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.

Presentation

to

Bering Sea Inter-Agency Work Group

July 17, 2006

Clarence Pautzke
North Pacific Research Board
Anchorage, Alaska

www.nprb.org

Research should address pressing fishery management issues or marine ecosystem information needs of the Gulf of Alaska, Bering Sea and Aleutians, and Arctic Ocean

Ex-officio Members or Designees

Alaska SeaLife Center	Tylan Schrock (Chairman)**
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Secretary of Commerce	Douglas DeMaster, NMFS**
Alaska Dept of Fish & Game	Earl Krygier**

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Office of Naval Research	Robert Gisiner
Oil Spill Recovery Institute	Nancy Bird
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Secretary of State	Alexandra Curtis, DOS
U.S. Coast Guard	LT Alan McCabe

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	Oil and Gas	Pamela Pope, BP Exploration, Anchorage
	Alaska Native	Robin Samuelsen, BBEDC, Dillingham
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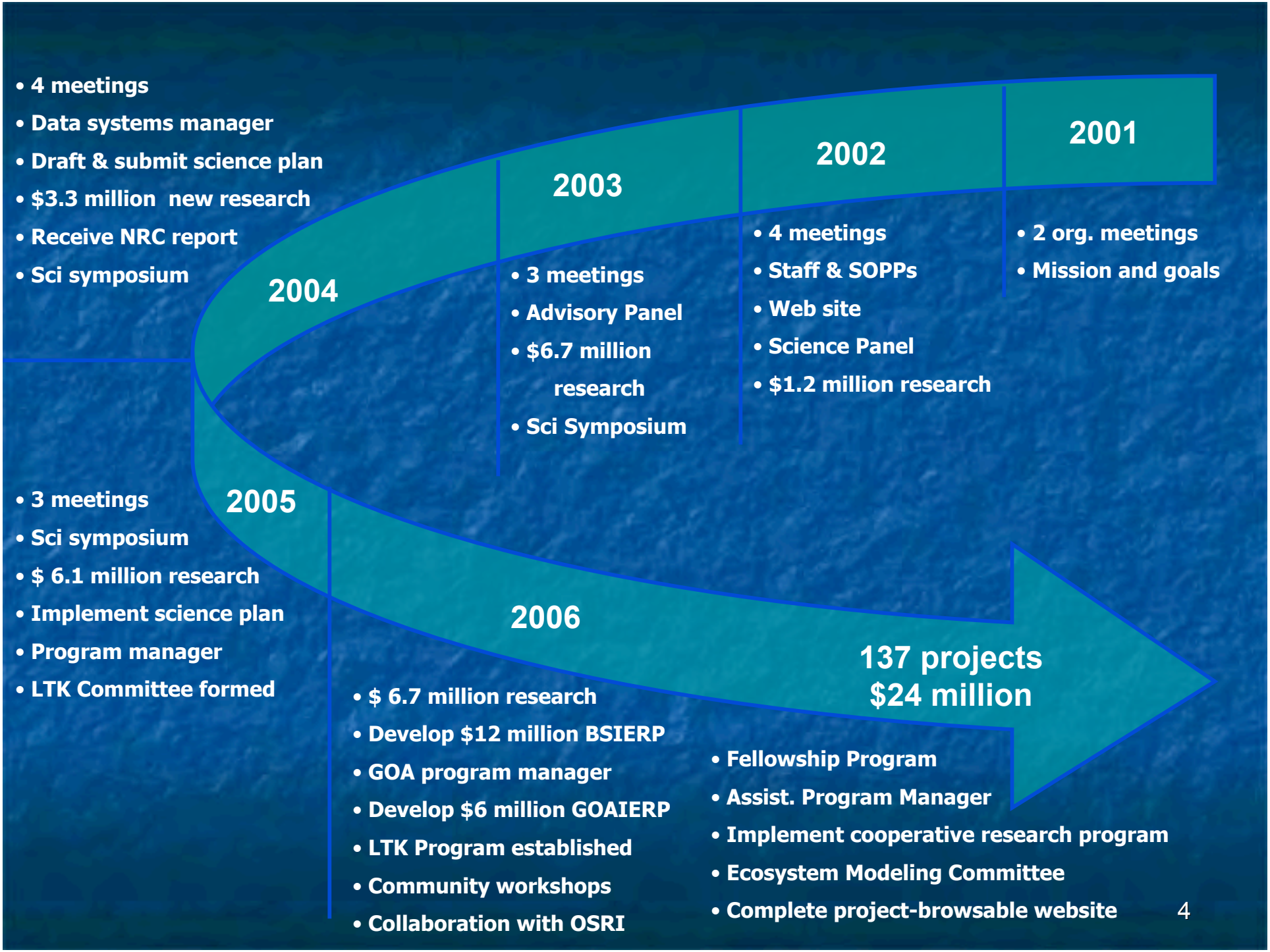
	Environment	Dorothy Childers, AMCC, Anchorage
Washington		John Iani, Van Ness Feldman, Seattle
		Paul MacGregor, Mundt MacGregor, Seattle
		John Gauvin, Burien
Oregon		Howard Horton, OSU, Corvallis


