



---

**Summary  
North Pacific Research Board  
Science Panel Meeting  
Anchorage, AK  
August 25-27, 2014**

The science panel met on August 25-27, 2014 in the NPRB board room in Anchorage, Alaska. The meeting was chaired by Tom Royer, and the following other members were in attendance: Milo Adkison, Vera Alexander, Jim Berner, Courtney Carothers, Stew Grant, Tuula Hollmen, Pat Livingston, Lloyd Lowry, Chris Siddon, Suzann Speckman, Pat Tester, Polly Wheeler, and Bill Wilson. Science panel member David Witherell attended on the first day but was absent for the remainder of the meeting (due to illness). Science panel member Carin Ashjian was absent for the duration of the meeting (due to previously scheduled field work). The meeting was staffed by Matt Baker, Danielle Dickson, Susan Dixon, Carrie Eischens, Abigail Enghirst and Denby Lloyd.

**1. Call to Order and Approve Agenda**

The meeting was called to order at 8:30 am. New science panel members Milo Adkison, Courtney Carothers, Lloyd Lowry, and Suzann Speckman were introduced and welcomed. The agenda was reviewed and approved with the addition of an item under "10. Other Matters" to discuss a replacement and potential recommendation to the board to fill the science panel seat left open by Steven Jewett, who was unable to accept the position that he had been offered in the most recent round of nominations. Staff gave a safety briefing regarding procedures to follow in the event of an emergency. Staff also announced the upcoming departure of Carrie Eischens, current chief of operations, in mid-December and noted that NPRB would be recruiting a program manager for the annual program in the near future.

**2. Conflict of Interest Policy**

Staff provided an update on the Conflict of Interest policy which was amended and finalized by the board at their May 2014 meeting. Since last reviewed by the panel, the board amended the policy so that letters of support written by a panel member's institution would be considered a "disclosure only" conflict and would not require the panel member to be recused from discussion of that proposal. In the case where the science panel member had personally signed a letter of support, that panel member would be recused. All new panel members signed the required disclosure form that states they had read and understood the policy.

**3. Budget Review**

Staff reviewed the current and projected budget for NPRB in the coming years. It was noted that while there continues to be sufficient funds for scientific research, administrative costs are approaching the 15% cap set by NPRB's enabling legislation. There is no plan to reduce staffing as a result but it is something that the board will need to be cognizant of in the coming years. Science panel members asked about the timeline and funding level of the arctic program and whether the budget would compromise a complete IERP program. Staff indicated that the vision was for the Arctic program to be integrated, but that it likely would not cover the full ecosystem, and would not therefore be as comprehensive an IERP as was achieved in the Bering Sea and Gulf of Alaska (although it could potentially grow to achieve that).

#### **4. Summary of Previously Funded Projects**

Staff provided a summary and update on the 24 projects chosen by the board for funding at their May 2014 meeting. Approved projects totaled almost \$4.7M and included 21 projects ranked as Tier 1 by the science panel and 3 proposals ranked as Tier 2. Panel members noted that the Tier 2 proposals the board funded were all from the AYK salmon focus section of the 2014 RFP. Staff confirmed that this was the case and that the board felt strongly about making a contribution to this area of research. Tier 2 projects are considered “good” projects which meet the scientific standard for NPRB funded projects.

Staff also noted the board’s decision to fund three new projects under the Long-term Monitoring Program (LTM) for a total of almost \$1.9M over a five year period. All LTM funded projects were ranked as Tier 1 by the science panel.

Panel members requested feedback on the quality of the science panel summary paragraphs that describe the proposals and justify tier rankings, given the extra effort put into those summaries during the 2014 cycle. Staff noted that the summaries were very effective, and that there were no calls from unfunded proposers following the announcement of the board’s funding decisions. Tom Royer complimented fellow panel members on the extra effort taken with these summaries and noted that they were very helpful to him in presenting the science panel’s recommendation to the board.

Staff provided information on the level of concordance between the funding decisions made by the board and the science panel’s recommendations, noting that since 2002, 93% of the projects funded by the board have ranked as Tier 1 or Tier 2. No Tier 3 proposals have been funded since 2008 and a policy was implemented in 2011 that prohibits the board from funding Tier 3 proposals.

