North Pacific Research Board

“Building a clear understanding of the North Pacific, Bering Sea, and Arctic Ocean ecosystems that enables effective management and sustainable use of marine resources”

www.npprb.org
Research Funding

- Dinkum Sands funds – 1997: 20% of interest

- Total Research $17 million for 94 projects:
  - $1.2 million for 2002
  - $7 million for 2003
  - $3.3 million for 2004
  - $5.5 million for 2005

- $4.5 million for 2005 and 2006 from EIRF, plus appropriations of $3 million in 2004 and 2005

- Plan for ~$6 million per year for next 4 years

- Could be higher if Treasury rates improve or augmented by appropriations
NPRB Geographic Scope

EIRF Legislation:

“...conduct research activities on or relating to the fisheries or marine ecosystems in the north Pacific Ocean, Bering Sea, and Arctic Ocean (including any lesser related bodies of water), with priority on cooperative research efforts designed to address pressing fishery management or marine ecosystem information needs.”
NPRB Mission

“Building a clear understanding of the North Pacific, Bering Sea, and Arctic Ocean ecosystems that enables effective management and sustainable use of marine resources”

Five Goals:

• **Improve understanding of North Pacific marine ecosystem dynamics and use of the resources;**

• **Improve ability to manage and protect the healthy, sustainable fish and wildlife populations that comprise the ecologically diverse marine ecosystems of the North Pacific, and provide long-term, sustained benefits to local communities and the nation;**

• **Improve ability to forecast and respond to effects of changes, through integration of various research activities, including long-term monitoring;**

• **Foster cooperation with other entities conducting research and management in the North Pacific, and work toward common goals for North Pacific marine ecosystems; and**

• **Support high quality projects that promise long-term results as well as those with more immediate applicability.**
• 3 meetings in 2003
• Advisory Panel
• MOA
• $7 million research
• Sci Symposium

2003

• 4 meetings in 2002
• Staff & SOPPs
• Web site
• Science Panel
• $1.2 million research

2002

2001

• 2 org. meetings
• Mission and goals

• 4 meetings in 2002
• Staff & SOPPs
• Web site
• Science Panel
• $1.2 million research

2005

• Sci symposium
• $4.5 million research
• Implement science plan
• Synthesis

2004

• 4 meetings
• Sci symposium
• $3.3 million new research
• Receive NRC report
• Draft & submit science plan
• Research coordination
• Hire data systems manager

North Pacific Research Board ~ Anchorage, Alaska
<table>
<thead>
<tr>
<th>Categories of Research</th>
<th>No. Projects</th>
<th>Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceanic and Estuarine Salmon</td>
<td>9</td>
<td>$2.29 million</td>
</tr>
<tr>
<td>Fisheries Habitat</td>
<td>12</td>
<td>$3.15 million</td>
</tr>
<tr>
<td>Other Fisheries-Related Research</td>
<td>22</td>
<td>$2.66 million</td>
</tr>
<tr>
<td>Marine Mammal</td>
<td>16</td>
<td>$2.76 million</td>
</tr>
<tr>
<td>Marine Food Web Ecological Studies</td>
<td>29</td>
<td>$5.86 million</td>
</tr>
<tr>
<td>Education, Outreach, and Synthesis</td>
<td>6</td>
<td>$1.12 million</td>
</tr>
</tbody>
</table>
North Pacific Research Board: Projects 1-30
1. NPAFC salmon tagging & genetic ID
2. Kuskokwim chum salmon early ecology
3. Kvichak sockeye genetics
4. Copper River salmon estuarine survival
5. Salmon data warehouse ADFG
6. Preseason sockeye forecasting
1. St. Paul Halibut thermal preferences
2. Kodiak-Shumagins forage fish studies
3. PWS herring pop. health studies
4. Bycatch video monitoring on trawlers
5. Salmon bycatch reduction in trawling
6. Herring spawning cues at Togiak
7. Rougheye rockfish genetics in NGOA
1. Deep coral mapping
2. Kodiak juvenile flatfish habitat
3. Togiak nearshore habitat mapping
Salmon  O. Fish  Habitat  Shellfish  Ecosystem  Mammals  Seabirds

1. Bitter Tanner crab studies
2. Blue crab cultivation techniques
1. Continuous plankton recorder: plankton, seabird and marine mammal observations on ships of opportunity
2. Biophysical moorings 2 & 4
3. Protocol for detecting change in Bering Sea
1. Right Whale acoustics
2. Sperm whale – longline interactions
3. Ice seal bio-monitoring
4. PWS harbor seals foraging ecology
5. Beluga whale wintering grounds
1. Pribilof – Aleutian seabird diet studies
2. Short-tailed albatross – fisheries interactions
3. Seabird – trawl 3rd wire interactions
EIRF for 2002-2003: Funded 38 projects for $8.2 million

