The North Pacific Research Board

Lynn Palensky, Executive Director
Matt Baker, Science Director

NPRB Mission & Process

To develop a comprehensive science program that provides a better understanding of the North Pacific ecosystems and their fisheries conducted 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.

Competitive proposal process and rigorous review steps:

- Scientific merit, stakeholder relevance, community involvement, and geographic significance;
- (1) Peer reviews, (2) Science Panel, and (3)Advisory Panel
- Board review and recommendations to Commerce; and
- Dept. of Commerce approval

NPRB's Unique relationship with NPFMC

- Pressing fishery management issues
- Research Priorities
- Standing seat on Board and ExCom
- Science Panel seat
- SSC and AP

NORTH PACIFIC
FISHERY MANAGEMENT COUNCIL

Board Members

FIRST NAME	LAST NAME	SEAT REPRESENTATION
Ragnar	Alstrom	State of Alaska - Alaska Native Interest
Joe	Anthony (CDR)	U.S. Coast Guard
Forrest	Bowers*	Alaska Dept. of Fish & Game
Becca Robbins-	Gisclair, JD	State of Washington
Katrina	Hoffman	Oil Spill Recovery Institute
David	Kennedy	U.S. Arctic Research Commission Designee
Nicole	**Kimball***	**North Pacific Fishery Management Council**
Glenn	Merrill	State of Alaska - Fishing Interests
Bradley	Moran, PhD	State of Alaska - Academic
Jamal	Moss, PhD*	Secretary of Commerce Designee
Annika	Saltman	State of Washington
Emily	Shroyer, PhD	Office of Naval Research
Bradley	Smith, PhD	State of Washington
Michelle	Stratton	State of Alaska - Environmental Interest
Chris	Zimmerman	U.S. Secretary of the Interior Designee
Krystyna	Wolniakowski	State of Oregon Representative
Wei Ying	Wong, PhD*	Alaska SeaLife Center
Caitlin	Yeager*	Fishing Industry Interests
VACANT		State of Alaska - Oil and Gas Interest
VACANT		Secretary of State

NPRB Funding, Legislation, & Outlook

- Upward funding trajectory over the next five years
- NPRB Legislation passed
- CDS Funding for FY2026 – $2.5M for NBS IERP
- Dept. of Commerce grant approval priority
- Next Core Program RFP will release in Oct 2026 at full capacity
- Fiscal Agent change at start of FY2026
- Anchorage Museum Exhibit

NPRB Advisory Panel Nominations

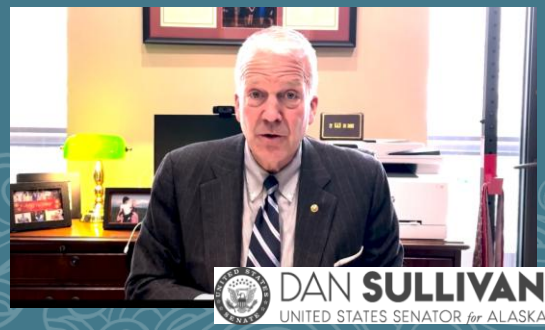
NPRB is seeking nominations to fill four seats on its Advisory Panel. Two seats will represent the Gulf of Alaska Region, and two seats will represent the Arctic Region.

The deadline for receipt of nomination materials is Friday, February 20, 2026.

ALASKA MARINE SCIENCE SYMPOSIUM

SHOWCASING THE LATEST RESEARCH ABOUT THE ARCTIC OCEAN, BERING SEA & ALEUTIAN ISLANDS, AND GULF OF ALASKA MARINE ECOSYSTEMS.

January 26 – 30, 2026



Informing Management

- Stock Status – population abundance, stock structure, SDMs, growth and energetics
- Harvest and catch limits in changing environment
- Management strategy evaluation methods

Surveys, Timeseries and Data Access

- Moorings, automated floats, MXAK (vessel traffic), USGS CoSMoS (coastal hazard modeling)
- Survey data, diet databases

New Technology and Approaches

- eDNA and passive acoustic monitoring
- Machine learning (enhance catch estimates in EM data)

Models

- Challenging paradigms, understanding processes and interactions (environmental impacts on crab)
- Forecasting
  - — integrating multispecies dynamics in stock forecasts
  - — evaluating tradeoffs in ecosystem caps

Indigenous Knowledge and Community Observations

- Successes and challenges to engage Indigenous Knowledge in fisheries management
- Western Alaska food security and subsistence

