



NPRB-NPFMC

Research Priorities



Intent – Informational presentation

- Review purpose and nature of NPRB-NPMC collaboration
- Identify opportunities to better track funded research relevant to priorities identified by Council
- Update on progress in NPRB system developments
- Clarify our intention to work with the SSC subgroup toward recommendations/report to be made in the 2024 triennial review.



NPRB and NPFMC have a stated aim to develop a more coordinated approach to:

- 1) identify priorities for research to inform fishery management
- 2) monitor investments in research and related results to determine...
 - what priorities are addressed
 - what information is developed through funded research
 - how insights are applied to inform management



June 2016 NPFMC Meeting

- 1) Tasked NPFMC staff to work with NPRB staff on research priorities
- 2) Determine whether research projects match NPFMC priorities and track research outcomes

June 2017-2019 NPFMC Meetings

- 1) Outline current research priorities
- 2) Detail analyses of investments
- 3) Detail methods to better track research priorities, results, products, and impacts
- 4) Solicit ideas on coordination to improve efforts to track results and investments



2018 Revised Approach

- (1) development of top-10 priorities from Urgent and Important priorities
- (2) transition from an annual to triennial schedule

Collaboration with SSC subgroup towards triennial review

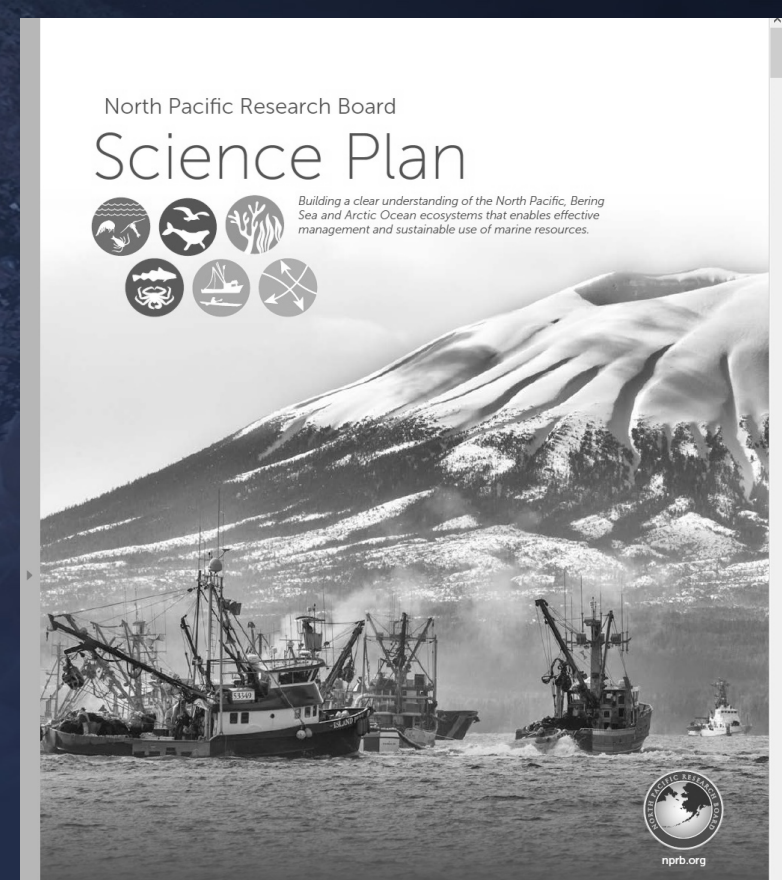
- 1) How to leverage the archive of research priorities in the NPFMC system to...
 - structure priorities in a way to enable efficient and consistent tracking of funded research (e.g., hierarchical frameworks or rational schematics to standardize tracking over time)
 - allow researchers to link their proposals to specific Council priorities in ways that enable us to track progress against those priorities

North Pacific Research Board

Supporting peer-reviewed scientific research that informs effective management and sustainable use of marine resources

Mission

...provide a better understanding of the North Pacific ecosystems and their fisheries through...
science planning, prioritization of pressing fishery management and ecosystem information needs, coordination and cooperation among research programs, competitive selection of research projects, enhanced information availability, and public involvement.