2001
• 2 org. meetings
• Mission and goals
2002
• 4 meetings
• Staff & SOPPs
• Web site
• Science Panel
• $1.2 million research
2003
• 3 meetings
• Advisory Panel
• $6.7 million research
• Sci Symposium
2004
• 4 meetings
• Data systems manager
• Draft & submit science plan
• $3.3 million new research
• Receive NRC report
• Sci symposium
2005
• 3 meetings
• Sci symposium
• $ 6.1 million research
• Implement science plan
• Program manager
• LTK Committee formed
2006
• $ 6.7 million research
• Develop $12 million BSIERP
• GOA program manager
• Develop $6 million GOAIERP
• LTK Program established
• Community workshops
• Collaboration with OSRI
137 projects
$24 million
• Fellowship Program
• Assist. Program Manager
• Implement cooperative research program
• Ecosystem Modeling Committee
• Complete project-browsable website

Research Funds

Dinkum Sands funds – 1997: 20% of interest

Total Research thru 2006 - $24 million for 137 projects:

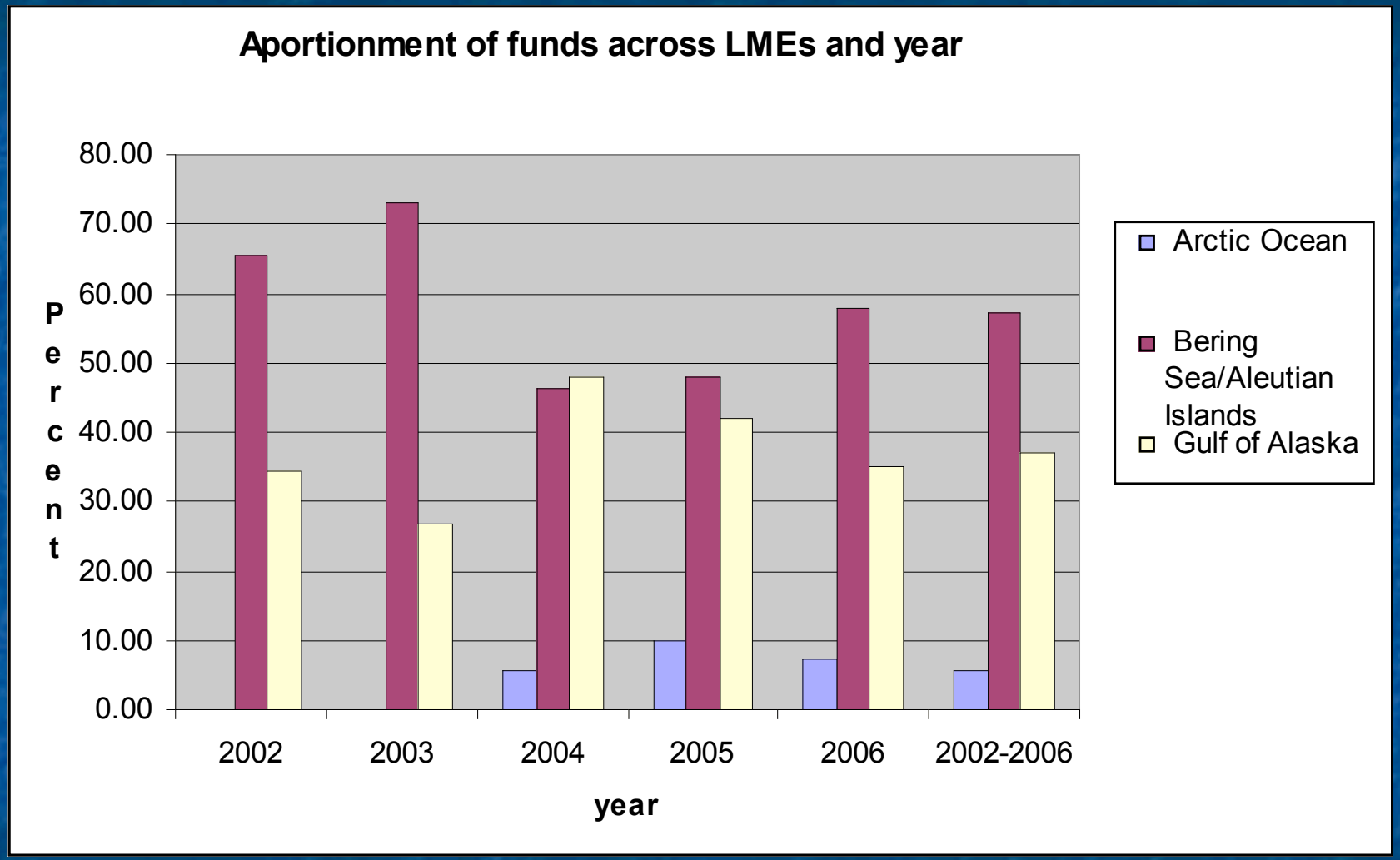
- $1.2 million for 2002
- $6.7 million for 2003
- $3.3 million for 2004
- $6.1 million for 2005
- $6.7 million for 2006