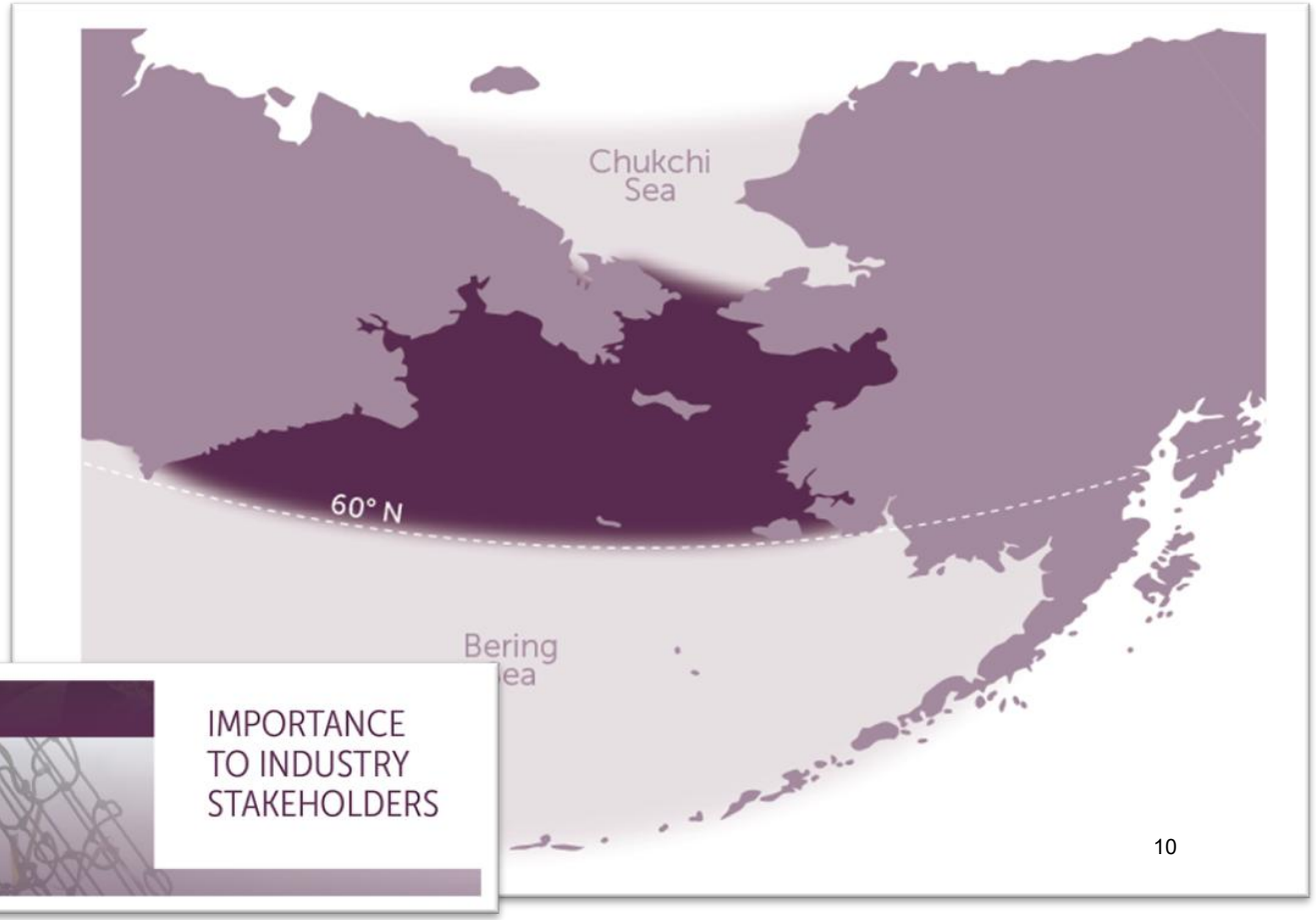
INTEGRATED ECOSYSTEM RESEARCH PROGRAM

NPRB aims to improve understanding of how changing environmental conditions influence physical, chemical, and biological processes in marine ecosystems.