Research Investments

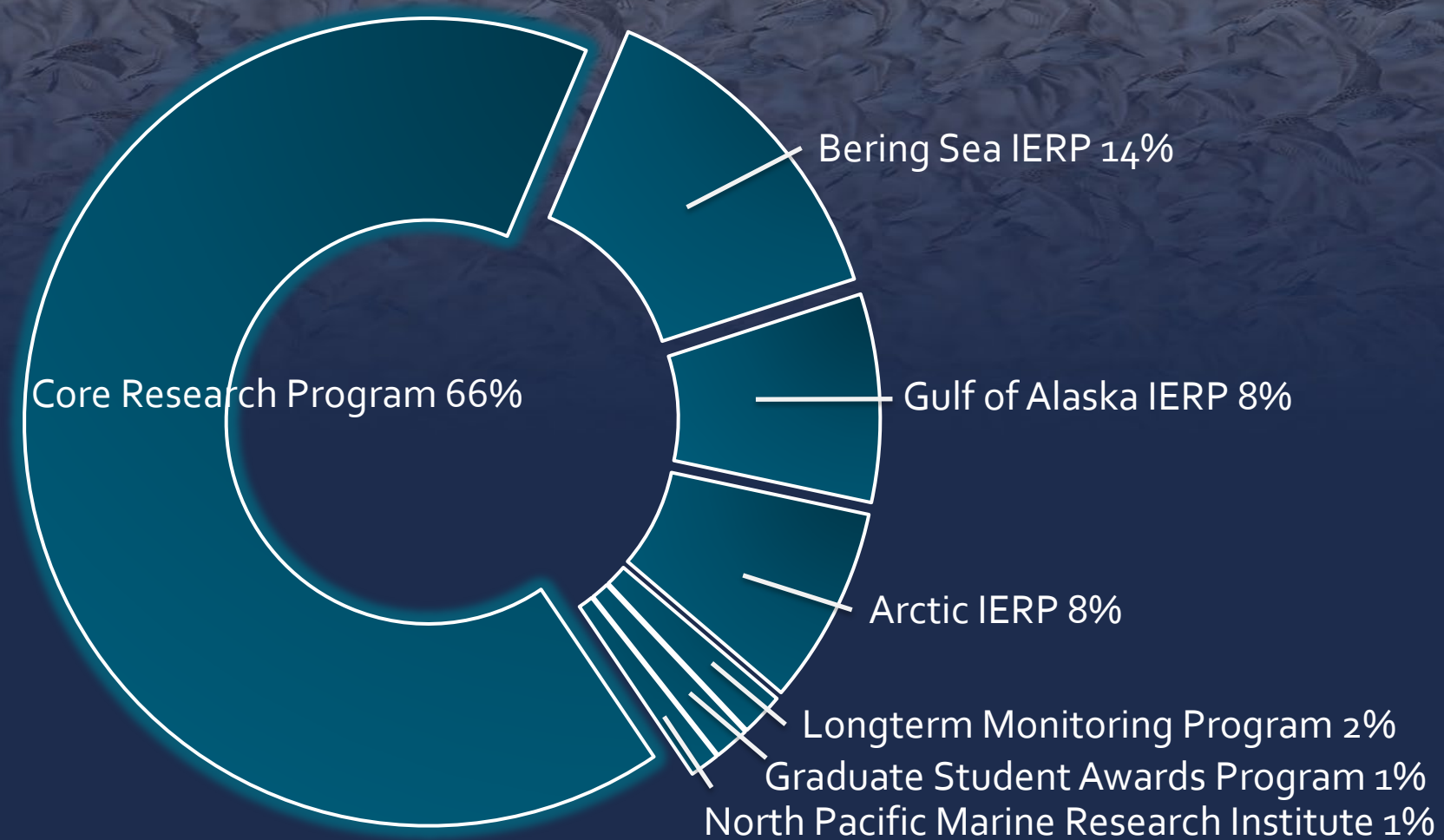


Core Research Program

— 520 projects funded



Research Investments



All Programs 2002-2021 – \$125 million; 700+ publications



Current NPRB Research Priorities

Fishes and Invertebrates

The individual proposal funding cap for this category is \$600,000.