35 projects complete; 102 ongoing

Plan for about $6-7 million annually plus appropriations if available

Funding Proportion by LME

Year	Arctic Ocean	Bering Sea/Aleutian Islands	Gulf of Alaska
2002	0	65	34
2003	0	73	27
2004	6	46	48
2005	10	48	42
2006	7	58	35
2002-2006	6	57	37


Aportionment of funds across LMEs and year
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
Percent
2002
2003
2004
2005
2006
2002-2006
year
Arctic Ocean
Bering Sea/Aleutian Islands
Gulf of Alaska

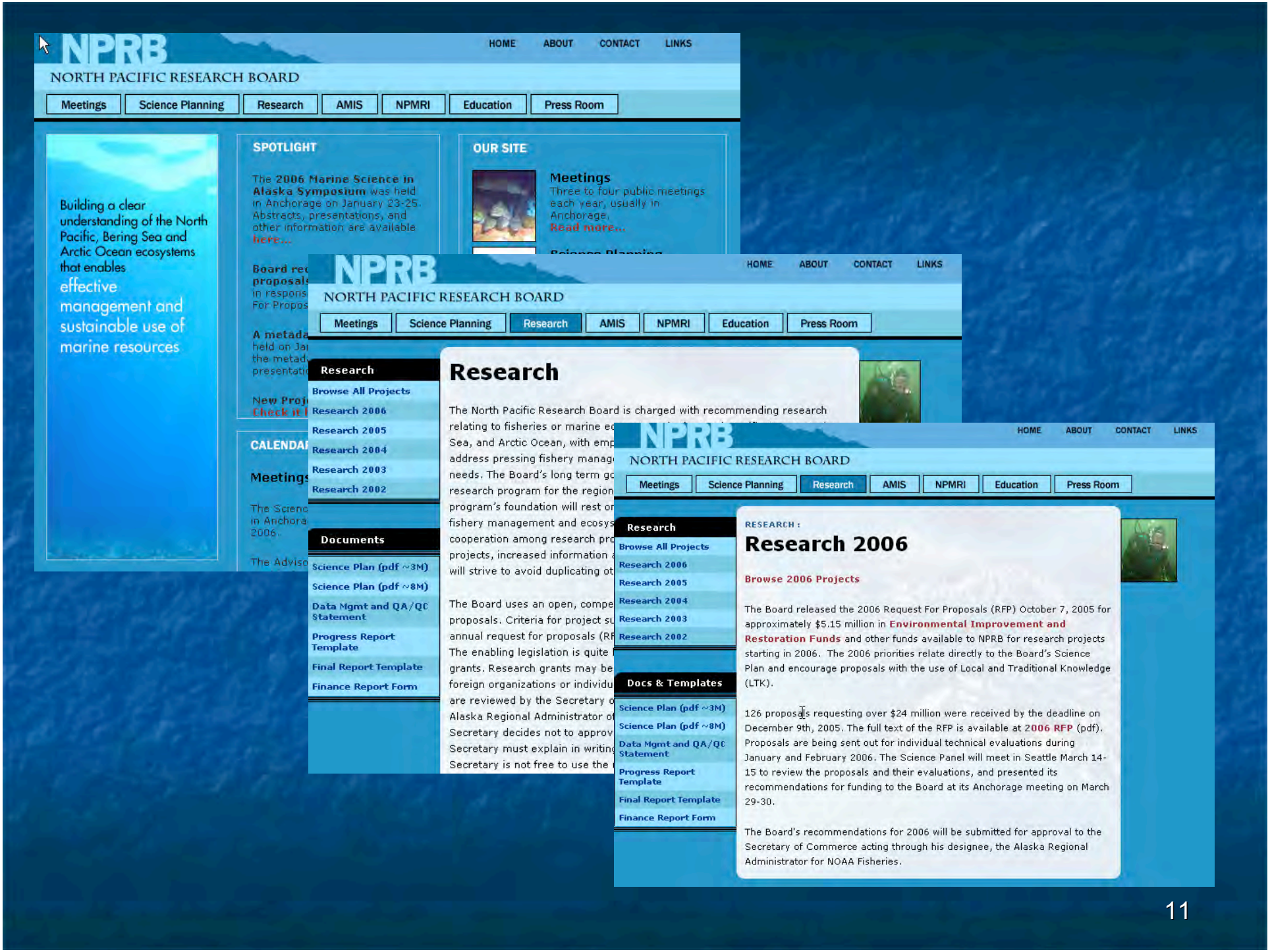
Institutions Receiving Over $400,000

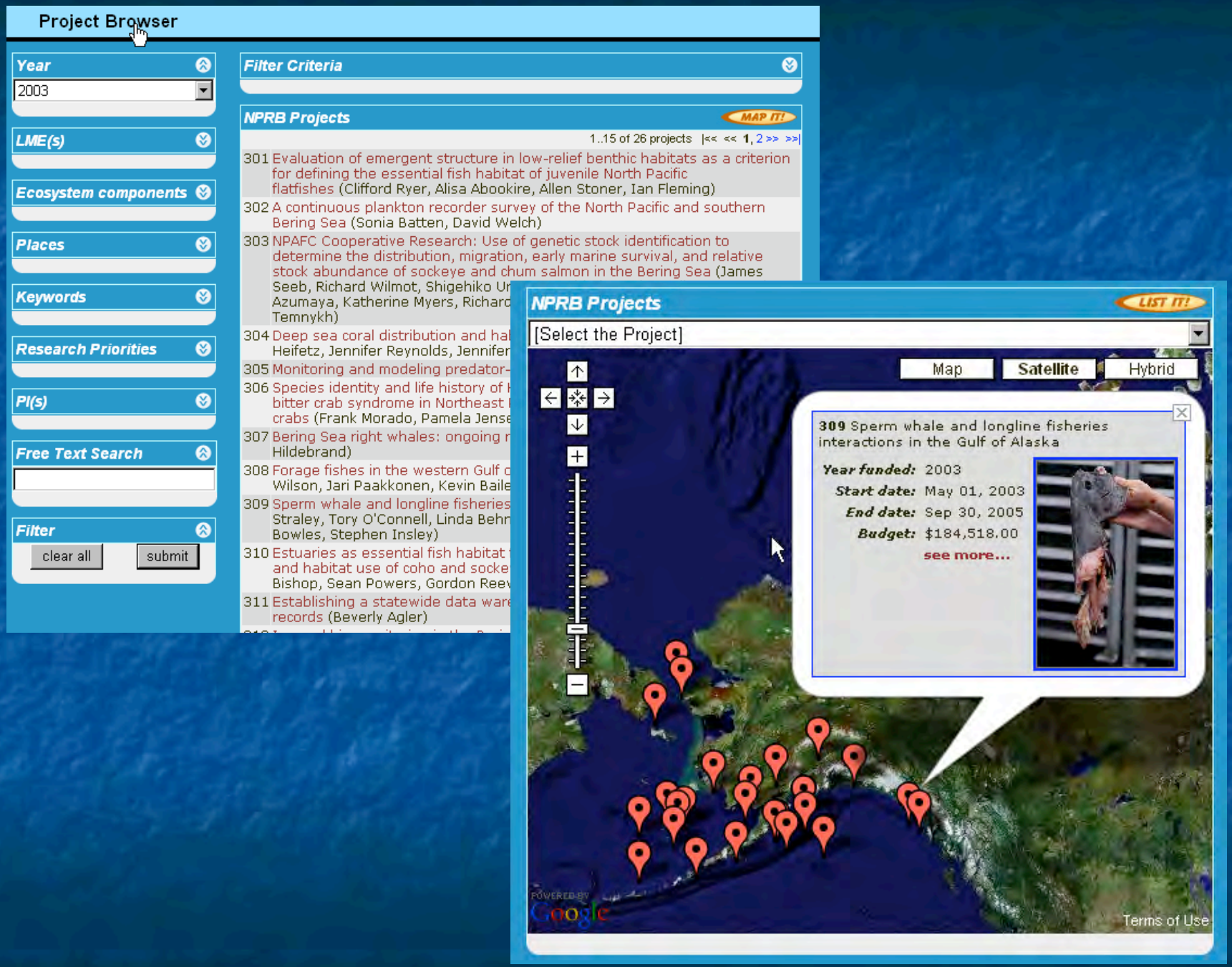
Institution	NPRB Funding	% Total
NOAA Alaska Fisheries Science Center	$5,688,260	24.2
University of Alaska	5,466,468	23.3
University of Washington	1,341,809	5.7
Alaska Dept of Fish and Game	937,684	4.0
Oregon State University	901,140	3.8
UAF-UAS	824,405	3.5
NOAA Pacific Marine Env. Lab.	820,630	3.5
U.S. Fish and Wildlife Service	680,571	2.9
U.S. Geological Survey	541,065	2.3
Moss Landing Marine Laboratories	514,398	2.2
PRBO Conservation Science	484,462	2.4
University of California - Scripps	479,505	2.0
Alaska SeaLife Center	443,948	1.9
Prince William Sound Science Center	400,022	1.7
NOAA Overall Total	6,860,487	29.2
University of Alaska Overall Total	6,433,537	27.4

Research Category	Total	%	# Projects
Ecosystem Studies	$6,202,977	26	34
Fish and Invertebrates	$5,955,058	25	37
Habitat	$2,715,664	11	12
Humans	$1,231,816	5	14
Marine Mammals	$3,788,661	16	23
Salmon	$2,290,037	9	9
Seabirds	$1,986,646	8	9
Grand Total	$24,170,859	100	138

Salmon | O. Fish | Habitat | Shellfish | Ecosystem | **Mammals** | Seabirds

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
6. Diets of BSAI killer whales
7. Fur seal foraging strategies
8. Winter movement of fur seal pups
9. Ice seal stock structure
10. Oceanography and endangered whales