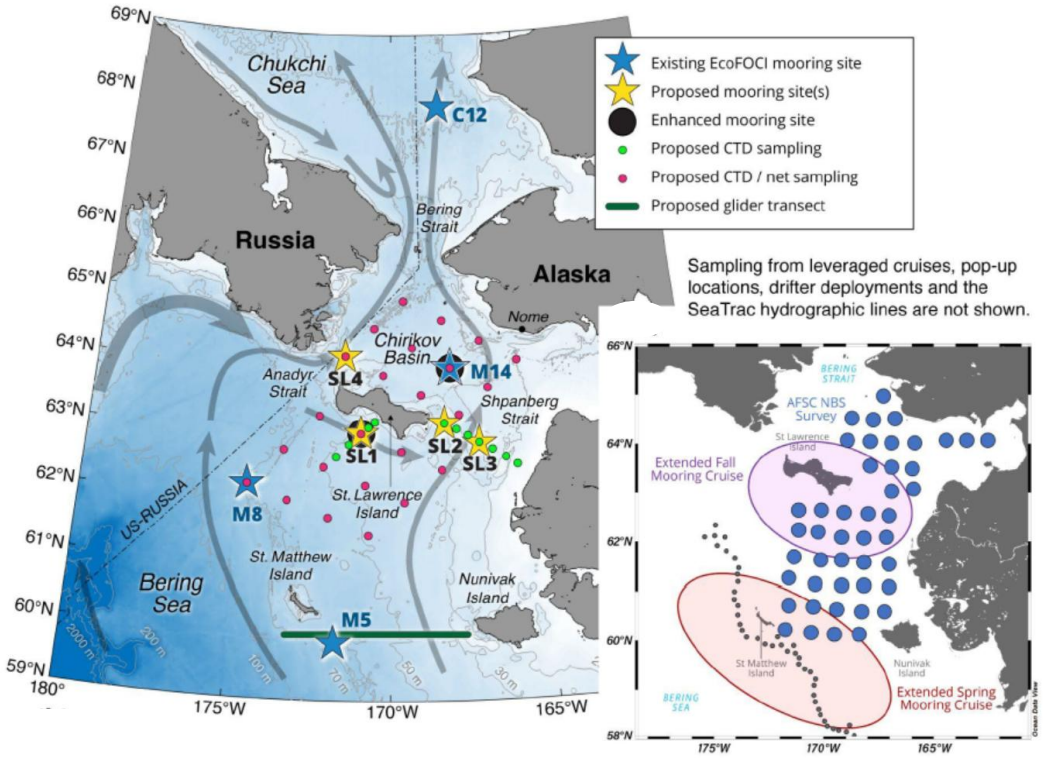
Northern Bering Sea IERP (2026-2031)

$21.4M Program

- Shifts in environment on species of commercial, ecological, and subsistence importance
- Implications for fisheries and communities

