

**Terms of reference for administration of an  
Arctic data synthesis and identification of research needs project**

The North Pacific Marine Research Institute (hereafter, the “Institute”), administered by the North Pacific Research Board (NPRB or the “Board”), and with assistance from the National Science Foundation (NSF), is soliciting a data synthesis and identification of research needs project funded by Shell and ConocoPhillips. The intent of this data synthesis is to clarify the present state of knowledge of Arctic marine ecosystem structure and function. All relevant data collected to date in the Bering Strait and the Chukchi and Beaufort Seas will be synthesized and analyzed in order to identify and prioritize future directions for Arctic ecosystem research. This will properly prepare the Institute, NPRB, NSF, and other potential partners—including members of the Interagency Arctic Research Policy Committee—for future integrated ecosystem research programs in the Arctic. The purpose of this document is to clearly define the roles and responsibilities of the organizations which will be involved in this effort (the Institute, NPRB NSF, Alaska SeaLife Center, Shell, and ConocoPhillips).

**Geographic Scope**

The geographic scope of this project will include the Chukchi and Beaufort seas and the Bering Strait north of St. Lawrence Island. Inclusion of the Bering Strait will allow consideration of the upstream effects of the Bering Sea on the Chukchi and Beaufort seas. Consultation with Alaska Native communities and organizations will be required of the researchers who will conduct the study. Further details are included in the Special Request for Proposals (RFP, <http://arctic.nprb.org>).

**Roles and Responsibilities**

**The Institute**

The North Pacific Marine Research Institute is administered at the Alaska SeaLife Center (ASLC) by NPRB. The ASLC serves as the Institute’s fiscal agent. The Institute was established by an MOU signed by NOAA, ASLC, and NPRB and allows for disposition of research funds and administration of research projects not made available through the Environmental Improvement and Restoration Fund (EIRF). As specified in the MOU, NPRB will make policies for the operations and administration of the Institute, appoint an executive director for Institute affairs, approve budgets and research projects, provide project oversight, and ensure public process of communications and outreach.

For purposes of this Arctic synthesis effort, the Institute’s Executive Director will provide final selection of the project recommended by the Board and will have signing authority on grant agreements and subawards.

**NPRB**

NPRB will administer this effort on behalf of the Institute and will use standard NPRB policies for proposal review and project oversight. NPRB will contribute an estimated total of 0.6 FTE of staff time for the administration of the proposal process and project management. NPRB staff, with assistance from

NSF, will issue the RFP on behalf of the Institute, conduct technical reviews, and utilize the NPRB Science Panel. The Board will make funding recommendations in consultation with NSF. NPRB staff will be responsible for project oversight, including review of progress and final reports, and will provide copies of such reports to NSF and industry participants. NPRB staff will communicate with the Principal Investigators (PIs) to ensure that project objectives are met according to the timeline agreed upon in the approved statement of work. An advisory committee, co-chaired by NPRB and NSF staff, will be created for this project that will serve in an advisory role (see below). NPRB staff will be responsible for coordinating quarterly communication between the PIs and the Advisory Committee.

All press releases related to this RFP and the funded project must be approved by NPRB and NSF staff and will acknowledge support from Shell and ConocoPhillips. NPRB staff will notify Shell and ConocoPhillips of press releases related to the project. Shell and ConocoPhillips logos will not appear on outreach materials unless requested by Shell and/or ConocoPhillips, and logos will not be used without obtaining a letter of authorization. The NPRB Communication and Outreach Director must approve all printed outreach materials and will dedicate an Arctic project page on the NPRB website to the funded project. If principal investigators have their own websites that describe the project, they will recognize the Institute, NPRB, NSF, Shell, and ConocoPhillips and link to the Arctic project page on the NPRB website.

#### NSF

NSF will also contribute staff time (estimated at 0.3 FTE) for the administration of the funded project. NSF staff will participate in drafting the RFP. NSF will identify appropriate technical reviewers. At least one NSF staff member will participate in the meetings of the NPRB Science Panel (April 2012) and Board (May 2012) and participate in making funding recommendations. One NSF staff member will co-chair the Project Advisory Committee and will participate in all meetings/teleconferences of the committee and will review progress and final reports.

