

**Meeting Summary**

North Pacific Research Board  
NPRB Conference Room  
Anchorage, AK  
April 27-29, 2011

**1. Committee of Visitors Report and Workgroup Actions**

Before the formal commencement of the full Board meeting, the Advisory Panel and Board met together to discuss the report drafted by the Committee of Visitors (CoV) Report Task Force that included members from the Board, Science Panel (SP) and Advisory Panel (AP). A separate joint meeting summary reflects those discussions.

**2. Call to Order/Approve Agenda and Meeting Summaries**

Call to Order: The Board convened their meeting at 3:30 p.m. on Wednesday, April 27, 2011. Present were Ian Dutton (Chairman), Eric Olson (Vice Chair), Sue Aspelund, Dorothy Childers, Douglas DeMaster, Michele Longo Eder, John Gauvin, Leslie Holland-Bartels, Howard Horton, Paul MacGregor, Steve MacLean, Heather McCarty, Gerry Merrigan, CAPT Michael Cerne, and Bradley Smith. Caryn Rea was absent. Science Panel chair Doug Woodby and Advisory Panel chair Jeff Stephan were present to present their respective reports. Francis Wiese, Carrie Eischens, Tom Van Pelt, Nora Deans, Tara Riemer Jones and Katie Blake staffed the meeting. Visitors present were Chris Oliver, Pete Jones, Pete Hagen, Cynthia Suchman, and Lt. Anthony Kenne.

Agenda: The agenda was approved after removing item 3b.

Safety Briefing and Election of Officers: A safety briefing was given by Francis Wiese followed by the election of officers. Ian Dutton was re-elected Chairman and Eric Olson was re-elected Vice Chairman for one-year terms.

Meeting Summaries: The Board approved the summary of their September 2010 and January 2011 meetings.

**3. CoV Report Actions**

Dutton referred back to the joint discussion held with the AP earlier in the day on the CoV Task Force report. CoV Task Force comments were divided into eight sub-groups and the Board opted to go through these again to see if there were any suggested changes. The AP and SP chairs were asked if they had any further comments that had not been presented during the joint session. Jeff Stephan, AP chair presented a comment from the AP regarding the role of the AP in RFP proposal selection (see April 2011 AP minutes for full comment). Doug Woodby, SP chair, stated he had nothing further. Dutton then pointed out that there were three larger issues to be discussed that would need decisions by the Board at their September 2011 meeting:

1. Conflict of Interest (CoI) issues
2. Standard Operating Processes and Procedures manual
3. Science Panel proposal rating system

The Board decided that, as with the CoV Report, the CoV Task Force response document should be public. It was noted, however, that staff should review this document first, clean up inconsistencies or inaccuracies, and resend it back to the full Board for final approval before posting it. The Board proceeded to go through the Task Force report by section, focusing mainly on CoI and SP tier system issues.

**D1 – Long-term monitoring:** Board needs to resolve whether it wants one or two workshops dealing with this topic (just the Board and/or a larger select group). It was noted that a better definition of long-term monitoring (LTM) in the context of the NPRB is needed. A Workgroup was formed (**Workgroup 1-LTM to include:** staff member, Leslie Holland-Bartels, Nancy Bird, Doug DeMaster and Paul MacGregor) to develop a whitepaper for the September meeting. The group should include current LTM efforts in Alaska, decide whether a larger workshop is needed and also address item **D2** and **R5**.

**D3 – Science Panel review process:** this item needs to be further discussed and decided upon at the September meeting. A workgroup was formed (**Workgroup 2-Proposal review to include:** staff member, SP member, Heather McCarty, Doug DeMaster, John Gauvin, Leslie Holland-Bartels and Gerry Merrigan) to further develop this topic and present options to the Board. The Workgroup should also address **D4**, **P3**, **G5** and consider how to best define ‘highly meritorious’. The group should also consider the motion put forth by the AP at the April 2011 meeting regarding their input to stakeholder relevance of scientifically meritorious proposals.

**R3 – LTK position:** include ‘at this time’ after ‘a new staff position is unnecessary....’

**R4 – Human section of RFP:** Board asked staff to present a recommendation at the September meeting of how to best deal with this issue.

**P1 – Proposal submission period:** The Board noted that 86% of survey respondents indicated that the current length of time is not an issue and that they don’t want more time. Thus, there seems to be no clear need to change the timing.