NPRB
NORTH PACIFIC RESEARCH BOARD
HOME ABOUT CONTACT LINKS
Meetings Science Planning Research AMIS NPMRI Education Press Room
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
The 2006 Marine Science in Alaska Symposium was held in Anchorage on January 23-25. Abstracts, presentations, and other information are available here...
OUR SITE
Meetings
Three to four public meetings each year, usually in Anchorage.
Read more...
Research
Browse All Projects
Research 2006
Research 2005
Research 2004
Research 2003
Research 2002
Documents
Science Plan (pdf ~3M)
Science Plan (pdf ~8M)
Data Mgmt and QA/QC Statement
Progress Report Template
Final Report Template
Finance Report Form
Research
The North Pacific Research Board is charged with recommending research
Docs & Templates
RESEARCH :
Research 2006
Browse 2006 Projects
The Board released the 2006 Request For Proposals (RFP) October 7, 2005 for approximately $5.15 million in Environmental Improvement and Restoration Funds and other funds available to NPRB for research projects starting in 2006. The 2006 priorities relate directly to the Board's Science Plan and encourage proposals with the use of Local and Traditional Knowledge (LTK).
126 proposals requesting over $24 million were received by the deadline on December 9th, 2005. The full text of the RFP is available at 2006 RFP (pdf). Proposals are being sent out for individual technical evaluations during January and February 2006. The Science Panel will meet in Seattle March 14-15 to review the proposals and their evaluations, and presented its recommendations for funding to the Board at its Anchorage meeting on March 29-30.
The Board's recommendations for 2006 will be submitted for approval to the Secretary of Commerce acting through his designee, the Alaska Regional Administrator for NOAA Fisheries.


Project Browser
Year
2003
LME(s)
Ecosystem components
Places
Keywords
Research Priorities
PI(s)
Free Text Search
Filter
clear all
submit
Filter Criteria
NPRB Projects
MAP IT!
1..15 of 26 projects |<< << 1, 2 >> >>|
301 Evaluation of emergent structure in low-relief benthic habitats as a criterion for defining the essential fish habitat of juvenile North Pacific flatfishes (Clifford Ryer, Alisa Abookire, Allen Stoner, Ian Fleming)
302 A continuous plankton recorder survey of the North Pacific and southern Bering Sea (Sonia Batten, David Welch)
303 NPAFC Cooperative Research: Use of genetic stock identification to determine the distribution, migration, early marine survival, and relative stock abundance of sockeye and chum salmon in the Bering Sea (James
Seeb, Richard Wilmot, Shigehiko Ur
Azumaya, Katherine Myers, Richard
Temnykh)
304 Deep sea coral distribution and hal
Heifetz, Jennifer Reynolds, Jennifer
305 Monitoring and modeling predator-
306 Species identity and life history of
bitter crab syndrome in Northeast
crabs (Frank Morado, Pamela Jense
307 Bering Sea right whales: ongoing
Hildebrand)
308 Forage fishes in the western Gulf
Wilson, Jari Paakkonen, Kevin Baile
309 Sperm whale and longline fisheries
Straley, Tory O'Connell, Linda Behr
Bowles, Stephen Insley)
310 Estuaries as essential fish habitat
and habitat use of coho and socke
Bishop, Sean Powers, Gordon Reev
311 Establishing a statewide data ware
records (Beverly Agler)
NPRB Projects
LIST IT!
[Select the Project]
Map
Satellite
Hybrid
309 Sperm whale and longline fisheries interactions in the Gulf of Alaska
Year funded: 2003
Start date: May 01, 2003
End date: Sep 30, 2005
Budget: $184,518.00
see more...
Google
Terms of Use

Documents

Project Summary and Statement of Work:

Progress Report: Jul, 2003

Progress Report: Jan, 2004

Progress Report: Jul, 2004

Progress Report: Jan, 2005

Progress Report: Jul, 2005

Final Report: Dec, 2005

Factsheets

Sperm whale interactions with longline fisheries off Southeast Alaska

Articles

Sneaky Cetaceans: Arctic Science Journeys Radio

LMEs

Gulf of Alaska

309 Sperm whale and longline fisheries interactions in the Gulf of Alaska

Year funded: 2003
Start date: May 01, 2003
End date: Sep 30, 2005
Budget: $184,518.00
Companion: 412

Sperm whales have learned to take sablefish, a natural prey, off longline gear in the Gulf of Alaska. Reports of depredation were first noted in 1978 and have steadily increased in frequency and severity, with a notable increase since the late 1990s likely due to the lengthening of the fishing season. Because the amount of sablefish mortality caused by sperm whale depredation is unknown it presents fisheries managers with a difficult assessment problem. In Alaska, injury has not yet occurred, however, mortalities and serious injury of sperm whales have occurred in other areas of the world due to similar fisheries interactions. Through cooperative research with fishermen, government and scientists, our ultimate goal is to provide recommendations for strategies to reduce or eliminate depredation on longline gear by sperm whales.