Staff also reviewed various RFP metrics regarding the level of competition and proposal success rate with respect to NPRB’s annual request for proposal process. Panel members noted that the overall success rate of 29% was quite high compared to other funding agencies. The measure of new applicants (42% and 33% in 2013 and 2014) and their success rate (approximately 20%) with NPRB was also seen as encouraging, and is higher than with other funding agencies.

Finally, staff presented a summarized update on all projects funded by NPRB to date. This included information on the various institutions receiving funding from NPRB, as well as the distribution of funds between the seven NPRB research themes and geographic areas of interest. Information was also presented on the submission of metadata and data files to NPRB at the completion of projects, and on the continued tracking of publications resulting from NPRB funded projects.

Panel members noted that these data are very useful in justifying and defending the funds that NPRB distributes, and they indicated it would be beneficial to see these metrics and analyses in the peer-reviewed program management literature. Panel members also suggested that these metrics be presented in some fashion on the NPRB website, as well.

#### **5. 2015 Request for Proposals**

Staff provided an introduction to the annual RFP structure for new panel members. In May 2014 the Board agreed to continue the cyclical approach for funding specific research themes in 2015-2016. As a result, the 2015 RFP will emphasize Oceanography and Lower Trophic Levels, Marine Mammals, and Social Science. Research areas to be deemphasized in 2015 are Seabirds,

Humans, and Other Prominent Issues. In addition, a social science section (separate from the Humans category under Ecosystem Components) was proposed by the board for the 2015 RFP, and the total RFP amount for both 2015 and 2016 was set at \$4.5M.

The science panel discussed the approach to the “Other” subtopic under each of the RFP categories as a means of encouraging proposals on topics not already asked for in the RFP. This section is intended to be less prescriptive and allow for new ideas to be proposed. It was indicated that many potential proposers did not see this as a real alternative, given the language in the RFP for this section. Panel members suggested that it might draw more proposals if it was framed in a different way so that it doesn’t convey the sense of it being a catchall and treated as an afterthought. To this end, the panel recommended changing the language in these sections to “NPRB welcomes” rather than “While the subtopics listed above are given priority, NPRB will also consider...”. The panel also recommended removing language specifically asking for retrospective studies in this section.

Following this general discussion, staff reviewed the documents and sources used for the development of the 2015 RFP, noting that the science panel subgroups had done significant work over the summer to provide a starting point for discussions. Research priorities identified by individual through the public online RFP input form were reviewed. In additions comments by agencies such as NOAA –Alaska Fisheries Science Center, Alaska Department of Fish and Game, the North Pacific Fishery Management Council, Alaska Ocean Observing System, UAA – Institute for Social And Economic Research, as well as Prince William Sound Science Center and the US Geological Survey were reviewed.

The science panel discussed all science sections of the draft RFP. Changes were made to sections as appropriate during these discussions, resulting in the current science panel draft of the RFP. Two sections of the RFP were discussed in significant detail and are described in more detail below.

### Social Science/Humans

Appreciating the board’s intent of having a separate social science section, panel members discussed the pros and cons of separating this section from the “Humans” category under Ecosystem Components section of the RFP. The science panel noted that the distinction between Humans, Social Science, and Local and Traditional Knowledge (LTK) is often unclear and confused by applicants and reviewers. It was suggested that one RFP category could incorporate all three topics if framed in a clear and concise manner. This would allow proposers to focus on one part of the RFP when determining where their proposal fit within NPRB’s priorities. It was noted that in previously RFPs, LTK and Community Involvement have been linked, and panel members noted that this linkage potentially added to the confusion regarding how LTK was used by social scientists. After much discussion the panel recommended that the RFP include a section, under the “General Research Priorities on the Ecosystem Components” heading, that included three subtopics:

- 1) Human-ecosystem relationships – which would address the range of human impacts on marine ecosystems as well as the impacts of marine systems on humans. This section is focused on understanding the complex interrelationships between people and the environment. This section could support projects based on natural and/or social science methods.
- 2) Social sciences applied to understanding management, policy and community – which would request projects that integrate the myriad methods and perspectives of various social science fields that contribute to a greater understanding of the human environment, as well as the implications of policy and management for people and communities. This section would support the application of

social science disciplines, methods and theory (e.g., anthropology, archaeology, behavioral science, demography, economics, geography, information science, law, management, political science, psychology, sociology, and similar fields) to priority marine science issues in the NPRB geographic areas.