**P4 – Proposal reviews:** The Board removed the first sentence as well as the first ‘should’ in the second sentence.

**G5/G4 – AP-SP communication and AP review:** The Board decided to change the language under G5 to say ‘see G4’, and to include this topic in Workgroup 2.

**G6 – AP and SP terms:** The Board supported the continuation of the staggered terms for the AP per the current policy, and agreed to implement three-year staggered terms for the SP with a two-term limit. This will effectively make the term policy equal between the two panels. When approving the final Task Force Document, the Board will effectively agree to this **Policy Change**.

**C1 – CoI policy:** A workgroup was formed (**Workgroup 3-CoI:** Cynthia Suchman, Ian Dutton, Sue Aspelund and Michele Longo Eder) to further develop this topic and present options to the Board in September. The Workgroup should also address all items in this subgroup.

**C2 – Board membership:** In the response on page 12, the Board deleted ‘do not’ from the first sentence, as well as the ‘(e.g. NMFS)’ in line 5.

**C3 – Reviewer COI:** Delete ‘but with caveat’ after ‘Disagree.’

**E2 – Only one IERP:** Delete the sentence in line 4 starting with ‘Moreover....’

**E4 – MOUs:** Change ‘MOU’ to ‘partnership’ throughout E4.

**E5 – Science needs:** Should note that we do not do this right now.

**E9 – Reviewer composition:** change ‘Modify’ to ‘Disagree’.

As a final statement, the Board noted that staff should proceed to make the edits noted above to the Task Force document, add staff responses and send the document back to the Board for final review.

#### **4. Budget Review**

**KPMG audit:** Fiscal Agent Tara Riemer Jones reported that the KPMG audit of the Board’s finances for the year ending on September 30, 2010, passed without any problems due to the good work of the financial program at the Alaska SeaLife Center.

**Grants status:** **Grant 2** covered FY 2007-08 which closed out on September 30, 2010. Twenty-four thousand dollars was left on the table on this grant. A request has been made that the money go back into our IERP funds. **Grant 3** covered all administrative expenses during 2009-10, as well as panels and committees, other expenditures, and meetings. It also covered about \$4.9 million of the total \$16 million BSIERP cost, plus about \$8.3 million for 800 and 900 series projects. Some of the expenses for fiscal year 2011 have also been billed to this grant due to projects leaving money on the table. This is freeing up funds on Grant 4, which the Board will have available to allocate to the 2011 RFP. Grant 3 is fully obligated right now. **Grant 4** covers one year of administrative costs but most of the planned expenditures for panels and committees, other expenditures, and meetings have been covered by Grant 3. Grant 4 also covers the rest of BSIERP, the first installment of the GOAIERP and the 1000 and 1100 projects. The Board expressed a need to consider how future funds will be considered for allocation, including projected plans for projects like the Arctic Focus and BSIERP 2. They requested the new ED to come back in September with some thoughts on long-term strategies.

**Grant 5 proposal:** The proposal for Grant 5 for \$9,870,269 was presented. The Board approved the budget proposal unanimously.

#### **5. Proposal Review for 2011**

**Overview of current research funded by NPRB:** Since 2002, NPRB has funded 252 regular projects, for a total of \$41.6M. To date, 184 (\$30.5M) of these have been completed. Tables were provided to the Board showing how projects have been assigned to a primary ecosystem priority, recognizing that many projects may be relevant to multiple ecosystem components. A status report also was provided on transfer of metadata and data to NPRB and the two-year embargo period for data was explained. To date, there are a total of 273 published papers and another seven in press. Publications are available via the NPRB Publication Library webpage (<http://publication.nprb.org/list.jsf>).

**Overview of 2011 request for proposals and proposals received:** The 2011 RFP was released on October 8, 2010, with a funding target of \$3.5 million for marine research in the NPRB study area commencing in 2011. One hundred and sixteen proposals were successfully submitted by the December 5, 2010, deadline, requesting \$22.8 million. Two proposals were subsequently withdrawn by the applicants. No specific reason was given for these withdrawals. As in previous years, NPRB staff conducted an initial evaluation on the remaining 114 proposals to determine compliance with 2011 RFP guidelines and

whether proposals were responsive to the chosen research priority. Staff rejected a total of four proposals based on non-compliance with formatting guidelines, and identified eleven proposals as potentially non-responsive to the RFP category the applicants chose to compete under. An ad-hoc committee of the Science Panel helped evaluate the scientific responsiveness of these proposals and concluded that 8 proposals were non-responsive to the RFP research priority chosen by the applicants. These were returned to the applicants without further processing. The remaining 102 proposals were sent out for anonymous peer review. The goal was to obtain at least two but ideally three high-quality technical reviews for each proposal. A total of 574 invitations to review were sent out by NPRB staff resulting in 286 completed peer reviews by April 12<sup>th</sup>. Completed reviews were distributed such that 36 proposals received two reviews, 50 proposals received three reviews and 16 proposals received four reviews.