North Pacific Research Board ~ Anchorage, Alaska
## Annual Cycle

<table>
<thead>
<tr>
<th>Event</th>
<th>Activities</th>
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</thead>
<tbody>
<tr>
<td>May-June</td>
<td>Meeting: Science reports and draft research priorities</td>
</tr>
<tr>
<td>Late September</td>
<td>Meeting: Board approves RFP Release</td>
</tr>
<tr>
<td>Early October</td>
<td>Release RFP</td>
</tr>
<tr>
<td>Early December</td>
<td>Proposals due</td>
</tr>
<tr>
<td>January</td>
<td>Science Symposium and Peer reviews</td>
</tr>
<tr>
<td>March</td>
<td>Meeting: Board approves proposals</td>
</tr>
<tr>
<td>May-June</td>
<td>Meeting: Science reports and draft research priorities</td>
</tr>
</tbody>
</table>

Meetings mainly in Anchorage, but could be elsewhere.
Draft Science Plan
(10 year plan)

• Conceptual Foundation

• Research Themes
  • Lower Trophic Level Productivity
  • Fish Habitat
  • Fish and Invertebrates
  • Marine Mammals
  • Seabirds
  • Humans
  • Integrated Ecosystem Res. Progs.

• Other Prominent Issues
  • Contaminants
  • HAB
  • Aquaculture
  • Climate Change
  • Invasive Species

• Other Research Approaches
  • LTK
  • Cooperative Research
  • Coordination
  • Ed and Outreach

• Policies and Procedures
  • Data Management
  • Scientific Integrity
  • Specimen Archives
  • Intellectual Property Rights
  • Equipment Sharing
Table 3-1. Summary of research themes for major ecosystems components.

<table>
<thead>
<tr>
<th>Lower Trophic Level Productivity</th>
<th>Fish Habitat</th>
<th>Fish and Invertebrates</th>
<th>Marine Mammals</th>
<th>Seabirds</th>
<th>Humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrient Dynamics</td>
<td>Stock Assessment Research &amp; Development</td>
<td>Other Human-Related Impacts</td>
<td>Other Human-Related Impacts</td>
<td>Other Human-Related Impacts</td>
<td>Fishery Management &amp; Policy</td>
</tr>
<tr>
<td>Fishing Effects</td>
<td>Alternative Harvest Strategies</td>
<td>Fisheries Interactions</td>
<td>Fisheries Interactions</td>
<td>Fisheries Interactions</td>
<td>Baseline Assessment Issues</td>
</tr>
<tr>
<td>Habitat Mapping</td>
<td>Socio-economic Considerations</td>
<td>Human Values and Resource Protection</td>
<td>Human Health and Marine Resources</td>
<td>Climate Variability and Change</td>
<td></td>
</tr>
<tr>
<td>Ecosystem Functions of Habitat</td>
<td>Reducing Catch of Unwanted Species</td>
<td>Marine Habitat Use</td>
<td>Marine Habitat Use</td>
<td>Marine Habitat Use</td>
<td></td>
</tr>
<tr>
<td>Phytoplankton Ecology</td>
<td>Causes of Perturbations of Major Species</td>
<td>Foraging Success</td>
<td>Foraging Success</td>
<td>Foraging Success</td>
<td></td>
</tr>
<tr>
<td>Zooplankton Ecology</td>
<td>Ecosystem Change Implications on Fisheries Management</td>
<td>Long-term Climate Change</td>
<td>Long-term Climate Change</td>
<td>Long-term Climate Change</td>
<td></td>
</tr>
</tbody>
</table>

North Pacific Research Board ~ Anchorage, Alaska
Implementation Plan

- General directions for next 4 years
- Review and revise annually
- ~$6 million/year for planning purposes
- Relates back to science plan
- Helps shape annual requests for proposals
Science Plan
5-7 years: 2005-2010

Implementation Plan
4 years: 2005-2008

Request for Proposals
1 year: 2006
Marine Research Funding Organizations in Alaska

North Pacific Research Board ~ Anchorage, Alaska
Building a clear understanding of the North Pacific, Bering Sea and Arctic Ocean ecosystems that enables effective management and sustainable use of marine resources.

**SPOTLIGHT**

**Science Symposium**
January 24-26, 2005
Marine Science in Alaska: Geographic Information Services

**Draft Science Plan**
On September 30, the Board approved its draft science plan for review by the National Research Council.

**Board approves**
$3,623,677 for 2004 research proposals.

**Science Planning**
Comprehensive science planning of the highest quality.

**Research**
Research priorities and a request for proposals will be released each fall.

**AMIS**
The Alaska Marine Information System (AMIS) is a web-based information system covering the North Pacific.

**NPMRI**
The North Pacific Marine Research Institute.