3) Local and Traditional Knowledge – which would request proposals for research focused specifically on gathering (and/or synthesizing) and applying local and traditional knowledge, to provide a more complete understanding of marine social-ecological systems and marine resource problems.

The panel suggested several titles for this newly formed section of the RFP including “Human Dimensions” and “Human Context”. Panel members agreed that the simple title of “Humans” was not appropriate for this newly formed section.

#### Focus Section

The panel considered a range of topics when drafting the focus section of the 2015 RFP. These topics included: Ocean Acidification, Fukushima Daiichi Radiation, Forage Fish, Arctic Cod, Pacific Salmon, and an Aleutian Islands Synthesis. Each of these topics was discussed at length by the panel members, who considered the timeliness and relevance to NPRB of the topic, research need, management need, impact, previous NPRB-funded projects on the topic, and other funding sources that may be available for work on the specific topic. As a result of that discussion, the panel members concluded that the two topics of most interest as a focus section of the 2015 RFP were an Aleutian Islands synthesis and Arctic cod. These two topics ranked the highest due to their timeliness, relevance to other ongoing regional programs in development, priority research needs including relevance to current information needs about key species of the North Pacific, relevance to NPRB science plan, feasibility at the proposed (600K) funding cap, and high potential for development of future partnerships and collaborative research. The panel prepared specific RFP language for these two topics, which can be found in the SP version of the 2015 RFP. Further details of the discussion on topics not selected are below.

Ocean acidification (OA): The panel noted that there was already federal agency money going toward research on this topic (NOAA, BOEM) and questioned whether the focus section funding amount would allow for a meaningful contribution. It was also noted that most studies were laboratory-based, which may not accurately represent what is currently happening in the Alaskan environment with respect to OA. It was further noted that NPRB has already funded OA studies, and that such proposals could respond to the RFP under other sections. If this were to be the focus section, it would need to be focused on specific, local, relevant aspects of the ocean acidification issue. Overall, the panel had a lukewarm response to the idea of making this area of research the focal section of the RFP.

Fukushima Daiichi Radiation: Panel members noted that from a health perspective this is really a non-issue since there is little evidence of a problem in that respect. There was limited discussion of the use of radiation studies as a tracer and means to better understand marine circulation patterns and distribution and movement of marine species and energy in the North Pacific. It was noted that research on this topic needs to start on the other side of the Pacific, and that by having this as the focus section it could perpetuate the false perception of radiation risk – shining a bright light on something that has already been largely resolved. The panel noted in conclusion that this is more of a public awareness issue and not an information or research need at this time. Thus, panel members did not support this area of research as the focal section of the RFP.

Forage Fish: This topic was seen as having relevance to NPRB’s mission, given the important role of forage fish and its linkage factor in the marine ecosystem. Given the amount of funding for the focus section, the scope of the RFP call would need to be very limited. Several specific study subjects were suggested: impacts of shifts or fluctuations in forage fish on higher trophic levels; interactions between forage fish species within this important ecological guild; forage fish as collectors of biotoxins; or mechanistic links between forage fish and the trophic levels above and below forage fish. The question was also raised as to whether this section would focus on commercially important forage fish species or on a specific geographical area. Overall, the panel felt that this was an important topic but perhaps not as important as some other topics, and that forage fish proposals could be submitted under the RFP’s “Fishes and Invertebrates” section.

Pacific salmon: Discussion of this topic was focused on Pacific salmon in the context of marine distribution (high seas), interactions between Pacific salmon species in the marine environment, and investigations related to capacity constraints within the marine environment. Panel members noted that salmon disaster money from AYKSSI has been allocated to similar projects on at-sea survival of juvenile salmon (in newspapers 25-Aug-14). It was also noted that NPRB was currently funding Project 1308 in Yukon delta in collaboration with AYKSSI (NPRB-marine, AYKSSI-rivers), as well as three other new AYK salmon studies funded in the 2014 cycle. There was also money from the State of Alaska (\$30 million for Chinook). There was concern about whether Pacific salmon research is already saturated with funding. It was further noted that it might be more advantageous to wait until some of the studies already being funded by NPRB and others have been completed and information gaps or areas needing further study are identified.