Review conflict-of-interest procedures: The Board reviewed its conflict-of-interest procedures, and members disclosed their affiliations and conflicts as proposals were discussed in detail. A discussion ensued about individual Board members stating conflicts of interest and whether conflicted members could still vote on the main motion. The Executive Committee took time to discuss this separately before the meeting proceeded. It was concluded that Board members should state their conflict and recuse themselves as individual proposals are discussed and voted upon, but that all members could vote on the main motion.

Science Panel process: Science Panel Chair Doug Woodby provided the panel's recommendations based on their meeting on April 14-17, 2011 in Seattle, Washington. Before going through specific proposals, he noted the modified process the SP followed this year. Specifically, as in past years, the Panel first went through all proposals and determined tier rankings according to their scientific merit. The Panel then did a second pass through the Tier 1 proposals to fit within the RFP budget categories. This second pass did not make calls on fisheries management priority and was based on scientific nuances only. The SP wanted to provide scientific nuances amongst Tier 1 proposals to help approach the budget targets, but without imposing strict budget constraints or other considerations (e.g. management priorities). Unlike previous years, the SP decided to show the Board both sets of rankings - one which showed the proposals by tiers according to scientific merit only and the second set where the Tier 1 proposals fit both scientific merit and conformed as closely as possible to the RFP category budgeting caps. Proposals removed from Tier 1 during the second phase were noted as "Tier 1 minus" in the final recommendation.

Science Panel Recommendations: Of the 101 viable proposals (one more proposal was withdrawn shortly before the SP meeting), the Panel recommended 25 proposals for Tier 1 funding for a total of \$4.69M, with another 15 proposals designated as 'Tier 1 minus'. Twenty-two proposals were designated as Tier 2, indicating they deserved consideration if specific concerns regarding the scientific integrity of the proposals could be clarified and satisfactorily adjusted by the PIs. Thirty-nine proposals were placed in Tier 3 indicating they had substantial scientific flaws and should not be funded. Woodby reviewed all Tier 1 and Tier 1 minus proposals and answered questions on others as necessary.

Public comments: There were no public comments.

Develop funding recommendations for Secretarial approval: The Board considered the proposals and the recommendations of the Science Panel for the rest of the day Thursday, and on Friday morning moved forward with a framework motion. Dutton indicated that under the current budget situation, he was willing to consider \$4M as an upper RFP funding cap this year, up from \$3.55M established in the RFP. A motion was made to remove proposal #9 focused on Iron in the Gulf of Alaska (GOA) and to fund it separately as part of the GOAIERP, while keeping the RFP cap at \$3.55M. This motion was successfully amended to clarify that the \$3.55M be a final cap, and then amended again to change the word 'cap' to 'target amount'. After much discussion the original motion was withdrawn, with thoughts about revisiting this later on as part of the GOAIERP.

A framework motion was made to adopt all proposals designated as Tier 1 and Tier 1 minus by the Science Panel. This included 40 proposals, totaling \$6.7M. The Board then proceeded to amend this motion to reach their \$3.55M-4M goal as follows:

- a. An amendment passed to remove proposal 84, regarding community adaptability on the Kenai Peninsula for \$199,202. Aspelund and Dutton recused from this amendment vote.
- b. An amendment passed to remove proposal 9, regarding iron in the GOA for \$499,918, citing that it was the intent to discuss this proposal again later in regards to the GOAIERP.
- c. An amendment passed to add proposal 106, regarding Steller sea lion (SSL) surveys for \$199,446, but to make funding conditional on ground-truthing data collected with the actual National Marine Mammal Laboratory (NMML) SSL surveys.
- d. An amendment passed to remove proposal 102, regarding passive contaminant samplers for \$199,997.
- e. An amendment passed to remove proposal 17, regarding the life history of skates for \$307,212. DeMaster recused from this amendment vote.
- f. An amendment passed to remove the remaining Tier 1 minus proposals from the Fish and Invertebrate section (proposals 22, 25, 27, 32, 39, 43, 54, 61).
- g. An amendment passed to remove proposal 36, regarding rockfish genetics for \$381,260.
- h. An amendment passed to remove proposal 38, regarding satellite tagging of dogfish for \$123,575. DeMaster recused from this amendment vote.
- i. An amendment failed (ExCom 2-2, Other 8-3) to remove proposal 45, regarding pink salmon plasticity for \$157,350.
- j. An amendment passed to remove proposal 56, regarding ocean acidification and crab larvae for \$133,783.
- k. An amendment passed to add proposal 43, regarding EST markers for rockfish for \$43,747.
- l. An amendment passed to add proposal 22, regarding age validation for cod for \$63,752. DeMaster and Horton recused from this amendment vote.
- m. An amendment passed to add proposal 110, regarding data rescue for benthic invertebrates in the Arctic for \$49,985.
- n. An amendment was made to remove proposal 70, regarding algal toxin exposure in marine mammals for \$88,446. After further discussion and consideration of conflicts of interest the motion was withdrawn.
- o. An amendment passed to remove proposal 71, regarding distribution and age structure of SSL for \$238,600. DeMaster recused from voting on this amendment.
- p. An amendment failed (ExCom 1-3, Other 2-9; DeMaster recusing) to add language to the feedback to applicants from proposal 72 for \$392,500, asking them to revise their statement of work to only focus on scat collections and not on the population dynamics and the regression analysis aspect.
- q. An amendment passed to remove the two-year data publishing embargo for proposal 72, thus asking PIs to make their data immediately available to the public following completion of the project. DeMaster recused from voting on this amendment.
- r. An amendment passed to remove proposal 73, regarding SSL foraging behavior for \$141,869.
- s. An amendment passed to remove proposal 74, regarding development of a telemetry instrument deployment method for SSL for \$156,023.
- t. An amendment passed to remove proposal 96, regarding reducing sablefish depredation for \$206,507.
- u. An amendment passed to remove proposal 97, regarding imaging oil under ice for \$365,913.
- v. An amendment passed to remove proposal 82, regarding pollock harvest oral history for \$24,521.
- w. An amendment was made to add proposal 25, regarding the collapse of the Kodiak shrimp stock for \$73,808. After further discussion the motion was withdrawn.

- x. An amendment was made to add proposals 27, 32 and 56, regarding spiny dogfish, prey quality and acidification effects on crab for a total of \$586,029. After further discussion the motion was withdrawn.
- y. An amendment passed to add proposal 34, regarding red king crab movement for \$293,522.
- z. An amendment passed to add proposal 27, regarding aging of dogfish for \$182,962.
- aa. An amendment was made to add proposal 56, regarding beluga river forage fish baseline for \$393,330. After further discussion the motion was withdrawn.
- bb. An amendment failed (ExCom 1-3, Other 5-3, DeMaster recusing) to add proposal 82, regarding pollock harvest oral history for \$24,521.

The main motion passed unanimously at 1:28 pm Friday April 29, 2011, resulting in 25 proposals recommended to the Secretary of Commerce for funding for a total of \$3,541,346, based largely upon the recommendations of the Science Panel. A motion was made to fund proposal 9 as part of the GOAIERP, adding these project funds (\$499,918) to that overall program. The motion passed unanimously, and this spending plan was included in the recommendation to the Secretary of Commerce.

Funding Revisions and Stipulations: Four out of the 25 proposals recommended to the Secretary of Commerce received conditional funding as follows:

- Proposal 34: Revise statement of work to address Science Panel and technical review comments. Specifically, investigators must provide more details on the methods and analysis proposed, and how each of the stated objectives will be met.
- Proposal 72: The Board stated that this award was conditional on the investigators agreeing to waive the standard two-year data embargo placed on the publication of project data by NPRB. The data obtained by this project will be very important to management issues and need to be available to the general public as quickly as possible.

Proposal 106: Revise statement of work to address comments from Science Panel and technical review. Specifically, investigators must develop a means of validating the technology, perhaps working in collaboration with NMML to conduct surveys at the same rookeries/haulouts. The revised statement of work should also address concerns regarding whether all the requisite permits could be obtained (i.e., FAA issues and disturbance of marine mammals given the height of the overflights) and assurances on this issue.