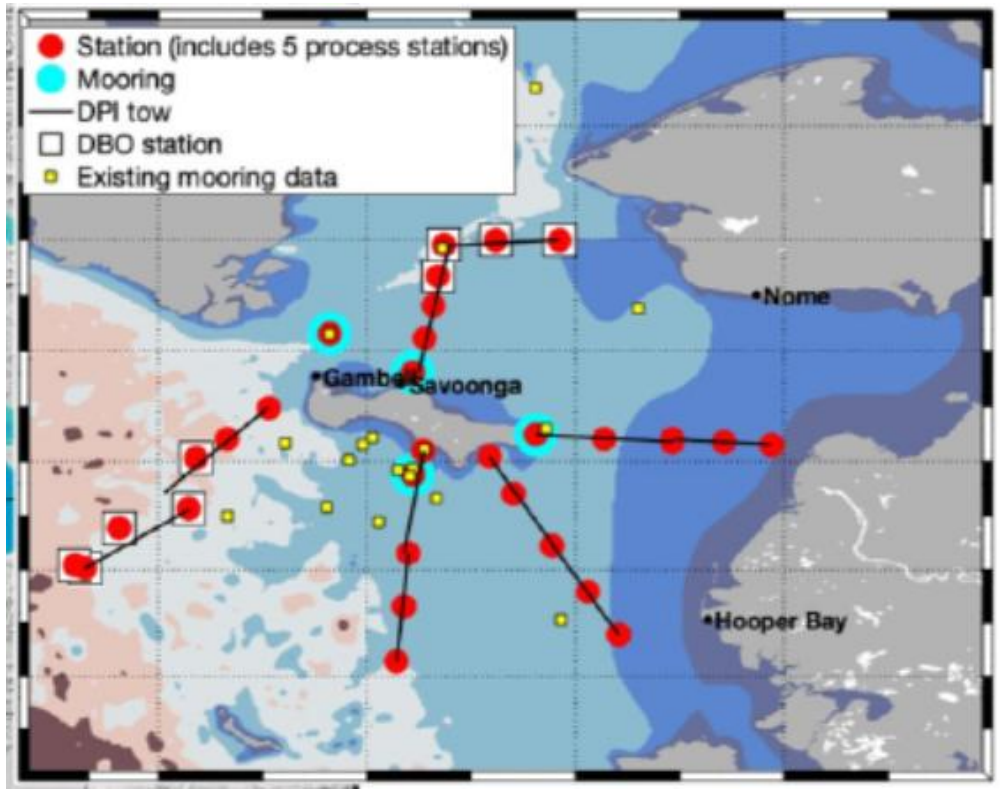


NOAA-led cruises in 2027 & 2029 (and surveys in 2026 & 2028)



- Influence of wind and ice on vertical structure and nutrient flux
- Impacts of timing of spring ice melt on ice algae, phytoplankton, zooplankton, ichthyoplankton and benthic species
- Impacts on system production
- Impacts on fish and food webs

University of Alaska Fairbanks 2026 & 2028



Role of stratification in production, nutrient dynamics, benthic–pelagic coupling, HABs

UAF CFOS

Community-driven research

NPRB provided $60,000 to support proposal development with communities

Projects include participants from Savoonga and Nome:

- Collaborate with St. Lawrence Island hunters
- Support science center on St. Lawrence Island and digital data archive
- HABs sampling
- Regular trips to Savoonga to share results
- Community member participation in research cruises

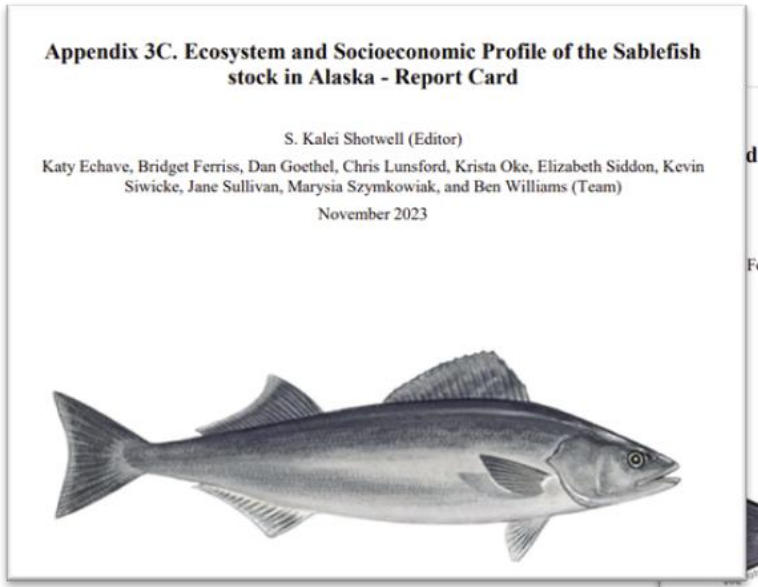
Photo Credit: Rodney Ungwiluk, Gambell
2025 NPRB Photo Award Winner

GULF OF ALASKA PROJECT

Evolution of the Ecosystem and Socioeconomic Profile

The ESP was first conceived in 2014, building on NOAA Fisheries' rich history of identifying ecosystem and socioeconomic pressures since the 1990s.

"We had a lot of information at the large marine ecosystems level. But we don't manage fish at that level. There was a communication gap between conducting research and getting the information into management advice for individual fish stocks," said Shotwell. "We developed the ESP to fill that gap."