General topics of interest:

- development and application of new assessment approaches
- estimation of life history parameters that impact stock assessments (e.g., age, growth, maturity, fecundity, natural mortality, environmental drivers, recruitment)
- spatial and temporal variation in stock structure and distribution patterns
- analyses of survey design and data (e.g., gear selectivity and species distribution/availability, influences of environment or habitat, linking multiple data sources, estimating parameter uncertainty)
- ecology and physiology of forage species (e.g., recruitment, growth, environmental linkages, and factors influencing availability to predators)
- bycatch and incidental catch (e.g., spatiotemporal distribution, ecological effects, discard mortality, and implications of management measures)
- characterization of habitat essential for spawning, nursery and feeding areas
- development of predictive models of habitat use and quality, including climate-driven shifts in habitat quality and availability
- direct and indirect effects of climate on fishes and invertebrates
- other fishes and invertebrates research

Research Priorities are determined through:

- Review of NPFMC priorities
- Solicitation of priorities from management agencies and community/tribal entities
- Solicitation from research community and public through online portal

Issues of Particular Interest - 2021

REQUEST FOR PROPOSALS | 2021

Issues of particular interest:

- mariculture enhancement and impacts on wild stocks
- understanding the distribution, movement, and stock structure of important commercial and subsistence fish and invertebrate species
- impacts of changing fish and invertebrate distributions and environmental variability on fishery surveys and model outputs
- organismal responses to climate stressors, for example emergent diseases, nutritional challenges, HAB toxins, contaminants, invasive species and temperature tolerances
- biodiversity, life history, habitat, and fish associations related to deep sea biological structure including corals and sponges



North Pacific Research Board

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

visit us at www.nprb.org

Submit Your Research Ideas

Solicitation for NPRB's 2019 Request for Proposals—by June 29th

The North Pacific Research Board (NPRB) will be releasing the next Core program Request for Proposals (RFP) in October 2018. As part of the multi-stage drafting process, input from the scientific community is considered by the NPRB Science panel, Advisory panel and Board under the issues of particular interest section for each category. Keep in mind as you draft your suggestions that they will be converted to bullet format to align with the RFP structure.

Those interested in themes from prior RFPs can view our [RFP evolution](#) as a reference.

Please submit your recommendations for specific topics to be considered by **Friday, June 29th**. Thank you for your interest, insight, and ideas.

[Submit Your Ideas](#)

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You are receiving this email because you have opted in North Pacific Research Board (NPRB) activities that include but are not limited to peer review, proposal submissions, abstract submissions, photo contests, general inquiry, etc.



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[Submit Your Ideas](#)

NPRB HOME

CORE PROGRAM

LONG TERM MONITORING PROGRAM

GRADUATE STUDENT RESEARCH AWARDS

ARCTIC PROGRAM

BERING SEA PROJECT

GULF OF ALASKA PROJECT

ABOUT THE PROGRAM REQUEST FOR PROPOSALS PROJECT SEARCH & DATABASE PUBLICATION LIBRARY RESOURCES & REQUIREMENTS

OVERVIEW RFP SUGGESTIONS APPLY ONLINE TEMPLATES OUTREACH REQUIREMENTS TIMELINE FAQs



Photo Credit: Ram Papish

Request For Proposals

Overview

Proposals undergo four stages of review, including independent peer review, the NPRB Science and Advisory Panels. The Board determines final funding recommendations to the U.S. Secretary of Commerce based on these reviews.

RFP Suggestions

NPRB staff begins developing draft research priorities for the annual RFP in late July and August. If you have ideas for research that you think merit consideration in next year's RFP, please complete this short form. Suggestions made before **July 10** will be considered for the current year's RFP development. Suggestions received after this date will be considered for the following year.

Name *

First Name Last Name

Affiliation * E-mail *

Research Suggestion *

Suggestions for RFP: Entries

[Forms](#)
[Fields](#)
[Field types](#)
[Notifications](#)
[Composer Templates](#)
[Utilities](#)
[Email Logs](#)
[Preferences](#)
[Help](#)

[New Entry](#)
[Export Entries](#)
[Edit Field Layout](#)