In concluding their discussions on the 2015 RFP, the panel developed a distribution of funds across the various RFP categories to achieve the total funding level of \$4.5M as indicated by the board. This distribution for the 2015/2016 RFP cycle is shown below.

|   | 2015 Cycle         | 2016 Cycle         |
|---|--------------------|--------------------|
| <b>1. General Research Priorities on Ecosystem Components</b> | <b>\$3,100,000</b> | <b>\$3,100,000</b> |
| a. Oceanography and Lower Trophic Level Productivity          | \$500,000          | \$200,000          |
| b. Fish and Invertebrates ( <i>\$500K proposal cap</i> )      | \$1,200,000        | \$1,300,000        |
| c. Marine Mammals ( <i>\$500K proposal cap</i> )              | \$800,000          | \$200,000          |
| d. Seabirds   | \$100,000          | \$500,000          |
| e. Human Context  | \$400,000          | \$600,000          |
| f. Other Prominent Issues                                     | \$100,000          | \$300,000          |
| <b>2. Community Involvement</b>                               | <b>\$100,000</b>   | <b>\$100,000</b>   |
| <b>3. Cooperative Research with Industry</b>                  | <b>\$400,000</b>   | <b>\$300,000</b>   |
| <b>4. Technology Development</b>                              | <b>\$200,000</b>   | <b>\$300,000</b>   |
| <b>5. Data Rescue</b>   | <b>\$100,000</b>   | <b>\$100,000</b>   |
| <b>6. Focus Section</b>                                       | <b>\$600,000</b>   | <b>\$600,000</b>   |
| <b>TOTAL</b>  | <b>\$4,500,000</b> | <b>\$4,500,000</b> |

After completion of the development of the 2015 RFP science section, staff previewed the newly developed proposal submission system that would be implemented for the 2015 cycle. Pat Tester and Chris Siddon agreed to serve as beta-testers for the new system in late September.

Science Panel members also discussed the need to revise the NPRB Science Plan and stated that it is uncomfortable to be pointing researchers to a science plan developed 10-years ago if we are looking for innovative and cutting edge science. It was noted that the current plan still had many relevant sections and that the initial plan was very expensive to develop. The panel did not feel that it was necessary to completely recreate the plan or to have a full-blown re-scoping effort. Panel members also noted that several long-time science panel members would be terming out of their roles on the panel in 2016 and it would be good to begin the process of revamping the NPRB science plan before their expertise is lost from the panel.

## **6. Communications and Outreach Report**

Staff presented an update on the communication and outreach activities since the previous science panel meeting. Activities include progress on project synopses for completed projects funded through the annual research program and Bering Sea “headlines,” which highlight research funded through the Bering Sea IERP. The 100-page magazine summarizing the Bering Sea project is still in progress, with an anticipated completion/publication date of spring 2015. Panel members were also notified of the launch of the 2015 photo contest. Attention was called to two new features of the 2015 contest: (1) rather than accepting any sea life or landscape photos, there is an underwater theme this year; (2) submissions are being accepted online, rather than only by mail.

Staff noted they are in the process of developing the 2013-2014 biennial report, with a target completion in time for distribution at the AMSS in January 2015. The report will highlight the new NPRB leadership that is focused on program refinement, given that a solid groundwork for the organization is already in place. Staff asked panel members to respond to one of two short questions regarding the impact and future of NPRB. Responses would potentially be featured on the inside covers of the report.

A newly developed strategic plan for NPRB public affairs was presented and reviewed with the panel. It was noted that the broad objective of the program is to translate technical scientific information into user-friendly terms, and to package it for maximum accessibility, exposure and impact. Several elements of the plan were discussed in detail. Specifically, panel members provided topic suggestions for the planned monthly message highlights intended to increase public awareness of and involvement in marine science. Panel members also discussed strategies for making the outreach requirement of annual research projects more effective and supported the concept of setting aside a portion of the communications budget to supplement (at the communication director’s discretion) the outreach plans for specific projects prior to finalization of the subaward process and release of fund for those specific projects. Panel members indicated they liked the idea of being able to support PIs with additional funds if they are motivated to do quality outreach. Staff also asked science panel members about their thoughts on allowing/recognizing in-kind outreach funding versus insisting that \$2,000 of NPRB funding be spent on project outreach. Panel members indicated they would be in favor of recognizing in-kind outreach funding so long as NPRB-branding did not suffer as a result.