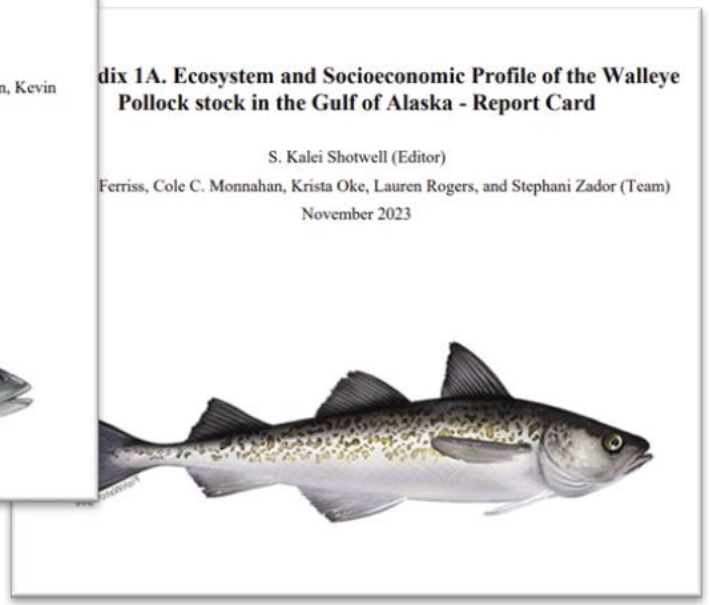


Appendix 3C. Ecosystem and Socioeconomic Profile of the Sablefish stock in Alaska - Report Card

S. Kalei Shotwell (Editor)

Katy Echave, Bridget Ferriss, Dan Goethel, Chris Lunsford, Krista Oke, Elizabeth Siddon, Kevin Siwicke, Jane Sullivan, Marysia Szymkowiak, and Ben Williams (Team)

November 2023



dix 1A. Ecosystem and Socioeconomic Profile of the Walleye Pollock stock in the Gulf of Alaska - Report Card

S. Kalei Shotwell (Editor)

Ferriss, Cole C. Monnahan, Krista Oke, Lauren Rogers, and Stephani Zador (Team)

November 2023

Synthesizing integrated ecosystem research to create informed stock-specific indicators for next generation stock assessments

S.K. Shotwell [a], J.L. Pirtle [b], J.T. Watson [c], A.L. Deary [d], M.J. Doyle [e], S.J. Barbeaux [a], M.W. Dorn [a], G.A. Gibson [f], E.D. Goldstein [d], D.H. Hanselman [c], A.J. Hermann [e g], P.J.F. Hulson [c], B.J. Laurel [h], J.H. Moss [c], O.A. Ormseth [a], D. Robinson [i], L.A. Rogers [d], C.N. Rooper [j], I. Spies [a], W.W. Strasburger [c]...J.J. Vollenweider [c]

GULF OF ALASKA PROJECT

Responses to Comments from the Scientific and Statistical Committee

This assessment reflects the recognition that the western and eastern GOA ecosystem have substantial differences. Thus, local effects may swamp basin-wide signals. We therefore present report cards and assessments for the western and eastern GOA ecoregions separately to highlight inherent differences.

Eastern Gulf of Alaska 2023 Report Card

Western Gulf of Alaska 2023 Report Card

Ecosystem Status Report

Disaster Relief Funds
Research on Bering Sea crab recovery

NPRB Review

Congressional Appropriations

- NPRB administered review
- ADFG set research priorities, funding targets, proposal decisions

- Awards made in May 2025
  - $6 million → RFP
  - $10 million → industry vessel charters for research

Disaster Relief Funds
Research on Bering Sea crab recovery

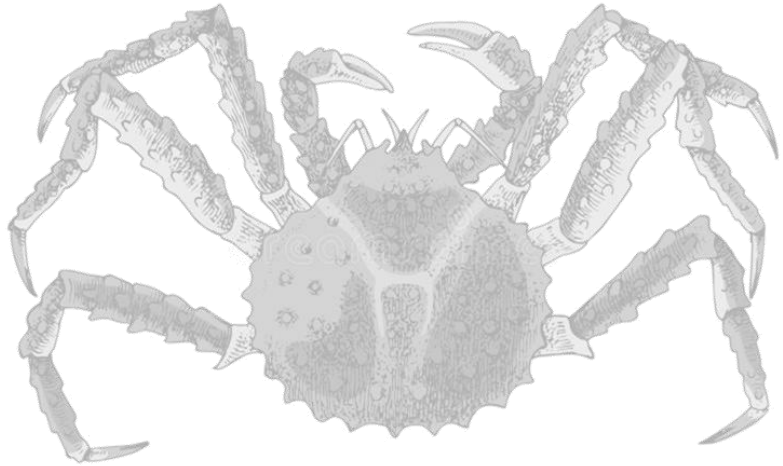
Population genomics for management and enhancement

Larval supply and recruitment strength

— IBM to generate larval trajectories and settlement

Impacts of lost pots

— simulated lost pots (cameras, pop-up tags)