Filter Entries

< 1 2 3

#	<input type="checkbox"/>	Edit	Author	I.P. Address	Entry Date ▲	Edit Date	Status	Affiliation (agency or organization)	Country	Email	First Name	Research Suggestion	Last Name
101	<input type="checkbox"/>			70.211.138.25	2015-06-16 - 17:28		open	NOAA-NMFS		claire.simeone@noaa.gov	Claire	Centralized data repository, monitoring and assessment platform for marine mammal health data	Simeone
102	<input type="checkbox"/>			69.166.47.99	2015-06-16 - 16:49		open	Washington State University		heiko@vetmed.wsu.edu	Heiko	1. Activity patterns and energetic costs of land use by polar bears. 2. Defining the extent of interactions between grizzly bears and polar bears. 3. Constraints on lipivory in polar bears.	Jansen
												Nobody knows the number of sponge species living in Alaskan waters. We started working on Aleutian sponges in 2004 and since then described 32 new sponge species from this area. (For a list of publications see www.spongetaxonomics.de)	

Title & Period

- Include the long title of up to **120 characters**, as well as a suggested short title of up to 60 characters.
- Provide a start and end date (i.e., month and year) for your project. Projects are not eligible for funding if they do not have a start and end date.
- Project duration should include final reporting requirements and attendance at the final project completion.
- If this is a resubmission of a previous proposal, use the section provided (limit 300 characters).
- Applicants should indicate which collaborative funding opportunities for which they are applying.
- **Any text over the character or word limit will not be saved.**

THE TITLE FIELDS MUST BE COMPLETED BEFORE NAVIGATING TO ANOTHER SECTION.

Short Title (60 characters)

Long Title (120 Characters)

This is a resubmission from a previous year:

Start Month

Start Year

End Month

Collaborative Funding Opportunity

I am granting permission for this proposal to be shared with the following external organizations:

- Oil Spill Recovery Institute
- National Center for Coastal Ocean Science
- Bering Sea Fisheries Research Foundation
- Pollock Conservation Cooperative Research Center
- None of the Above

Descriptors

Research Category (Select one Primary Research Category)

Secondary Topic

Large Marine Ecosystem(s)

Select the Large Marine Ecosystem(s) (LME) in which your study will take place. LMEs are defined in the NPRB Science Plan and shown below. You may select more than one if appropriate.

- Gulf of Alaska
- Bering Sea/Aleutian Islands
- Arctic Ocean

Research Approach (Optional)

Select all applicable Research Approaches included in your study

- Monitoring
- Process Studies
- Retrospective Studies
- Modeling

Species (Optional)

Enter the scientific or common name(s) of the species to be studied. Type the name followed by the comma or enter key in the box below. Repeat as needed.

Keywords

Provide 3-10 keywords to describe your project. Type the keyword followed by the comma or enter key in the box below. Repeat as needed.

Methods to Track Results

Development of searchable database to determine:

- where investments have been made
- what priorities have been funded
- what priorities have not been funded (and why)
 - lack of proposals in that area
 - lack of scientific merit
 - alternate priorities of the Board





North Pacific Fishery Management Council: Research Priorities

Query List Reports

Research Priorities Query and Records List

Export

Plan Teams

- Joint Groundfish PT
- Crab PT
- Scallop PT

Council Actions

Ecosystem Area

- Gulf of Alaska
- Bering Sea
- Aleutian Islands
- Arctic

Council Priority

Research Status

10 records per page

Search:

ID	Title	Council/SSC Priority	Research Status	Ecosystem Area	Related Council Action
144	District-wide survey for demersal shelf rockfish in Southeast Alaska	Critical Ongoing Monitoring	No action	Gulf of Alaska	Harvest specifications
145	Continuation of State and Federal annual and biennial surveys	Critical Ongoing Monitoring	Underway	Gulf of Alaska, Bering Sea, Aleutian Islands	Harvest specifications
146	Improve surveys in untrawlable habitat, particularly for rockfish, Atka mackerel, and sculpins	Urgent	Partially underway	Gulf of Alaska, Bering Sea, Aleutian Islands	Harvest specifications
147	Life history research on data poor or non-recovering crab stocks	Important	No action	Bering Sea	Harvest specifications
148	Spatial distribution and movement of crabs relative to life history events and fishing	Urgent	Partially underway	Bering Sea	Harvest specifications
149	Improve handling mortality rate estimates for crab	Important	Partially underway	Gulf of Alaska, Bering Sea, Aleutian Islands	Harvest specifications
150	Maintain the core biological and oceanographic data (e.g., biophysical moorings, stomach data, zooplankton, age 0 surveys) ...	Critical Ongoing Monitoring	Underway	Gulf of Alaska, Bering Sea, Aleutian Islands, Arctic	Ecosystem impacts




