Facilities. The establishment of this committee and the designation of National Oceanographic Aircraft Facilities shall be renewed every three years by vote of the UNOLS membership.

6. DOCUMENT HISTORY

Originally Adopted: September 27, 2002 at Arlington, VA

Revised and adopted: October 15, 2004

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX IX TO THE UNOLS CHARTER

Marcus Langseth Science Oversight Committee (MLSOC) Terms of Reference

1. INTRODUCTION

The R/V *Marcus Langseth* will provide the U.S. academic community with the resources to acquire state-of-the-art, two-dimensional (2-D) and three-dimensional (3-D) marine seismic-reflection data. No other ship in the UNOLS fleet approaches the seismic acquisition capabilities of this vessel, and consequently the *Langseth* represents a unique national resource. Furthermore, the *Langseth* provides capabilities in addition to those already available in the UNOLS fleet for marine geophysical data collection and general oceanographic research. The Marcus Langseth Science Oversight Committee (MLSOC) is charged with overseeing the scientific operation of this vessel as a National Oceanographic Facility (NOF). First and foremost, MLSOC fulfills an ombudsman role for all scientific groups in need of high-quality geophysical images, with the goals of providing state-of-the-art seismic acquisition capabilities, lowering the threshold of expertise needed to use the facility, and increasing the quality and accessibility of archived data. Second, the MLSOC is charged with maintaining and enhancing the *Langseth's* capabilities for general geophysical and oceanographic research, thereby insuring the most cost-effective operation of this unique asset.

The efficient operation of the *Langseth* in its capacity as the premier UNOLS seismic vessel involves some unique challenges. In overseeing the operations, outfitting and utilization of the *Langseth*, the MLSOC will need to factor in environmental and regulatory issues on account of concerns over the impact of artificial sound sources on marine mammals. The task of setting the schedule for the *Langseth* will be more complex than most UNOLS vessel. Scheduling challenges arise from the usefulness of the *Langseth's* airgun array for seismic refraction experiments, which requires coordination with both the marine Ocean Bottom Seismograph Instrumentation Pool (OBSIP) and land-based Program for Array Seismic Studies of the Continental Lithosphere (PASSCAL) seismometer facilities. The MLSOC will be capable of providing expertise and advice during the process of coordinating these activities.

The technological capabilities of the seismic exploration industry evolve rapidly. MLSOC will therefore need to identify and recommend hardware and procedure upgrades that will ensure that this national facility remains at the cutting edge of exploration capability. MLSOC will need to be proactive with the user community, federal sponsors and the operator of the national facility, Lamont-Doherty Earth Observatory/Columbia University (LDEO), to encourage geophysical research worldwide. Additionally, MLSOC will also encourage the advancement of cooperative international programs for the enhancement of multidisciplinary geophysics-based science throughout the global academic community.

2. AUTHORITY

The MLSOC shall operate pursuant to appointment by UNOLS and in accordance with Annex II to the UNOLS Charter. In addition, each funding agency will be invited to designate an official observer to the Committee. The MLSOC is empowered to identify and establish subcommittees

to explore and advise the committee on specific issues relating to the operation and use of the *Marcus Langseth*. These subcommittees may draw on expertise outside of the Committee itself.

3. MEMBERSHIP

The MLSOC membership shall be comprised of up to nine individuals who can represent the various oceanographic and geologic disciplines required to fulfill the committee tasks as outlined below. For example, in addition to members of the academic geophysical community, the Committee shall include individuals with significant technical background in seismic data acquisition and one or more (industry) representative(s) with expertise in the areas of 3-D geophysical surveying (including related permitting and navigation issues), borehole imaging, and related technologies. The MLSOC will also need to include a representative with expertise in marine mammal biology and permitting and at least one non-seismic, general oceanography representative. The Facility Operator, LDEO, may only be represented by non-voting ex-officio representatives. Ex-officio representatives of the UNOLS RVTEC and RVOC committees may serve on the Committee and under normal circumstances the LDEO members of these committees can serve in this role.

4. NOMINATIONS

Nominations to the MLSOC and for the MLSOC Chair will be solicited from the research community and other organizations with relevant expertise, such as the offshore exploration industry. Vacancies will be announced in various weekly journals and other venues as appropriate, and candidates will be asked to submit a vita and letter of interest. Applications for membership to the MLSOC and the MLSOC Chair will be reviewed and voted on by the standing MLSOC. The standing MLSOC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the MLSOC members and the MLSOC Chair from the nominations put forward by MLSOC. Members of the MLSOC will be appointed for terms up to three years, staggered so that two or three terms begin each year. Individuals may serve not more than two consecutive terms. The operating institution may designate non-voting ex-officio member(s) in addition to those members appointed by the UNOLS Chair. With the Council's concurrence, other standing committees of UNOLS, such as RVOC and RVTEC may also designate ex-officio members as appropriate to MLSOC.