Assessment of early life ecology and stock-recruit dynamics

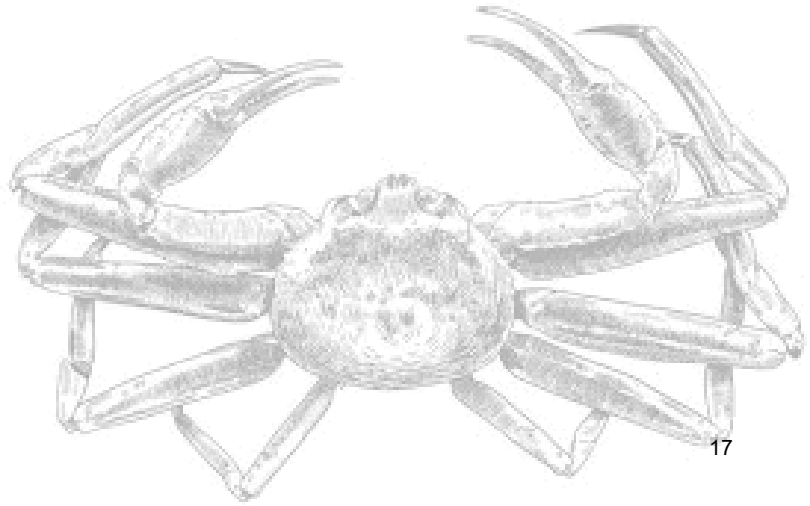
— under-ice trawl and benthic video (CamSled)

Predation and thermal pressure in a changing NBS

— acoustic and predation tags (ROV + acoustic telemetry)

Metabolic costs of migration

— temperature-dependent metabolism (treadmill respirometry)



North Pacific Crab

North Pacific crab growth	UW
Pribilof Islands blue king crab recruitment	UAF
Qualitative approaches to blue king crab management	UW
Tanner crab response to temperature change	NOAA-AFSC
Snow crab body condition	NOAA-AFSC
Pathology of black eye syndrome	Bigelow Lab
Fatty acid sampling in snow crab	Bigelow Lab
Bristol Bay red king crab movement	NOAA-AFSC
Bristol Bay red king crab settlement potential	ADFG
Impact of sea ice loss on snow crab productivity	NOAA-AFSC

Total Investments: $2.5M (2020-2025)

Pacific Salmon

Salmon winter ecology	NOAA-AFSC
Automation of scale age estimation	PWSSC
Engaging Yukon fishers in Chinook and chum research	YRDFA
Climate drivers of Yukon Chinook productivity	ADFG
Decadal study on ecological dynamics of salmon	UAF
Marine survival of hatchery- and wild-origin sockeye salmon	NOAA-AFSC
Bioenergetic models of Yukon River Chinook growth	NOAA-AFSC
Differential growth in hatchery and marine origin	NOAA-AFSC & ADFG

Total Investments: $3.5M

Pacific Cod

Thermal effects on cod in the Gulf of Alaska	NOAA-AFSC
IBM validation and enhancement	NOAA-AFSC
Population structure in the Aleutians	NOAA-AFSC
Spawning habitat in a changing Bering Sea	NOAA-AFSC
Passive acoustic monitoring in the Arctic	U Victoria
Evaluating cod response to warming	Oregon State
Age validation	U Florida

Total Investments: $2.9M (2020-2025)

Applications to Management

Combining the EBS Shelf and Slope surveys
Age validation of GOA groundfishes
Resource partitioning among flatfishes
Western Arctic continuous plankton recorder survey
Quantitative methods for ecosystem indicators

Total Investments: $1.8M (2020-2025)

Applications to Management

Combining the EBS Shelf and Slope surveys

Age validation of GOA groundfishes

Resource partitioning among flatfishes

Western Arctic continuous plankton recorder survey

Quantitative methods for ecosystem indicators

Total Investments: $1.8M

Gear comparisons to inform survey redesign efforts (paired trawling)

- inform gear selectivity ratios to enable to retrospective analyses
- improve understanding of spatial ecology

Applications to Management

Combining the EBS Shelf and Slope surveys
Age validation of GOA groundfishes
Resource partitioning among North Pacific flatfishes
Western Arctic continuous plankton recorder survey
Quantitative methods for ecosystem indicators

Total Investments: $1.8M

Build on Council's ESPs, to explore methods to quantify:
(1) direction, magnitude, and relative importance of ecosystem indicator impacts on demographic processes (recruitment)
(2) whether relationships are stable through time

DataONE

The North Pacific Research Board Data Portal

About | Data | Metrics

Summary

163

datasets

The total number of publicly-available metadata records. Only the latest version of each metadata record is counted. A "dataset" here is defined by a single metadata record which may be packaged with one or more data files.

