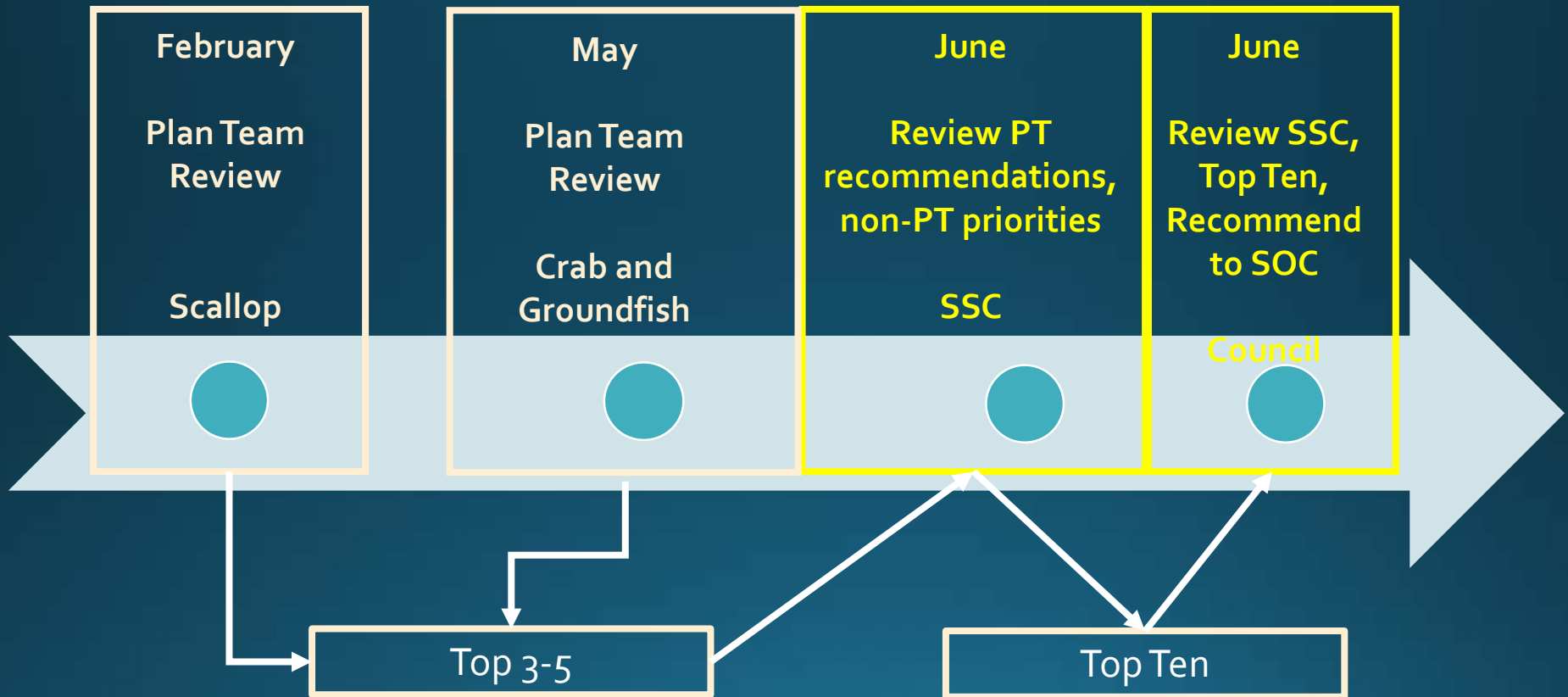


2018 Annual Review / Recommendations

Research Priorities

Annual research priority process



Categories / Definitions

CRITICAL ONGOING MONITORING: Information provided by monitoring activities in this category (1) provide an essential management function; (2) cannot likely be acquired through other means; or (3) are required by regulation. This is monitoring essential to maintaining our compliance with federal requirements, including National Standards, or necessary for the ongoing management of the fishery. Postponement would have a significant and immediate impact on management.

URGENT: Research that is essential for compliance with federal requirements, including National Standards, or that has been identified by management as necessary to aid decision-making. It is expected that a one or two year project would meet the information need. Postponement would have a significant impact on management.

Categories / Definitions

IMPORTANT (Near Term): Obtaining a new set of data or research result that is **likely to aid** in the evaluation of a near term or ongoing management goal. The research might involve a **several year program or work that could continue indefinitely**. Postponement will not have an immediate impact on fishery management; however, the information generated *will likely* inform near term (e.g., <5 year) Council actions.