Principal

Janice St

University

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Sitka AK 9

Phone: (9

Education

- Marine Mammals
- Seabirds
- Fish and Fish Habitat
- Invertebrates
- Pollutants and Contaminants
- Humans
- Plankton, Ocean Processes, and Lower Trophic Productivity

Project Audio

Recording 1
Sound and spectrogram from 9:27 AM, earlier in the day: The clicking of a distant whale, plus the sound made by the fishing vessel Cobra as it briefly engages its engine during a longling recovery. Half an hour later two whales were visually sighted next to the vessel.

Recording 2
From 11:33 AM May 8, 2004: sounds from two animals, one doing a "regular" click, the other a "slow" click. The echoes that can be heard permit the animals to be tracked in

EDUCATION : MARINE MAMMALS :

Sperm Whale and Longline Fisheries Interactions in the Gulf of Alaska (R0309, F0412)

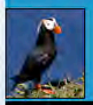
For a print-friendly PDF version of this fact sheet, click here.

Jan Straley (University of Alaska), Dr. Aaron Thode (Scripps Institute of Oceanography)

Are Sperm Whales Thieves?

While many modern day fishermen share camaraderie with marine mammals, sometimes the animals take advantage of the situation. For example in the Gulf of Alaska, Sperm whales have learned how to "steal" black cod, halibut, and lingcod from longline fishing gear. This behavior has created a significant economic loss to the fishermen. Although some whales have become entangled in fishing gear, no mortality or serious injury has yet occurred. Depredation of longline gear by sperm whales has been occurring since at least 1978, and has increased in frequency since the mid 1990's. Fishermen have approached


Photo: Jan Straley



Marine Mammals

- Bering Sea Right Whale Distributions (307)
- Sperm Whale Interactions with

ARCTIC Science Journeys

Radio Script
2004

Longline fishermen in Southeast Alaska are helping biologists find out why some sperm whales, like this one near a fishing boat, are marauding fishermen's catch. (Courtesy Jan Straley)

Sneaky Cetaceans

INTRO: In the novel Moby Dick, Captain Ahab pursues a giant sperm whale in revenge for taking his leg. That was fiction. In real-life, some Alaska sperm whales would rather take a bite out of fishermen's catch. Sonya Senkowsky has more in this week's

Sea Grant Alaska

Listen to story on Real Audio

Download RealAudio

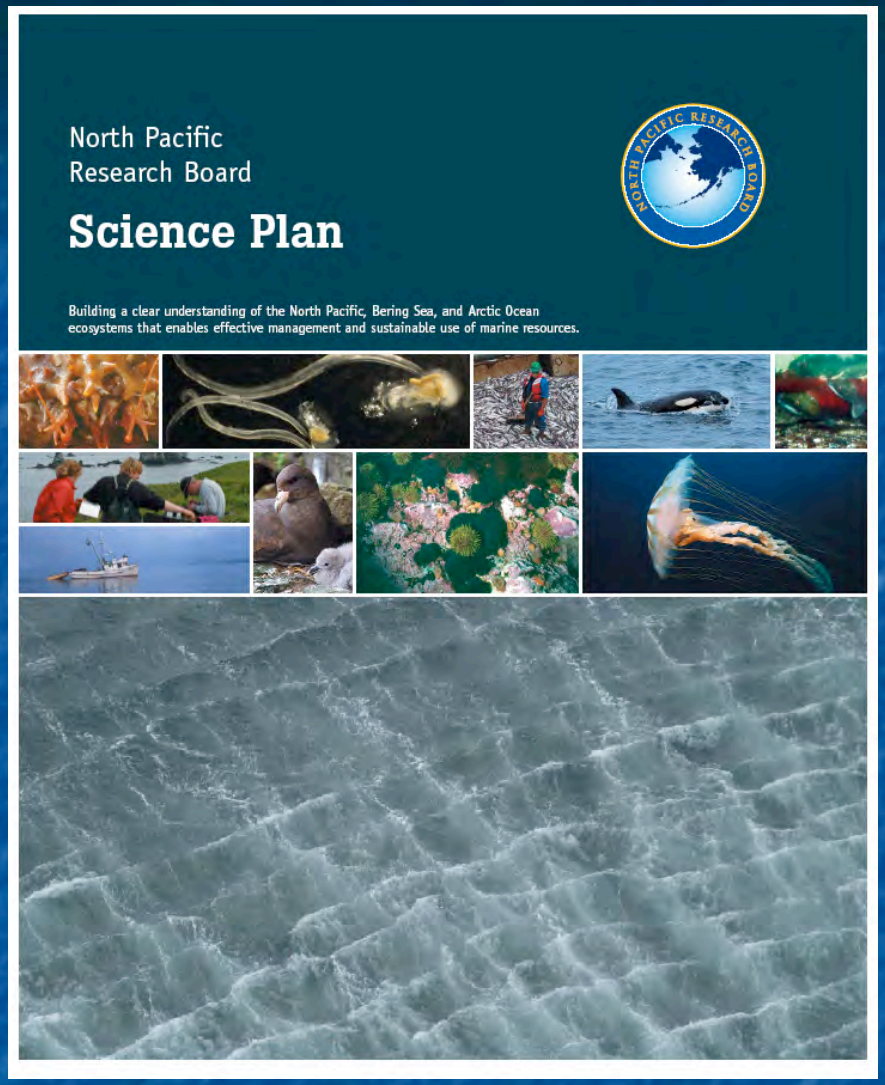
Search

Related websites

North Pacific Research Board

Guide to Marine Mammals of Alaska

Alaska Wildlife News (Alaska Department of Fish and Game)