106 GiB

of content

The volume of all publicly-available metadata and data files in this portal. Only the latest version of each file is included.

NPRB Project Investments

NORTH PACIFIC RESEARCH BOARD PROJECT INVESTMENTS 2020-2025

www.nprb.org

PACIFIC SALMON	2020-2025: $3.5M
AUTOMATION OF SCALE AGE ESTIMATION	PRINCE WILLIAM SOUND SCIENCE CENTER
ENGAGING YUKON FISHERS IN CHINOOK AND CHUM RESEARCH	YUKON RIVER DELTA FISHERIES ASSOCIATION
SALMON WINTER ECOLOGY	NOAA-AFSC
CLIMATE DRIVERS OF YUKON RIVER CHINOOK PRODUCTIVITY	ADFG
DECADAL STUDY ON ECOLOGICAL DYNAMICS OF PACIFIC SALMON	UAF
MARINE SURVIVAL OF HATCHERY- AND WILD-ORIGIN SOCKEYE SALMON	NOAA-AFSC
BIOENERGETICS MODELS OF YUKON RIVER CHINOOK GROWTH	NOAA-AFSC
DIFFERENTIAL MARINE SURVIVAL OF HATCHERY AND WILD-ORIGIN SOCKEYE	NOAA-AFSC-ADFG
NORTH PACIFIC CRAB	**2020-2025: $2.5M**
NORTH PACIFIC CRAB GROWTH	UW
PRIBILOF ISLANDS BLUE KING CRAB RECRUITMENT	UAF
QUALITATIVE APPROACHES TO BLUE KING CRAB MANAGEMENT	UW
TANNER CRAB RESPONSE TO TEMPERATURE CHANGE	NOAA-AFSC
SNOW CRAB BODY CONDITION	NOAA-AFSC
PATHOLOGY OF BLACK EYE SYNDROME	BIGELOW LAB
FATTY ACID SAMPLING IN SNOW CRAB	BIGELOW LAB
BRISTOL BAY RED KING CRAB MOVEMENT	NOAA-AFSC
BRISTOL BAY RED KING CRAB SETTLEMENT POTENTIAL	ADFG
IMPACT OF SEA ICE LOSS ON SNOW CRAB PRODUCTIVITY	NOAA-AFSC
COOPERATIVE RESEARCH WITH INDUSTRY	**2020-2025: $1.8M**
BERING SEA INNER SHELF: IMPROVING SYSTEM UNDERSTANDING	ALASKA SEAFOOD COOPERATIVE
INDUSTRY-DRIVEN DATA TO FILL BERING SEA INFORMATION GAPS	ALASKA BERING SEA CRABBERS
BRISTOL BAY RED KING CRAB MOVEMENT	NOAA-ADFG-BSFRF
BRISTOL BAY RED KING CRAB SETTLEMENT POTENTIAL	NOAA-ADFG-BSFRF
APPLICATIONS TO MANAGEMENT	**2020-2025: $2.5M**
ARCTIC PLANKTON RECORDER SURVEY	AOOS- SIR ALISTER HARDY FOUNDATION
AGE VALIDATION OF GULF OF ALASKA GROUNDFISH	UAF
RESOURCE PARTITIONING AMONG NORTH PACIFIC FLATFISHES	UAF-NOAA-AFSC
BERING SEA MEASUREMENTS TO IMPROVE FISHERIES MANAGEMENT	NOAA-AFSC
QUANTITATIVE METHODS FOR ECOSYSTEM INDICATORS	NOAA-AFSC
COMBINING THE EASTERN BERING SEA SHELF AND SLOPE SURVEYS	NOAA-AFSC
COMMUNITY INVOLVEMENT	**2020-2025: $2.9M**
BRIDGING KNOWLEDGE TO INFORM BERING SEA MANAGEMENT	NOAA-BBNA-KAWERAK-BERING SEA ELDERS
ENGAGING YUKON FISHERS IN RESEARCH ON CHINOOK SALMON DECLINE	YRDFA
CLIMATE DRIVERS OF YUKON RIVER CHINOOK PRODUCTIVITY	YRDFA-ADFG-NOAA-USGS
IMPORTANCE OF SUBSISTENCE WHALE REMAINS IN UTQIAGVIK	NORTH SLOPE BOROUGH
ASSESSING ACCESS TO SUBSISTENCE FISHERIES	ADFG
INTEGRATING INUPIAQ OBSERVATIONS AND SCIENTIFIC MEASUREMENTS	NATIVE VILLAGE OF KOTZEBUE
QANGYUT: GULF OF ALASKA OCEAN FORECAST	NOAA-AOOS-CHUGACH RESOURCE COMMISSION