#### NPRB–NSF Shared Responsibilities

NPRB and NSF staff will co-chair the Project Advisory Committee (see below), and at least one staff member from each organization is expected to be present during all meetings and teleconferences of the committee. NPRB and NSF staff may travel to Alaska Native communities that are within the scope of this project to facilitate data-sharing agreements, to solicit or facilitate input into the identification of research priorities phase of the project, and/or to communicate results. NPRB, on behalf of the Institute, and NSF will be the ultimate authorities in dispute resolutions.

#### Oil and Gas Industry

Shell and ConocoPhillips will provide the funds for this project to the Alaska SeaLife Center, fiscal agent of the Institute. This transfer of funds will occur in advance of a funding decision in May 2012. Shell and ConocoPhillips will each have a seat on the Advisory Committee that will be formed to help with coordination and data access (see below). At present, ConocoPhillips has a representative on the NPRB Board and Shell has a representative on the NPRB Advisory Panel. Both Shell and ConocoPhillips are

represented on the NPRB Arctic Subcommittee. Industry representatives will not participate in any aspect of proposal review or funding decisions. Shell and ConocoPhillips will each receive a copy of the final report, progress reports, as well as a copy of all data and metadata submitted as part of the contractual obligations of the funded project.

### ASLC

The Alaska SeaLife Center (Seward Association for the Advancement of Marine Science d/b/a Alaska SeaLife Center; ASLC) is the fiscal agent for the Institute and will, in this capacity, administer the funds for this project. The funds provided by Shell and ConocoPhillips to support this project will be directly transferred from them to the ASLC. ASLC will charge an indirect rate of 32.95% on the first \$25,000 of each subaward administered by ASLC for the project. ASLC will disburse funds only as selected by the Executive Director of the Institute following recommendation by NPRB. Grants will be administered as reimbursable awards following NPRB policy.

### Project Advisory Committee

A Project Advisory Committee will be formed to help ensure data flow between the PIs and the organizations holding the data, as appropriate. The Committee will be co-chaired by NPRB and NSF staff, and will include a representative from each of the organizations considered major holders of relevant data to be included in this project. Such organizations may include, but are not restricted to: BOEM, NOAA, USFWS, ADFG, oil and gas industry, Alaska Native Organizations (ANOs), and environmental non-governmental organizations (ENGOS). Committee membership will be finalized by the co-chairs as soon as proposal funding decisions have been made. Individual organizations will pay salary for their representatives participating in Committee activities. The Institute and NSF will not pay stipends for Committee members. Program management funds will be set aside from the funds provided by industry for this project to support travel for Advisory Committee members to attend in-person Committee meetings, and other workshops as deemed appropriate and necessary by NPRB and NSF staff, as well as administrative costs associated with teleconferences and potential outreach activities.

As noted, one of the critical roles of the Advisory Committee members will be to help ensure that data and metadata collected by their respective organizations, and any reports that synthesize those data, are accessible to the researchers. For example, in the case of NOAA, the Advisory Committee member will ensure that relevant data, metadata and reports from the National Snow and Ice Data Center, the National Ocean Service, the National Marine Fisheries Service, and the National Weather Service are all accessible. In the case of the Alaska Native Organization representative(s), he or she will help PIs by identifying key people within the relevant ANOs that have an interest in Arctic marine ecosystems (e.g. Appendix 1, Arctic Phase I RFP) and, if necessary, by facilitating access to data.

The Advisory Committee will review quarterly reports submitted by the PIs, will participate in regular teleconferences, and will forward suggestions to NPRB and NSF staff. Advisory Committee members will assume responsibility for identifying past and ongoing marine research initiatives in the Arctic in which the organizations they represent are involved and for ensuring that such projects are included in this effort.

The Advisory Committee Co-Chairs will be responsible for preparing a written report to the Board before each of the biannual Board meetings. Reports will include a summary of any issues of special concern that were discussed by the Committee since the previous Board meeting, and recommendations for action items.

### Principal Investigators

The principal investigators (PIs) will be responsible for meeting all project requirements as described in the approved statement of work. The PIs will submit quarterly progress reports and participate in teleconferences with the NPRB staff and/or the Advisory Committee as requested.

PIs will acknowledge support from the Institute, NSF, NPRB, Shell, and ConocoPhillips in all presentations and publications resulting from this work.

### Fiscal Arrangements

The funds provided by Shell and ConocoPhillips to support this project will be directly transferred from them to the Alaska SeaLife Center, which will act as the fiscal agent for the Institute. Funds totaling \$1.6 million will be provided by Shell and ConocoPhillips before May 2012 when funds are awarded. Shell and ConocoPhillips will provide \$500,000 and \$300,000 respectively before December 31, 2011. Shell and ConocoPhillips will provide an additional \$500,000 and \$300,000 respectively by the end of the first quarter of 2012.