- Proposal 110: Revise statement of work to address comments from Science Panel and technical review. Specifically, investigators should revise the statement of work to (1) confirm the involvement of Dr. Hendler and specify how many samples will be processed for the proposed \$5000; (2) provide better documentation for collaboration with the LA County Museum and confirm Dr Carey's involvement; and (3) specify the whereabouts of the taxonomic data from the photographic stations and confirm their availability.

The Board closed this process by noting that it will help review specific feedback language for proposals recommended by the SP but not chosen for funding by the Board. It was also agreed that, overall, the process followed this year by the SP and the Board was an effective and constructive one, leaving sufficient time to discuss the large number of meritorious proposals received.

## **6. Education and Outreach Report**

Nora Deans gave an overview of the Education and Outreach products and efforts since September 2010 for the regular program, the Bering Sea Project and the Gulf of Alaska Project and announced the winners of the photo contest after the Board judged the finalists. She also presented and asked for input on the NPRB two-year report. The Board commended her on the excellent ongoing communication, education and outreach work.

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

The 2011 Graduate Student Research Awards (GSRA): The Awards were announced October 20, 2010 with online application submission available as of December 3, 2010 and an application deadline of February 11, 2011. Thirty-one applications were successfully submitted by the deadline, 14 from Masters students and 17 from Ph.D. students. One application was subsequently rejected because the research topic was outside of the scope funded by the North Pacific Research Board. Each of the remaining 30 applications was assigned to two Science Panel members for review.

Science Panel: In formulating their GSRA recommendations, the Science Panel first limited discussion to those applications that had received at least two “Very Good” rankings from the Science Panel’s independent reviews. This narrowed the field of applicants from 30 to 13. Unfortunately, neither of the two applications from students pursuing quantitative stock assessment research was of sufficient quality to go forward to the next phase of review. For the remaining 13 applications, the Panel, as a group, gave two separate rankings (out of 10) on proposal merit and student qualification, recognizing that for graduate awards, student qualifications should be weighted just as high, if not higher, than the scientific merit of the proposal. This ranking system resulted in two applications with a perfect score of 20 (one Ph.D. student and one MS student). Three other applicants scored 19 out of 20 (two Ph.D. and one MS student). These applications formed the basis of the Science Panel’s recommendation for awards for the 2011 GSRA.

Advisory Panel: The AP also presented their recommendations to the Board, stating that their process began with the same 13 applications and considered proposal topics and stakeholder relevance, which resulted in an overlap with four of the five applications recommended by the SP. The exception was their recommendation of application 418 (Gulf of Alaska skates) instead of 428 (movement of demersal fishes).

Board Decisions: The Board considered the SP and AP recommendations and moved to accept the five applications recommended by the SP. An amendment to this motion passed to add application 428 recommended by the AP, bringing the total number of awards to 6. The main motion passed, with the Board awarding six 2011 Graduate Student Research Awards, at \$20,000 each to the following applicants:

**Delphine Mathias**, Ph.D. student, University of California San Diego, Scripps Institution of Oceanography: *Quantifying sperm whale depredation rates using passive acoustic detection and tracking.*

**Shiway Wang**, Ph.D. student, University of Alaska Fairbanks: *Tracking the contribution of ice algal fatty acids to ice seals in the Bering Sea from 2003 – 2010.*

**Joseph Bizzarro**, Ph.D. student: University of Washington: *Resource utilization of the Gulf of Alaska skate assemblage with applications for ecosystem-based management.*

**Julie Nielsen**, Ph.D student, University of Alaska Fairbanks: *Multi-scale movement of demersal fishes in Alaska.*

**Raphaelle Descoteaux**, MSc student, University of Alaska Fairbanks: *Effects of ocean acidification on development of larval Tanner crabs (*Chionoecetes bairdi*) in Alaska.*

**Matthew Lawonn**, MSc student, Oregon State University: *Breeding Ecology of Kittlitz's Murrelet on Kodiak Island, Alaska: Limiting Factors for a Declining Seabird Species of Conservation Concern.*

2012 Awards: During the GSRA discussions, it was noted that for 2012, the Board would like to consider a) giving Alaska students preference in the case of ties; b) raising the funding amount; c) accounting for overlap with other awards students are receiving; and d) using stakeholder relevance as a criteria. A workgroup was formed (**Workgroup 4-GSRA to include**: staff, an SP member, an AP member, Sue Aspelund, Doug DeMaster, Heather McCarty and Eric Olsen) to deal with these topics and report back at the September meeting.