NORTH PACIFIC RESEARCH BOARD				matt	Log Out
CORE	GSRA	AMSS	Other programs		
2021 RFP	2021 GSRA	2021 AMSS	2020 Outreach Fall		
2020 RFP	2020 GSRA	2020 AMSS	2020 Outreach Spring		
2019 RFP	2019 GSRA	2019 AMSS	2019 Outreach Fall		
2018 RFP	2018 GSRA	2018 AMSS	2019 Outreach Spring		
2017 RFP	2017 GSRA	2017 AMSS	2018 Outreach		
2016 RFP	2016 GSRA	2016 AMSS	2017 Outreach		
2015 RFP	2015 GSRA	2015 AMSS	2016 Arctic		
2014 RFP	2014 GSRA	2014 AMSS	2014 LTM		

Unified Proposal View

- o Comprehensive view of all previous cycles across all programs
- o Enable staff to view entire volume of submitted research (proposals and reviews)

NPRB Programs



Select a Program and Cycle
Search for and select a cycle below.



Filter Projects / Proposals

Funded: Funded Do Not Fund Conditional Tier1a Blank

Year From: To: No Year Defined

Amount Awarded From: To: No Award Defined

Program: RFP GSRA Outreach LTM Arctic *IERP

LME: BSAI GOA Arctic Bering Sea Aleutians (Blank)

Institution Type: Consultant Federal Academic International State NGO Alaskan village NPRB direct None

Projects

Search..

Year	Program	Proj#	Title	Awarded	Spent	Category	LME	Institution	Lead PI	Type	Verdict
2020	2020RFP	1902	Supplemental funding: Pacific sleeper sharks	70606	<input type="text"/>	Fishes and Invertebrates	Gulf of Alaska	Alaska SeaLife Center	Markus Horning	Consultant	
2020	2020RFP	1901	Pacific cod spawning habitat in a changing Bering Sea	599719	<input type="text"/>	Fishes and Invertebrates	Bering Sea/Aleutian Islands	NOAA/NMFS/AFSC	Lauren Rogers		
2019	2019OUTREACHFall	1900	Inquiry-based science education: a snow crab outreach unit	19369	<input type="text"/>			NOAA/NMFS/Alaska Fisheries Science Center	Erin Fedewa		
2020	2020RFP	1899	Gulf of Alaska deep-sea zooplankton	162882	<input type="text"/>	Oceanography and Productivity	Gulf of Alaska	University of Alaska Fairbanks	Debbie Gonzalez		
2020	2020RFP	1897	Seabird diet changes over 4000 years	399032	<input type="text"/>	Interdisciplinary Studies	Gulf of Alaska, Bering Sea/Aleutian	University of Alaska Fairbanks	Nicole Misarti		

NPRB Database

allows staff to...

- search our systems according to various criteria/identifiers
- match data submitted and funded against specific research categories or research priorities
- assemble data and query or subset based on logical functions
- view outputs in tabular form and export data and queries

Advanced search options

1-10 of 28 results < >

- FISH AND INVERTEBRATES
- NPRB ACTIVE PROJECTS
- ARCTIC OCEAN 1
- BERING SEA/ALEUTIAN ISLANDS 6
- FISH HABITAT 6
- GULF OF ALASKA 8
- HUMANS 5
- LOWER TROPHIC LEVEL PRODUCTIVITY 6
- MARINE MAMMALS 3
- NPRB ANNUAL PROJECTS 27
- NPRB LONG-TERM MONITORING PROJECTS 1
- OTHER PROMINENT ISSUES 4
- SEABIRDS 1

1426 Long-term Monitoring Project: Ecosystem monitoring and detection of wind and ice-mediated changes through a year-round physical and biogeochemical mooring in the Northeast Chukchi Sea

Advances in instrument technology now allow us to autonomously sample the marine ecosystem from the vantage of multiple disciplines and across multiple trophic levels. We propose to deploy a subsurface mooring on the Northeast Chukchi Sea shelf to record with high temporal resolution throughout the year, including the under-sampled and poorly understood seasons when sea ice typically inhibits ship-based sampling. The mooring will record physic...