Overall, panel members agreed that they support and appreciate the new, detailed, strategic public affairs plan.

Finally, staff provided the panel with press clips and examples of project-specific outreach that has occurred since the last meeting

### **7. Graduate Student Research Awards**

Staff provided a summary of the board's funding decisions regarding the 2014 Graduate Student Research Awards and noted that there were a large number of highly qualified applicants. Staff also reviewed the current structure of the GSRA program and indicated that Alaska Sea Grant had approached staff regarding using NPRB reviews of GSRA applicants to inform Sea Grant decisions on how to award \$100,000 in funds towards supporting graduate research. This in essence would provide four more awards to be distributed to qualified applicants. Panel members encouraged efforts to expand this program through this or similar mechanisms. Panel members also inquired how this would work and voiced concern that Sea Grant might favor University of Alaska students. Staff noted that the details of any such collaboration had not yet been discussed or finalized. It was noted that any sharing of applications with Sea Grant must be indicated in the call for applications to the 2015 GSRA program if that process was to be implemented this coming year. It was also noted that, should this extension of the program occur, the NPRB brand should also be part of the Sea Grant supported awards, given the review process by the panels and board.

Staff also noted that in recent years, there have been significantly more applicants from doctoral students than master's students. Staff asked for feedback regarding the even split of the six awards between the two degree levels. No recommendation was made to change the current distribution policy. Panel members did inquire as to whether the potential four new awards supported by Sea Grant would be evenly split between the degree levels. Staff indicated that that had not yet been discussed with Sea Grant.

### **8. Gulf of Alaska IERP**

Staff provided an update on the Gulf of Alaska Project, noting that the field work component of this project had now been completed and integrated analysis of collected data was underway. A no-cost extension for all components of the project had been requested and granted with all projects now scheduled to be completed in January of 2016. The PIs plan to hold a meeting in March 2015 to work on the development of final reports and manuscripts for three planned special issues of Deep-Sea Research Part II.

Science panel members considered a proposal for additional synthesis work to be conducted by a subset of the Gulf of Alaska investigators at a cost of \$390,814. It was noted by staff that the synthesis work proposed was seen as above and beyond the original scope of the GOAIERP project and is research that was not anticipated at the time the original GOA proposals were written five years ago. Science panel members inquired as to the impact of shifting \$400,000 to this effort and away from other NPRB priorities. Staff responded that there would be no immediate impact but the shift could potentially push back equivalent future funding of IERP-type work. It was noted by panel members that future IERP-type projects should plan for and expect such synthesis requests toward the end of such projects.

Panel members also expressed concern over how the subset of participants for this synthesis work had been selected, and staff provided an outline of the process used by the lead investigators of the current program in determining the subgroup. Specifically, synthesis ideas were developed at the PI

meeting in March 2014 and further refined in subsequent program calls. Each of the GABI team leads were then tasked with developing a set of research questions and identified the researchers critical to the implementation of those synthesis products, resulting in the current subgroup which it was noted has not yet been finalized.

After this general discussion the panel proceeded with reviewing the synthesis proposal that had been submitted. Staff walked the panel through the five proposed research themes. Panel members noted their concern about the lack of methods provided, with some panel members stating that there was not enough information in the proposal to properly review it using the normal process. It was suggested that much of the work could come in through the annual request for proposals, and there was discomfort with deviating from the standard NPRB review process. The panel discussed the possibility of viewing the current synthesis proposal as a pre-proposal and requesting a more detailed proposal that would go through the normal NPRB peer review and science panel review process. It was noted that this could delay the process by approximately six months. Disadvantages of this would be the potential loss of momentum and losing the “magic” of having this integrated group of investigators already focused on the data and goals. Panel members agreed there was potential value in pursuing this type of synthesis effort, but stated again that more information was needed to enable appropriate review. There was a request for clarification that the proposal actually represented a synthesis effort as opposed to the analysis of opportunistically collected data (specifically in reference to the theme focused on salmon) and discussion on how those aspects should be considered separately.