The Board's first Science Plan will guide its funding decisions over the next 5-7 years

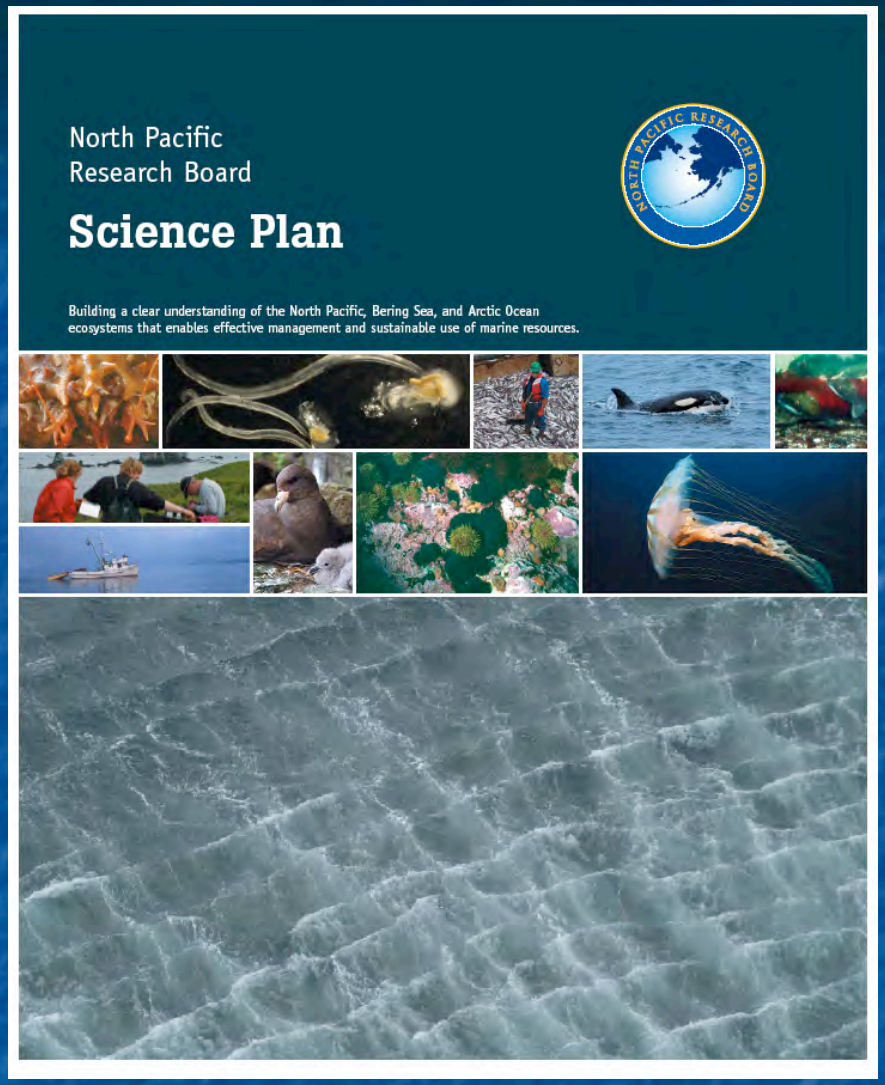
5-7 year Science Plan

- Conceptual Foundation
  - Atmospheric and Oceanographic features
  - Ecosystem Dynamics
  - Human Dimensions
- Research Approaches
- Ecosystem Indicators
- Research Themes
  - Lower Trophic Level Productivity
  - Fish Habitat
  - Fish and Invertebrates
  - Marine Mammals
  - Seabirds
  - Humans
  - Other Prominent Issues
    - Contaminants
    - HAB
    - Aquaculture
    - Climate Change
    - Invasive Species