[Seth Danielson](#) • [Catherine Lalande](#) • [Russell Hopcroft](#) • [Thomas Weingartner](#) • [Peter Winsor](#)
[Claudine Hauri](#) • [Andrew McDonnell](#) • [Seth Danielson](#)

[Info](#) [Documents](#)

1501 How many krill are there in the Bering Sea and Gulf of Alaska? Quantitative acoustic assessment of euphausiid abundance and their role in these ecosystems.

Euphausiids (or 'krill') play a key role in many ecosystems including the eastern Bering Sea (EBS) and Gulf Alaska (GOA), channeling energy from phytoplankton to fish and higher predators, yet their abundance is difficult to measure. We will develop an improved euphausiid standing stock estimate in the EBS and GOA using 1) new measurements and modeling of the acoustic and material properties of euphausiids and 2) acoustic-trawl survey data whi...



[Joseph Warren](#)

[Info](#) [Documents](#)

1503 Tracing sea ice algae in Arctic benthic food webs using the sea ice diatom biomarker IP25

[← Back to Search Results](#)[Project Metadata](#)

1426 Long-term Monitoring Project: Ecosystem monitoring and detection of wind and ice-mediated changes through a year-round physical and biogeochemical mooring in the Northeast Chukchi Sea

Abstract

Advances in instrument technology now allow us to autonomously sample the marine ecosystem from the vantage of multiple disciplines and across multiple trophic levels. We propose to deploy a subsurface mooring on the Northeast Chukchi Sea shelf, providing temporal resolution throughout the year, including the under-sampled and poorly understood seasons. The mooring will record physical, nutrient and carbonate chemistry, particulate, phytoplankton, and zooplankton data sets, thereby providing an unprecedented view into the mechanistic workings of the Chukchi shelf ecosystem. The mooring's payload is unique for the Chukchi and Alaskan Beaufort seas, and rare for any continental shelf. The proposed project will aid management of subsistence resources and potential commercial fisheries through an ecosystem-based approach to resource management. We will be able to estimate the particulate organic matter flux to the benthic community with organic matter and, in turn, feed the walrus that forage here. The mooring will also monitor the presence of arctic cod (a subsistence resource; marine mammal prey) and euphausiids (fish and

Back	Alt+Left Arrow
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Reload	Ctrl+R
Save as...	Ctrl+S
Print...	Ctrl+P
Cast...	
Translate to English	
View page source	Ctrl+U
Inspect	Ctrl+Shift+I

Purpose

Arctic regions are projected to strongly reflect the impacts of an altered climate. The selected site is well situated to monitor the state of ocean acidification, changes to the shelf's nutrient and carbon cycles, and how changing wind, wave, and ice affect the regional oceanography. The proposed mooring will provide biogeochemical model validation data and improve our understanding of the marine carbon pump and shelf-basin exchanges. The project will complement water column, benthic, and passive acoustics sampling carried out by other programs, including serving as a year-round anchor for the Distributed Biological Observatory, an initiative to collect physical, chemical, and biological observations in the Western Arctic and Subarctic.

Supplemental Information

Additional subject keywords:

climate change
 ecosystem monitoring
 Nutrient Dynamics
 ocean acidification
 acoustic backscatter
 Sea Ice loss
 Biological hotspot
 Biogeochemical modeling
 Marine Carbon Cycle

Online links

- <http://mater.sfos.uaf.edu/~seth/NECEM/>

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Professor
- Peter Winsor
University of Alaska Fairbanks
Associate Professor of Oceanography
- Claudine Hauri
University of Alaska Fairbanks
Research Professional
- Andrew McDonnell
University of Alaska Fairbanks
Assistant Professor
- Seth Danielson
University of Alaska Fairbanks
Research Assistant Professor

Keywords

- acoustic backscatter
- Arctic Ocean
- Biogeochemical modeling
- Biological hotspot
- climate change
- ecosystem monitoring
- Marine Carbon Cycle
- Nutrient Dynamics

NPRB Publication Library

These NPRB publications have resulted from projects funded by NPRB in its Core Program (formally known as the Integrated Ecosystem Research Program (GOAIERP), Bering Sea Project (BSP), and Graduate Student Research Program (GSRA)). Enter the project # (i.e., Gulf of Alaska, Bering Sea, or Graduate Student) enter the abbreviation.