5. MEETINGS

It is expected that the MLSOC will typically meet twice per year. One meeting should allow for an open forum with the user community to get broad input for long-range planning, user concerns, etc. The second meeting will be generally devoted to equipment and procedural improvements, advice on scheduling, permitting, or specific programs, and other near-term issues, and should occur in the spring or early summer when plans and schedules for the next year are being formulated.

6. CHARGE TO THE COMMITTEE

- a. Provide advice on scientific programs. The MLSOC will not review proposals, but rather provide advice to the facility operator and supporting federal agencies regarding optimum use of the asset to further marine research in a cost-effective manner.

- b. Forecast future operations locations. The MLSOC will work with the user community, federal sponsors and the operator to define general areas of operations approximately two years in advance in order to promote and facilitate geophysical expeditions to remote geographic regions. A preliminary discussion on geographic areas of operations is conducted in an open forum for the user community (e.g., at the December meeting of the American Geophysical Union). At that time, the community is provided with an indication of the potential areas in which the national

geophysical asset could feasibly operate with adequate lead time prior to proposal submission deadlines. MLSOC will work with the federal funding agencies to provide timely information regarding funded projects as that information becomes available, so as to enable potential users to cluster proposals for work in geographic areas.

c. Help with short-term scheduling. Ship scheduling is based on funded projects and is done by the UNOLS Ship Scheduling Committee (SSC), including the federal agencies, for projects in the next two fiscal years. The committee will provide feedback and advice to the UNOLS SSC, agency representatives and staff from the operating institution to assist in developing efficient and effective schedules that execute funded seismic imaging field programs in a timely manner.

d. Address user concerns. On a yearly basis, the MLSOC will review and assess comments from scientific users of the national geophysical asset. The MLSOC will identify key areas that warrant attention by the operator and recommend remedial actions as appropriate. As part of this activity, the MLSOC will work with the user community to rethink and redefine the roles of the science party and the technical support group provided by the operator. This task may include reviewing options and recommending solutions for the specialized technical support required for *Marcus Langseth* operations, e.g., contractor vs. full-time staff for back-deck activities, navigation staff, and marine mammal observers.

e. Review technical capabilities. The technical capabilities of the national geophysical asset will be formally reviewed by the MLSOC, with the assistance of selected outside experts, at least once every two (2) years. The data quality should be compared against some minimum standard set by the MLSOC, taking into account the challenges of working in remote marine environments. The quality, accessibility and preservation of archived data and archival procedures will be included in this review. The results of that review will be provided to the facility operator, UNOLS and the federal funding agencies.

f. Monitor issues related to permitting. On a yearly basis or more frequently, the MLSOC will review issues relating to permitting of seismic activities and make recommendations to the operator and federal agencies for improving the process.

g. Encourage technology expansion and upgrades. The MLSOC will, on a continuing basis, maintain awareness of new geophysical imaging tools and the needs of the user community for new geophysical equipment to address important scientific questions. Relevant areas for tracking include, but not limited to, sound sources/receivers for through-water/sea-floor - based surveying and on-site (i.e., down hole/observatory-based) imaging. MLSOC will provide this information to the facility operator, UNOLS, and the federal agencies. MLSOC will encourage development and promote acquisition of new geophysical sensors and tools, as warranted by the scientific needs of the user communities and as deemed feasible by the pertinent funding agencies. Some of this new equipment may have multidisciplinary use and could be considered, with appropriate resources, for inclusion into the standard suite of scientific equipment for this NOF. Other types of sensors may be task or research-specific and should be considered Third Party Tools, as formulated by MLSOC, which have been approved by the federal agencies and UNOLS. In carrying out this task, the MLSOC will need to coordinate its efforts with industry oversight groups TBN (To Be Named) as deemed appropriate, marine mammal permitting organizations like the National Marine Fisheries Service, and may need to organize special workshops.

h. Reports of activities shall be made to the UNOLS membership on at least an annual basis and to the UNOLS Council at regularly scheduled Council meetings.

7. DOCUMENT HISTORY

Originally adopted: October 14, 2005, Arlington, VA

Revised and adopted: October 12, 2007, Arlington, VA

Revised and adopted: October 15, 2010, Arlington, VA

ANNEX X TO THE CHARTER

Ocean Observing Science Committee (OOSC) Terms of Reference

1. INTRODUCTION

In response to the global need to study the inter-connectivity of the ocean with the Earth system as a whole, the ocean science community has planned and invested in the design, deployment and operation of ocean observatories. Ocean observatories provide a research platform to study many temporal and spatial scales using concurrent time-series data and responsive capabilities. Compelling science themes include climate variability, ocean ecosystems, turbulent mixing, plate tectonics and sub-seafloor biogeochemistry. In addition, these observatories can be critical to support tactical decisions in response to episodic events such as oil spills, harmful algal blooms and tsunamis. The National Science Foundation (NSF) is making a major investment in ocean observing capabilities with the Ocean Observatories Initiative (OOI), a program that began its observatories installation in 2010, will take 66 months to deploy, and will operate for 25 years. The observatories will require the use of other ocean science infrastructure including the US Academic Research Fleet, AUV/ROVs and unmanned systems such as gliders. Community input and perspectives on current and future directions is needed by NSF in order to effectively align the ocean science and research needs with technically sound decisions and cost efficient operations.