NPRB and the Institute will set aside \$150,000 of the \$1.6 million for program management. These funds will support meetings, workshops, and teleconferences attended by the Project Advisory Committee and PIs, potential collaboration meetings with other relevant ongoing efforts, outreach for the project, and any indirect costs charged by ASLC to manage subawards (see below).

Industry funds will not be used to support salary for NPRB or NSF staff. They will be used to cover indirect cost charges by ASLC on the first \$25,000 of each subaward managed for the Institute for the Arctic synthesis project (or \$8,238 for each subaward). NPRB will provide 0.6 FTE and NSF 0.3 FTE in existing staff time as outlined above.

### Coordination with Other Projects

The PIs will be required to coordinate with researchers working on other synthesis and identification of research needs efforts related to the Arctic marine ecosystem (e.g., the Synthesis of Arctic Research (SOAR) project, [http://www.alaska.boemre.gov/ess/ongoingStudies/PSPO\\_1105.pdf](http://www.alaska.boemre.gov/ess/ongoingStudies/PSPO_1105.pdf); Chukchi Sea Environmental Studies program, [www.fairweatherscience.com](http://www.fairweatherscience.com)). To the extent possible, funds should be leveraged and duplication of effort should be avoided. The Institute and NSF plan to reserve some of the funds provided by industry to help support a coordination workshop.

### **Process for Proposal Review and Funding Decision**

The Institute has engaged the NPRB to review proposals, make a recommendation to the Institute, and thereafter oversee project administration. NPRB shall follow its normal policies and procedures, including its conflict of interest policies, in conjunction with reviewing proposals, making recommendations to the Institute, and overseeing project administration.

#### **Initial Screening of Proposals**

Upon receipt, the NPRB staff will screen proposals for conformance with requirements set forth in the RFP. This review will consider whether the proposal meets the format and structure requirements in the RFP, and assess whether it is responsive to the RFP. Proposals identified by staff as having questionable responsiveness will be reviewed by an ad hoc committee of Science Panel members and NSF representatives who will determine which of these proposals, if any, to carry forward. If the ad hoc committee cannot agree on whether a proposal is responsive to the RFP, it will be fully reviewed. Proposals that are found to not comply with the requirements of the RFP or that are determined to be unresponsive will be returned without further processing. Notification of non-compliance will be sent to the proposal applicant.

#### **Independent Technical Evaluations**

Proposals that pass the initial screening will undergo independent, anonymous, technical peer review conducted by regional, national and international experts recommended by NSF. NPRB staff will use NSF recommendations to assign peer reviewers to proposals. The goal of this step is to receive three independent technical reviews for each proposal. Reviewers will be asked to provide comments and qualitative assessments of the technical aspects for each proposal in each of the categories indicated below (percentages indicate the weight that the subsequent review by the NPRB Science Panel will give to the criteria), and an overall summation. Reviewers will be asked to score each section, as well as the overall summation into one of five categories: poor, fair, good, very good and excellent.

Employees of Shell and ConocoPhillips will not serve as technical reviewers.

The technical review criteria are as follows:

- a. **Soundness of Project Design/Conceptual Approach (60%)**: Is there a clear statement of project objectives, explanation of what the project will accomplish, and why it is important? Have the applicants demonstrated a clear understanding of the problem being addressed, the present state of knowledge in the field, the project's relation to other work, including their own, and the measurable benefits that will result from the proposed work? Is there sufficient information to evaluate the project technically? What are the strengths and/or weaknesses of the technical design relative to securing productive results? Do the applicants have an adequate plan for gaining and incorporating input from Arctic communities, marine scientists and traditional knowledge holders?
  
- b. **Timeline and Milestones (15%)**: Is there a clear table detailing appropriate timelines and associated measurable milestones, objectives, accomplishments, and deliverables that can be used to track and

evaluate project performance through the entire award period? Is there a description of the product or result that may be used to measure project success (e.g., report, published paper, management implementation) and how the research results will be disseminated?

c. Project Management (15%): The organization and management of the project, and the project's principal/co-investigator(s) and other personnel in terms of related experience and qualifications will be evaluated. Applicants must demonstrate an awareness of, and a plan for, coordination with other synthesis and research prioritization efforts focused on the Arctic, and where possible, leverage their proposals with support from other sources. Applicants must seek to avoid duplication of other research efforts.

d. Project Costs (10%): The justification and allocation of the budget in terms of the work to be performed will be evaluated. Is the project cost unreasonably high or low?