Enter **GOAIERP, BSP, or GSRA** in the keyword or project # search for publications related to these programs.

NPRB should be acknowledged in all publications, articles, or media releases derived from NPRB-funded projects. For more information on how to acknowledge NPRB, contact NPRB Program Support Specialist Susan Dixon (susan.dixon@nprb.org) at the acceptance stage. The acknowledgment should be included in the acknowledgement section of your paper.

Search Publications

Keyword Search

Project Search (#)

Submit

PROJECT	PUB #	CITATION	LINK
207	1	Rodionov, Sergei N. "A sequential algorithm for testing climate regime shifts." <i>Geophysical Research Letters</i> 31, no. 9 (2004). doi:10.1029/2004GL019448.	Link to Publication
301	2	Ryer, Clifford H, Allan W Stoner, and Richard H Titgen. 2004. "Behavioral Mechanisms Underlying the Refuge Value of Benthic Habitat Structure for Two Flatfishes with Differing Anti-Predator Strategies." <i>Marine Ecology Progress Series</i> 268. <i>Marine Ecology Progress Series</i> : 231-43. http://s3.pubs.nprb.org/project_0301_ryer_meps_2004.pdf .	Link to Publication

The screenshot shows the AGU Publications website interface. At the top, there is a navigation bar with 'AGU PUBLICATIONS' and links for 'Journals', 'Topics', 'Books', 'EOS', 'Membership', 'AGU.org', 'Search Help', and 'Log in'. Below the navigation bar is a search bar with the text 'All AGU Journals' and a prompt to 'Enter search terms, e.g. title, author, keyword'. The main content area features the journal title 'Geophysical Research Letters' and the subtitle 'AN AGU JOURNAL'. The article title 'A sequential algorithm for testing climate regime shifts' by Sergei N. Rodionov is prominently displayed. Below the title, it indicates 'First published: 6 May 2004' and 'DOI: 10.1029/2004GL019448'. A 'Cited by (CrossRef): 349 articles' link is also visible. On the right side, there is a thumbnail image of the journal cover and a 'View issue TOC' link.

NPFMC Research Priorities



2018 Research Priorities

- 1) Spatial distribution and movement of crabs (spatial variation in distribution, FI)
- 2) Fish, crab, and oceanographic surveys in the Arctic Ocean (analysis of survey design, FI)
- 3) Dedicated access privileges (socioeconomic trends in resource access, HD)
- 4) Evaluation of Council PSC/bycatch reduction initiatives (bycatch and incidental catch, FI)
- 5) Stock-specific ecosystem indicators (biological response to physical drivers, ID)
- 6) Cooperative research efforts on upper trophic levels
- 7) Retrospective analysis of the impact of Chinook PSC avoidance measures (bycatch, FI)
- 8) Tools for analyzing coastal community vulnerability to fisheries management changes
(individual and/or community wellbeing related to resource access, HD)
(vulnerability to ecological change and management changes, HD)
- 9) Assessment of dependence and impacts of halibut management actions on communities
- 10) Maturity estimates for Bering Sea and Aleutian Island crab stocks
(estimation of life history parameters and application to stock assessment, FI)

Analysis of Research Investments

Intent

- promote research findings
- provide data to the public
- track progress on priorities
- determine how priorities inform NPFMC and Board of Fish processes

Proposed Approach

NPFMC

- link project-specific info in the research status field of the research priorities spreadsheet and detail progress (e.g., new, underway, completed, ongoing)
- develop hierarchical structure to group research priorities into broad headings

NPRB

- provide link in RFP to NPFMC priorities and AKFIN website to enable researchers to determine relevance of their research to specific Council priorities
- enable researchers to link proposals to NPFMC priorities within NPRB proposal submission system
- develop a keyword function in our project catalogue to associate projects to specific NPFMC priorities
- annual output of data to summarize investments
- static output of 600+ research priorities articulated in RPFs since 2002, to:
 - streamline priorities
 - evaluate what research has been done relevant to each priority and how it has been applied

SSC Recommendations

Our Ask

- endorsement to work with NPFMC staff and SSC subgroup to further explore collaboration prior to the next triennial review