The Ocean Observing Science Committee, (OOSC), is charged with providing advice and guidance on decisions and plans from the science perspective related to NSF observing investments such as the Monterey Accelerated Research System (MARS) and OOI as well as other ocean observing support systems. The OOSC will be an essential element in the process of communicating the science user perspective to the National Science Foundation and to the project teams involved in developing, deploying and operating ocean observatories.

2. AUTHORITY

The OOSC shall operate pursuant to appointment by UNOLS, and in accordance with the UNOLS Charter. These terms of reference shall be incorporated as Annex X to the Charter. Due to the significant investment in the OOI construction project, NSF will work closely with UNOLS to ensure the OOSC membership will represent a balanced cross section of the bio/geoscience community. In addition, each federal agency providing funding to the UNOLS Program Office will be invited to designate one official observer to the committee. The OOSC is empowered to identify and establish subcommittees to advise the Committee on specific issues relating to the development, operation and use of the NSF supported ocean observatories and support system infrastructures. These subcommittees are particularly important for working emergent issues related to the construction of OOI and the OOSC will work closely with NSF to determine the timing for their establishment. The subcommittees may draw on expertise outside of the committee itself, but shall not include members of the teams receiving federal funding to construct and operate ocean observing systems.

3. MEMBERSHIP

The OOSC membership shall be comprised of up to seven individuals who will represent the various science disciplines required to fulfill the Committee tasks as outlined below. The Committee shall include individuals with significant expertise in scientific research, as well as in

ocean observing infrastructure and systems, and data acquisition and management. The OOI Operator, Consortium for Ocean Leadership, may only be represented by non-voting ex-officio representatives. The OOSC shall not include members of the teams receiving federal funding to construct and operate ocean observing systems.

4. NOMINATIONS

Nominations to the OOSC and for the OOSC Chair will be solicited from the research community and other organizations with relevant expertise. Vacancies will be announced in journals and other venues as appropriate, and candidates will be asked to submit a vita and letter of interest. Applications for membership to the OOSC and the OOSC Chair will be reviewed and voted on by the standing OOSC. The standing OOSC will select one nominee for each open position and forward the nomination to the UNOLS Chair. The UNOLS Chair, with the endorsement of the UNOLS Council, shall appoint the OOSC members and the OOSC Chair from the nominations put forward by OOSC. Members of the OOSC will be appointed for terms up to three years, staggered so that two or three terms begin each year. Individuals may serve not more than two consecutive terms. Given the potential impact of Ocean Observing Systems support requirements on the US Academic Research Fleet, and with the Council's concurrence, other standing committees of UNOLS, such as RVOC, RVTEC and FIC may also designate ex-officio members as appropriate to OOSC.

5. MEETINGS

It is expected that the OOSC will typically meet twice per year. One meeting will occur in the winter period and will be generally devoted to a strategic review of the portfolio of ocean observing assets and support systems. A second meeting will be timed to occur concurrently or immediately after the annual OOI Construction/Operations review in early summer. A subset of the OOSC and/or Subcommittees may be asked to participate in additional periodic reviews of the OOI Subsystems. The meeting logistics and travel arrangements shall be coordinated by the UNOLS Office.

6. CHARGE TO THE COMMITTEE

- a. Provide advice on decisions and plans from the science perspective related to NSF ocean observatories (MARS, HOTS, BATS, OOI, and others) and ocean observing support systems. These may include the US Academic Research Fleet, AUV/ROVs, and other unmanned systems such as gliders. The OOSC will not review proposals, but rather provide a research community perspective on the strategic, tactical and prioritization issues that project teams and agencies are addressing for the portfolio of ocean observatories.
- b. Represent science user perspectives. The OOSC will provide through the UNOLS process, the science user perspective to the project teams and the federal agencies that are developing, deploying and operating ocean observatories. The OOSC will develop a process and structure for effectively representing the community who use or who have interest in NSF ocean observatories and supporting systems.
- c. Provide technical advice. The OOSC will be requested by NSF to review technical decisions and trade off analyses to inform decisions and provide advice as needed. This may require establishing subcommittees.
- d. Project Reviews. NSF will conduct periodic performance reviews of the OOI construction project using personnel not associated with the OOI Project Team. The OOSC will be requested by NSF to observe (1-2 OOSC members) these reviews and provide science users perspectives.

e. Evaluate best practices across Ocean Observatories. The OOSC will identify and disseminate best practices for ocean observatories across both technical and managerial regimes.

f. Reporting. Reports of activities shall be made to the UNOLS membership on at least an annual basis and to the UNOLS Council at regularly scheduled Council meetings.

7. DOCUMENT HISTORY

Originally adopted: October 15, 2010, Arlington, VA