### Science Panel Review

Science Panel discussions will include participation by at least one NSF official. NPRB staff will assign two Science Panel members with the relevant expertise to each proposal (a Primary and a Secondary). Science Panel members generally conduct their own independent review following the same technical review guidelines above. These are completed and made available to all panel members in advance of the Science Panel meeting. The Primary and Secondary summarize the proposal for the entire Panel, go over the evaluations by the outside technical reviewers, and, based upon that input and their own evaluation, give their overall assessment to the group. The entire Panel then discusses the proposal and its evaluations further and determines, by consensus, a tier ranking as follows:

#### Tier 1:

Proposals that are considered highly meritorious based on the combined peer and science panel reviews (based on the criteria outlined above) will be designated Tier 1 proposals. Highly meritorious will be defined as proposals that generally score an average of Very Good to Excellent and do not require any scientific alterations to the proposed work to go forward (although suggestions for improvements may be made). The Science Panel may decide to go back over the Tier 1 list to determine if there are any scientific nuances amongst them that may be relevant to the Board when making their final funding decisions. Such criteria will be only science-based and may include relative comparisons between highly ranked proposals such as: more technically robust, more specifically on target with what the RFP was looking for, or more time sensitive in terms of increasing scientific knowledge base. Accordingly, proposals placed in this category may be separated into **Tier 1a** or **Tier 1b**.

Proposals that are highly meritorious as defined above but have minor non-science related issues (e.g. budget) that once fixed would place the proposal in the Tier 1a or Tier 1b category, will be categorized as **Tier 1a conditional** or **Tier 1b conditional** proposals respectively. In such instances, the Science Panel will clearly identify the conditions they believe need to be met before the proposal goes forward.

#### Tier 2:

A **Tier 2** ranking will be given to proposals that are good scientifically but not exceptional. Additionally, proposal that have minor science issues of a simple or straightforward nature, for example simple changes

to sample size or study design, will be categorized as **Tier 2 conditional**. A Tier 2 proposal that has non-science issues will also be placed in the **Tier 2 conditional** category. For conditionally ranked proposals, the Science Panel will clearly identify the conditions they believe need to be met before the proposal goes forward.

Tier 3:

Proposals that are found to have fatal flaws or those that are simply not competitive scientifically even with minor changes and should not be funded, are designated **Tier 3** proposals. These will generally be proposals with some Poor and Fair ratings or those that are mixed, depending on the issues. Tier 3 proposals are those that require substantial revision to be competitive and thus they should not be funded.

#### Reconciling Differences between Independent Technical and Science Panel Reviews

Ideally, each proposal will be read by five technical reviewers (three peer and two Science Panel reviews). With that number of reviews it is common that evaluations vary, sometimes greatly. Where there is disagreement between the Science Panel and the outside reviewers (in either direction), proposals and all reviews will be discussed at length by the Science Panel. The final scientific authority lies with the Science Panel, which will document these discrepancies and their discussion in support of their final written recommendation to the Board (in the Science Panel Summary). The Board will also have access to all of the technical reviews as well as the Science Panel Summary ahead of their meeting and thus the Board will have all the information needed to also discuss any discrepancies in the rankings if they wish to do so.

#### NPRB Science Panel Recommendations

Staff, Primary and Secondary panel members will take notes on the discussion of their assigned proposals. Following the meeting, the Primary, in consultation with the Secondary and any other panel member identified during the discussions, is responsible for drafting a summary paragraph for the specific proposals for the Board. This paragraph will follow a pre-determined template and be submitted to the NPRB staff within a few days of the meeting. Staff will compile all paragraphs and submit Tier 1 and Tier 2 summary paragraphs to the NPRB Advisory Panel, and all summary paragraphs to the Board as soon as possible.

#### NPRB Advisory Panel Input

NPRB maintains an Advisory Panel to provide community input for all NPRB activities (<http://www.nprb.org/about/advisory.html>). This Panel is a completely separate body from the Project Advisory Committee to be formed to support the activities of any funded Arctic synthesis project.