INVESTING IN ALASKA'S MARINE RESOURCES & ECONOMY

www.nprb.org

NORTH PACIFIC RESEARCH BOARD

Alaska's seafood industry plays a crucial role in the state's and nation's economies contributing approximately $6.3 billion in annual economic output (*2024 ASMI Economic Report*). Alaska is the largest producer of seafood in the U.S. representing more than 60% (5.2 billion pounds) of commercial landings nationwide (*NOAA FOSS*) and translating to 48,000 industry jobs.

The North Pacific Research Board (NPRB) contributes to the economic sustainability of the seafood industry through informed management and understanding of Alaska's fisheries and marine ecosystems of the Gulf of Alaska, Bering Sea, and Arctic Ocean. As important commercial stocks move further north into the northern Bering Sea and Arctic, fisheries may follow. Sound science is paramount to ensure long-term sustainability and resiliency for Alaska's fisheries.

Established in 2002 by the U.S. Congress under the leadership of Senator Ted Stevens, NPRB has directed non-tax payer funds **of more than $140 million to critical science addressing pressing fishery management issues and marine ecosystem needs in Alaska**. Over 200 different institutions have received NPRB support totaling 1,228 research awards through competitive request for proposals. Since inception, NPRB has invested in Alaska's economy through the:

- University of Alaska System,
- NOAA Alaska Fisheries Science Center,
- Alaska Department of Fish and Game,
- Alaska SeaLife Center, and
- Other smaller, local, regional, and tribal organizations.

NPRB also invests in the next generation of marine researchers. NPRB has directed $2.7 million to 112 graduate students nationwide studying Alaska marine science as it relates to pressing fishery management issues.

20 BOARD MEMBER SEAT AFFILIATION
U.S. Secretary of the Commerce
U.S. Secretary of the Interior
U.S. Secretary of State
U.S. Coast Guard
U.S. Arctic Research Commission
Office of Naval Research
State of Alaska – Fishing Interest
State of Alaska – Oil and Gas Interest
State of Alaska – Academic
State of Alaska – Dept. of Fish & Game
State of Alaska – Alaska Native Interest
State of Alaska – Environmental Interest
State of Oregon Representative
State of Washington Representative
State of Washington Representative
State of Washington Representative
Fishing Industry Seat – Board Appointed
North Pacific Fishery Management Council
Alaska SeaLife Center
Oil Spill Recovery Institute

NPRB RESEARCH FOCUS

Oceanography & Productivity · Fishes & Invertebrates · Cooperative Research With Industry · Integrated Ecosystem Research · Long-Term Monitoring · Marine Birds & Mammals · Human Dimensions · Technology Development · Data Rescue · Community Involvement

INFORMING FISHERY MANAGEMENT FOR OVER 20 YEARS

The North Pacific Research Board contributes to sustainable fisheries and economies through research to inform fishery management, improve stock assessment models, identify processes that influence recruitment, growth, and survival, understand environmental interactions, and model stock dynamics and economics. NPRB invests in research applicable to those who live and work in Alaska to support industries, fishermen, and communities that engage in commercial, recreational, and subsistence use of marine resources.

NPRB has broad representation including commercial fishing, marine industry, environmental, Alaska Native interests, representation of federal agencies, and representatives appointed by the governors of the states of Alaska, Washington, and Oregon. NPRB continues to strengthen the integrity of the scientific review process, and partner with industry and community-based institutions on shared investments in research.

A FRAMEWORK FOR SUCCESS:

- LEADING A TRANSPARENT AND RIGOROUS SCIENCE REVIEW PROCESS
- PARTNERING WITH MARINE INDUSTRY STAKEHOLDERS
- INTEGRATING COASTAL COMMUNITY ENGAGEMENT AND INVOLVEMENT
- INVESTING IN THE NEXT GENERATION OF MARINE SCIENTISTS
- SUPPORTING FISHERY DISASTER RELIEF EFFORTS

www.nprb.org

ANCHORAGE MUSEUM

COLLEGE OF FISHERIES AND OCEAN SCIENCES
University of Alaska Fairbanks