#### **8. Gulf of Alaska Integrated Ecosystem Research Program**

Wiese gave a brief overview and status of the Gulf of Alaska Project, detailing the overarching hypotheses, sampling grid and field calendar as well as a quick review of the February 2011 Seattle Gulf of Alaska Project PI meeting. No actions were required.

#### **9. Bering Sea Integrated Ecosystem Research Program**

BSIERP lead PI Mike Sigler gave a Bering Sea “headlines” talk to the Board focusing on the main results to date of the program, and particularly those pertaining to fish and fisheries. Sigler also introduced the “Road-Map” progress-tracking tool being developed by the Bering Sea Project Science Advisory Board and NPRB and NSF staff. The presentation was well received. Van Pelt and Wiese also provided a very brief status report on the Bering Sea Project, with focus on the 2011 Principal Investigator Meeting, publications, data management, modeling projects, and program integration.

#### **10. Arctic Strategy for NPRB**

The Arctic Subcommittee: The workgroup met on Wednesday evening to follow up on the December meeting and to determine how to move forward with an Arctic strategy. Although there are many funding challenges, not least of which is the uncertain federal budget, there continues to be a lot of interest in moving forward with developing a strategic research plan and defining a coordination role for NPRB. It was noted that NPRB should be specific in all instances that Arctic for NPRB means High Arctic (i.e. north of Bering Strait, as opposed to encompassing the Bering Sea, as in the case of NOAA). It was also pointed out that the new staff position currently being recruited for NPRB will dedicate about 30% of their time to the Arctic.

Plan Development: It was decided that the Arctic Subcommittee would meet again before the September meeting to continue framing the intent of the Board’s activities in the Arctic. At the same time, staff was directed to continue developing a more detailed plan for the September Board meeting discussion. Such a timeline would allow the rest of 2011 and most of 2012 to develop collaborations for an Arctic program, in time for a 2013 RFP and field work in 2014, if so desired. Board members noted that the budget projections presented in September should include some strategic thinking about Arctic and other long-term IERP planning.

## **11. Other Matters**

Executive Director Transition Cynthia Suchman, the new NPRB Executive Director who will start June 1, gave an outline of what she sees as her near-term priorities, highlighting (1) the development of a good working relationship with staff, Board and Panel members; (2) optimization: responding to the CoV report, and (3) long-term planning, particularly in regards to the Science Plan, IERPs and other future opportunities available to us given our funding scenario. Several Board members invited Suchman to stop by their respective locations.

Resignation of Steve MacLean: Steve MacLean regrettably resigned his position on the Board during the meeting. The Board thanked Steve for his work for the Board, both as an Advisory Panel member and a Board member, and expressed best wishes for his future endeavors at the North Pacific Fishery Management Council.

Data Management Report: As requested, Wiese gave a brief overview of NPRB Data Management policies and procedures.

Outside Funding Requests: Wiese reviewed the four outside funding requests and presented staff recommendations on funding levels vis-à-vis past support and the budget available for such activities. The Board approved the following outside funding request for a total of \$33,000:

1. PICES/ICES/IOC Climate Change Symposium May 15-19, 2012 in Korea for \$15,000
2. Illustrated keys to free-living Invertebrates of Eurasian Arctic Seas and adjacent deep waters for \$8,000
3. American Fisheries Society Annual Meeting September 4-8, 2011 in Seattle for \$5,000
4. Wakefield Fisheries Symposium September 14-17, 2011 in Anchorage for \$5,000

September 2011 Meeting Location: The Board decided to hold their September 2011 meeting in Barrow on September 19-21. The intent is to meet for two-and-a-half days with an additional half-day dedicated to a community event or some other social activity with the community. The intent would be to fly to Barrow on the 18<sup>th</sup> with the possibility of departing on the evening of the 21<sup>st</sup>.

Workgroups: All four workgroups established during this meeting, as well as the Arctic Subcommittee, should be prepared to present their recommendations to the full Board in September.

Adjourn: The Board adjourned at 3:26 p.m. on Friday, April 29, 2011.