- Integrated Ecosystems Research

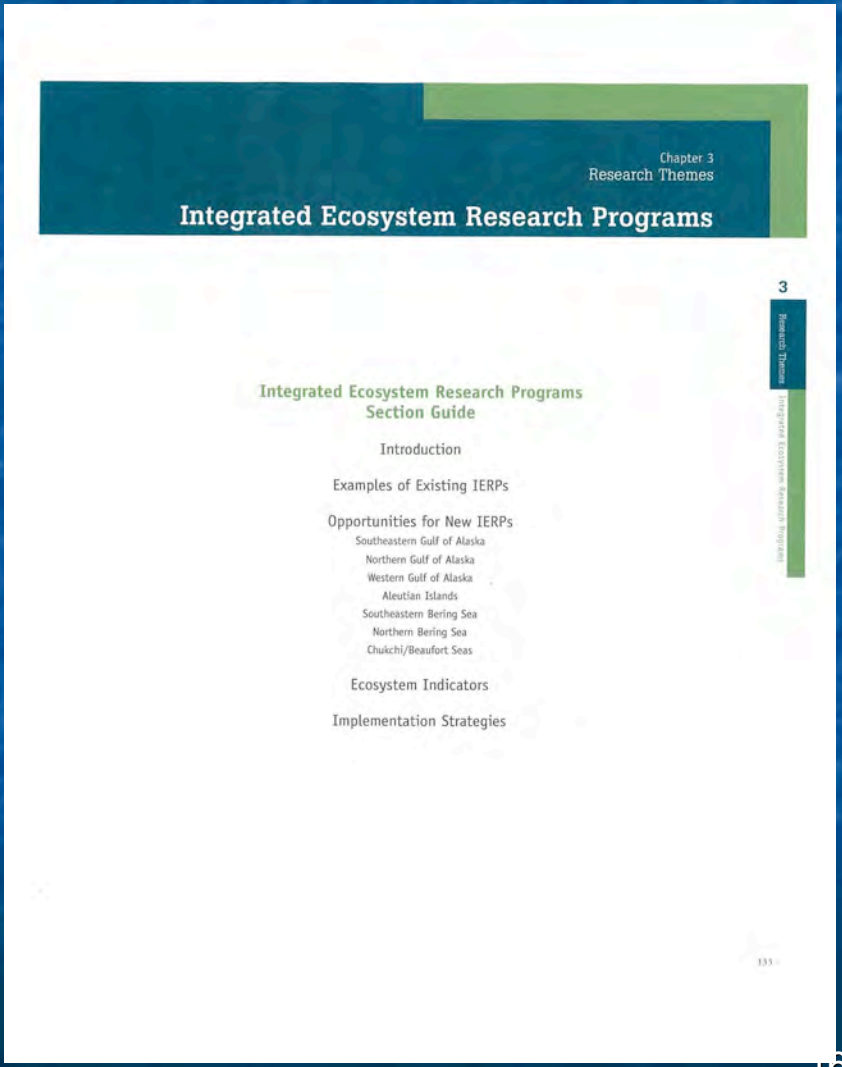
- Other Research Approaches
  - Local and Traditional Knowledge
  - Cooperative Research
  - Coordination
  - Education and Outreach

- Policies and Procedures
  - Data Management
  - Scientific Integrity
  - Specimen Archives
  - Intellectual Property Rights
  - Equipment Sharing



Science Plan promotes integrated ecosystem research

The Board's first Science Plan will guide its funding decisions over the next 5-7 years…



Bering Sea Integrated Ecosystem Research Program 2007-2013

- **How is the Bering Sea ecosystem responding to climate variability and change?**
- **What processes regulate the production, distribution and abundance of upper trophic level organisms such as commercial/subsistence fish species and marine mammals?**
- **How well can these processes be quantified and can we separate the natural variability of the system from impacts of climate change and/or human intervention?**
- **Can we quantitatively tie together the lower and upper food webs?**

BSIERP KEY ELEMENTS

- Focus on climate change and ecosystem impacts within BSAI LME
- Focus on quantitative predictions and continuous interaction between field work and modeling, with definitive evaluative criteria for models
- Funding of $12-12.5 million over 6 years
- One spin-up year, 3 major field seasons, 2 years for analysis and synthesis
- Vertical integration up through food web, including human impacts
- Multi-disciplinary and multi-agency research teams with academic and agency scientists and managers
- LTK Component
- Clear schedule and milestones and data management plan
- First of many 6-year modules to come

2006-2007 Schedule

2006

September 20-22	**Board approves release of 2007 RFP**
October 6	**Release 2007 RFP (BSIERP & non-IERP)**
November 22	**BSIERP pre-proposals due**
December 8	**Non-IERP full proposals due**
December 15	**Invite BSIERP full proposals**

2007

January	**Science Symposium and Peer reviews**
March 2	**BSIERP full proposals due**
April 23-26	**Board decision on ALL proposals**

Ecosystem Modeling Committee

- **Membership:**
  - Dan Goodman (Chair), MSU
  - Tim Barnett, Scripps
  - George Hunt, UW
  - Phil Mundy, ABL-NOAA
  - Dick Beamish, DFO
  - Andre Punt, UW
  - Kerim Aydin, AFSC-NOAA
  - Tom Royer, ODU
- **Drafting Criteria for Model Review which will be included in RFP**
- **Full proposals must address the criteria**
- **Review modeling components of proposals (only those members not involved in proposals)**
- **May request adjustments**
- **Provide oversight as project proceed**

Funding Outlook

- NPRB's research funding outlook through 2011: $32 million
- Bering Sea and Aleutians IERP (60% of 60%): $12 million
- Gulf of Alaska IERP (60% of 30%): $6 million
- Non-IERP Projects: $15 million
- Arctic Ocean: $3 million