Some science panel members noted that a tremendous amount of review and consideration went into the initial review and selection of the GOAIERP proposal and team, and that this synthesis proposal outlines desired work that was not anticipated or expected at the onset. It was seen as a positive aspect that the PIs were trying to bring the overall project together and link findings to commercial fishery concerns, which had not been seen as a possibility at the outset of the GOAIERP program.

After much discussion, the science panel decided to recommend conditional funding of this synthesis proposal. Final approval for funding would be based on the PI’s completion of the following:

- Submitting a list of products/specific paper concepts and titles that will come out of this extra synthesis effort
- Justifying expenditure of 12 months of post-doc time for this project (justification should be in terms of this project only)
- Identifying all participants, with the final list of participants covering a broad suite and potentially including expertise from other ongoing projects.

## **9. Arctic Program**

Staff provided the panel with an update on the progress of the Pacific Marine Arctic Regional Synthesis (PacMARS) project. A final report for the project was received in mid-June. This report has been reviewed by the PacMARS Advisory committee and project PIs will be submitting a revised report in late fall. PacMARS investigators also provided advice about the direction of future Arctic marine research and should be used by the panels and board to inform discussions on NPRB’s future Arctic program. Science panel members noted a lack of upper-tropic level components, specifically Arctic cod and whale species in the PacMARS report, although the report did reference large categories of taxa and the need for future research.

Staff reviewed the decisions and direction given to the staff by the board at their May 2014 meeting with regard to the initiation of an Arctic program. Panel members were informed that the board has committed \$6M towards development of an Arctic program and requested staff present scenarios for an Arctic program design at the fall 2014 meeting. An Arctic working group was established with Vera Alexander as the science panel representative. This working group met twice over the summer to develop recommendations for the board. The working group discussed three scenarios developed by staff focusing on one which proposes to conduct research that is most relevant to the interests of Arctic communities. Further more specific research directions were developed by the staff for the science panel's review and recommendations.

The science panel discussed the proposed research direction at great length. Panel members commented that rather than focusing on the oceanography and lower tropic levels first it would be more compelling to start the effort at the top of the tropic web and the elements of the ecosystem that are important to communities of the Arctic – that being sea ice, large marine mammals and the people who depend on the Arctic ecosystem. The focus should be on what is important to people and then study what affects those components. By framing this from a top-down perspective, the funded research and the findings may not change but it might reflect a more relevant emphasis. It was additionally noted that until there is an understanding of some basic things about the big species, there is no context for the other studies.

Discussion by the science panel also focused on whether the proposed work should focus on both “keystone” species (such as Arctic cod) as well as “subsistence” species (such as the large marine mammals). The question was raised as to whether enough is known about the key species in the Arctic and perhaps it would be better to focus on that as the starting place with studies linking both upward and down the tropic structure from there. It was noted that if the program was to focus on species of human importance it would be important to go to the people. Framing the proposal in this way would provide researchers the ability to weave in local and traditional knowledge data to pose questions and guide research teams into considering larger issues.

The panel also discussed the inclusion of the nearshore, terrestrial-marine interface in the program, as well as the geographic extent of the program.

Panel members recommended starting with the idea of hotspots, leading to other subtopics.

A potential revision to the main focus was suggested: *What are the biological attributes of key species (or subsistence species) and how do physical and biological processes in the Chukchi Sea influence the distribution, abundance, and life history of these species, and how might those processes change over the coming fifty years?*

The panel also discussed whether the project would focus on intra-annual (seasonal) time scales and if there was an interest in further investigating the winter conditions and the “system reset”. While this was seen as an important component of the Arctic system, such a study, done properly, was considered beyond the funding level being provided.

With reference to the subtopics outlined by staff in meeting Attachment 9d (research scenarios), the panel concluded that their recommendation would be to have the framing idea for an Arctic program be subtopic G (Patterns in subsistence harvest and potential shifts in response to ecosystem change) with inclusion of both ecosystem change and variability. Subtopics D (Biological

hotspots), E (Keystone species) and F (Thresholds and tipping points) could be collapsed and refined to provide support to that overarching framing concept (i.e., the current subtopic G). Subtopics A (Production phenology, distribution and magnitude), B (Phenology of secondary production and match-mismatch) and C (Influence of winter conditions and system reset) could also be combined and would follow from the above components.