The NPRB Advisory Panel Review of proposals is intended to highlight those proposals that have special stakeholder, community and other societal relevance and public interest value. The Advisory Panel will be provided with full proposal materials and the Science Panel summary paragraphs for all proposals that the Science Panel has determined to be responsive to the RFP and to have scientific merit. The Advisory Panel will review Tier 1 and Tier 2 proposals and provide a short summary of the attributes of a subset of

these proposals that they wish to highlight as having significant stakeholder, community or other societal relevance. These summaries will be brought to the attention of the Board for consideration. It is not the intent of the Advisory Panel to comment on all Tier 1 and Tier 2 proposals, but rather to highlight those they identify as having special value to stakeholders. The Advisory Panel contribution is also not intended to rank proposals, to provide comment on the scientific merit of proposals, nor the alignment of such proposals with category budgets.

### Board Review

For this project, at least one representative of NSF will participate in the discussion of proposals with the Board. The chair and/or vice-chair of the Science Panel will present the Science Panel summary paragraphs to the Board and be present at the meeting to answer technical questions. The Board will consider technical evaluations, Science Panel recommendations and Advisory Panel input. The Board will use scientific merit as defined by the Science Panel rankings as their primary criterion, but may consider other factors at the time of final funding decisions. Such factors include, but are not limited to:

1. Ecosystem information needs;
2. Other projects currently funded on a similar topic;
3. Overlap with other ongoing programs;
4. Previous performance of applicants (evaluation of previous NPRB funded projects will involve project management, adherence to project budgets, timelines, and reporting requirements, as well as achievement of previously funded project objectives).

While these factors will be considered, scientific merit remains the primary consideration for proposal funding. Thus, the Board will accept Science Panel recommendations for Tier 3 proposals and will not consider them for funding. Further, if the Board decides to fund a Tier 1 conditional or Tier 2 conditional proposal, the Board will carry forward all the Science Panel conditions. The Board reserves the right to put any additional conditions on any proposal recommended for funding. Proposals that receive conditional funding by the Board will be asked to resubmit a revised proposal which specifically addresses all concerns raised and specified during the review and decision-making process. Unless otherwise noted by the Board, staff will review the revised statements of work vis-à-vis the conditional requests and determine whether to go ahead with funding. Where staff does not feel comfortable making this final determination they may consult a subset of the Science Panel or the Executive Committee of the Board.

The Board will document their decision-making process, in particular where it deviates from the Science Panel recommendations. This information, as well as all technical reviews and Science Panel Summary paragraphs will be provided as written feedback to the applicants.

### Institute Review and Final Selection

The Institute will make final project selections after having reviewed the NPRB recommendation. The Executive Director of the Institute will have signing authority on grant agreements, and approval of subawards and subcontracts relating to the Arctic RFP. The exact award period and amount will depend

upon the requested duration of funding and the results of post-selection negotiations between the applicant and NPRB staff on behalf of the Institute, in consultation with NSF.

Consultation with Interested Parties

Throughout the proposal review process, NPRB, on behalf of the Institute, and NSF may consult with federal and state agencies, Alaska Native organizations, and other entities, as appropriate, who may be affected by or have knowledge of a specific proposal, or on-going project on this subject matter.

Public comment will not be taken during the proposal review and decision-making process

Tentative Schedule

The tentative schedule is as follows (except for the proposal deadline, the schedule is subject to change):

<u>Schedule Item</u>	<u>Tentative Timeline</u>
Release of RFP	January 9, 2012
Deadline for proposals	<b>March 9, 2012, 4 p.m. Alaska time</b>
Deadline for signature pages	<b>March 21, 2012, 4 p.m. Alaska time</b>
Technical evaluations	March – April 2012
Science Panel review	March – April 2012
NPRB Recommendation	May 2012
Selection by the Institute	May 2012
Initial notification to PIs	May 2012
Grant agreements to PIs	June – July 2012
Commence research	June 2012 (earliest)
Initial research needs input to broader Arctic plan	January 2013
Research needs finalized	mid-June 2013
Final report due	end July 2013

All proposal review and program management on behalf of the Institute shall be administered by NPRB staff. The exact amounts of funds awarded to a project will be determined in pre-award negotiations between the applicant and the Institute. Projects should not be initiated in expectation of funding until a fully executed Subaward Agreement or Memorandum of Understanding is received and the Institute has issued a Release of Funds email for the funded project. Applicants may not request a project start date before June 1, 2012.

Please note that although funds will be dispersed by the Institute, financial support of this RFP comes from industry. It is the applicants' responsibility to ensure that the internal policies of the institutions requesting funds as part the proposals can receive such funds.