In essence the panel was supportive of the concepts and ideas of the proposed Arctic plan but recommended restructuring the program with a top down approach. They also stated that the questions asked in the Arctic RFP should be synthetic rather than tropic level specific, such that the questions could be answered from more than one perspective. The challenge would be to write questions that require interdisciplinary involvement to answer.

The science panel had a lengthy discussion regarding the structure of the RFP and the process/timeline for review. Given the number of potential partners, it is likely to be complex. The panel discussed the pro and cons of a “winner-take-all” approach versus funding individual proposals that would then be integrated. The panel consensus leaned towards funding individual projects, providing the flexibility to mix and match, with encouragement to cross-reference and collaborate at the early stages. Panel members discussed the potential for following a letter of intent/pre-proposal process which might help facilitate the collaboration/cross-reference process early on. Panel members noted that it would be necessary to make clear early on that the expectation is for there to be interdisciplinary and integrated work throughout the program.

Given the previous discussion regarding the GOA synthesis proposal, panel members indicated it would be important to consider at the outset how to achieve and budget for integration and synthesis among all levels during the process and not just at the end. There is an important coordination level but also a synthesis ecology element that must be considered in the design of the program. Panel members suggested staff revisit the GOA IERP development documents as the Arctic RFP is being developed to review the pros and cons of different methods of constructing an integrated program.

In summary, the Science Panel recommends that the board

- consider a top-down approach to the intended Arctic program
- require that proposers have an explicit link to two or more trophic/topic levels
- require proposals to include real and meaningful interdisciplinary connections, to include involvement of PIs and not just acknowledgment of connections.

The science panel further recommends that the science questions be broad enough to force integration and that the board should look for proposals that are highly synthetic throughout the project (within the project itself and then across all projects once they are funded). The board should also consider having a pre-proposal process for the funding of this program.

With respect to the Arctic working group the science panel requests that the board add an additional science panel member (specifically Lloyd Lowry) to the working group to help further the development of this program.

## **10. Other Matters**

**Bering Sea IERP** - Staff provided an update on the status of the Bering Sea IERP, noting that all projects had now submitted their final reports and staff, along with contracted program manager Tom Van Pelt, are in the process of completing final reports reviews and closing out individual

projects. All projects are anticipated to be closed by the end of September. Publication of the third special issue of Deep-Sea Research Part II is nearing completion with a publication date of October 2014. A fourth special issue is currently in production with 30 manuscript currently in review and an anticipated publication date of early 2015.

2015 Alaska Marine Science Symposium - An update regarding the upcoming Alaska Marine Science Symposium was also presented. The symposium is set for January 19-23, 2015 at the Hotel Captain Cook in Anchorage. Travel to the symposium by panel members will be supported by NPRB. Panel members were reminded to register for the symposium and to register as “volunteers”. Panel members inquired whether there was a specific room block at the Hotel Captain Cook for panel members and also if it was possible to have the poster venue open during the afternoons for poster viewing when there was less of a crowd. Staff indicated they would look into these items with Crystal Benson, the chair of the AMSS organizing committee and report back to the panel as soon as possible.

Outside Funding Requests - Staff reviewed the current policy of NPRB support of outside meetings (financial support for meetings not directly connected to NPRB activities) and reviewed potential changes to the policy that the board would be asked to implement at their upcoming meeting. The panel supported the changes suggested by staff.

Science Panel Membership – Panel members discussed potential replacements for the panel seat left open by the departure of Steven Jewett. Staff reviewed candidates nominated in response to the previous call who had expertise similar to Dr. Jewett. These were Christopher Caudill (University of Idaho), Melissa Haltuch (NOAA-NWFSC) and Phil Mundy (NOAA –AFSC). The science panel concluded that they recommend Phil Mundy to fill the currently vacant seat on the panel.

Meeting schedule – The panel was reminded of the dates and location of the spring 2015 science panel meeting which is set for March 30-April 3 at the Sheraton Hotel in downtown Seattle. The panel also chose the week of August 24-28 for their fall 2015 meeting.