STRATEGIC (Future Needs): Research that is valuable but is **not associated with an immediate need or near-term** (e.g., <5years) Council action.

Action

- Review “top” priorities
- Recommend all priorities to Secretary
- Other Issues:
 - Database changes
 - NPRB coordination

Materials

- Action Memo
- Terms Definitions
- Lists of Research Priorities for Review
 - SPT, CPT, JGFPT, Halibut, Other/PR
- SSC report on RP June 2018
- Catch Sharing Plan RP (Sarah)

Plan Team Research Priorities

- **Scallop**

- 23 projects
- 4 changes
- 3 first review
- 0 new

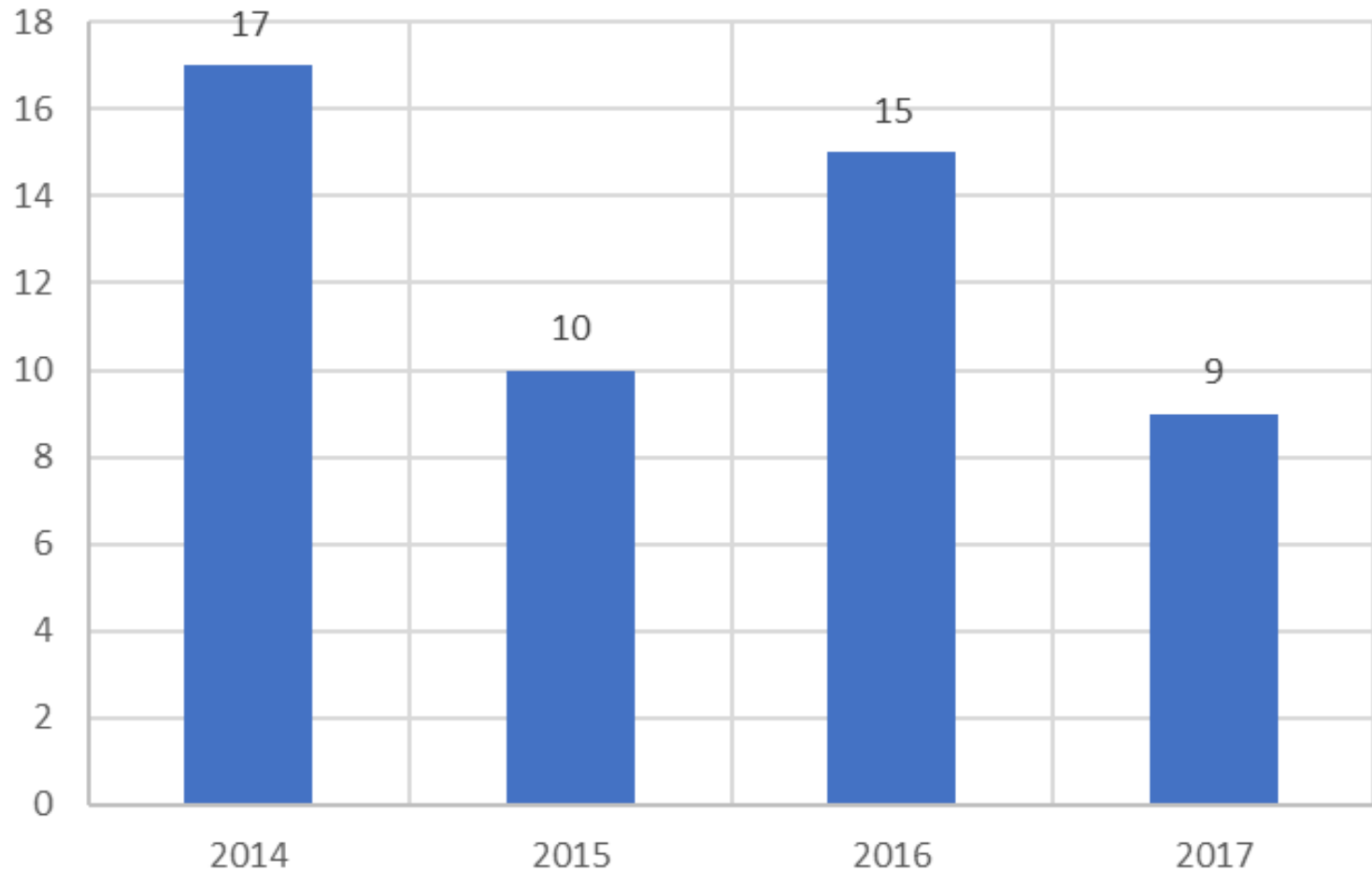
Crab

55 projects
16 changes
4 first review
1 new

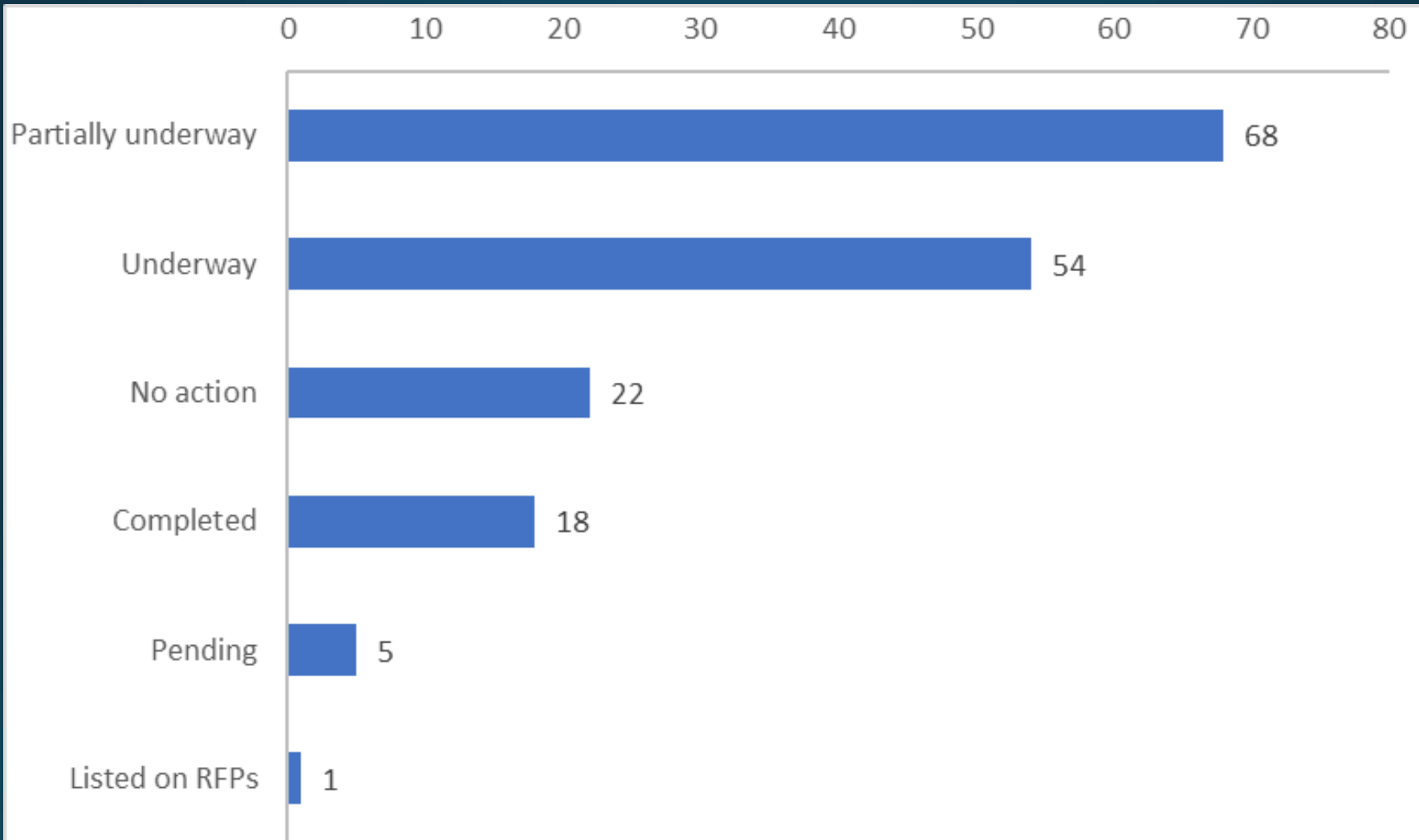
- **Groundfish**

- 95 projects
- 25 changes
- 6 first review
- 0 new

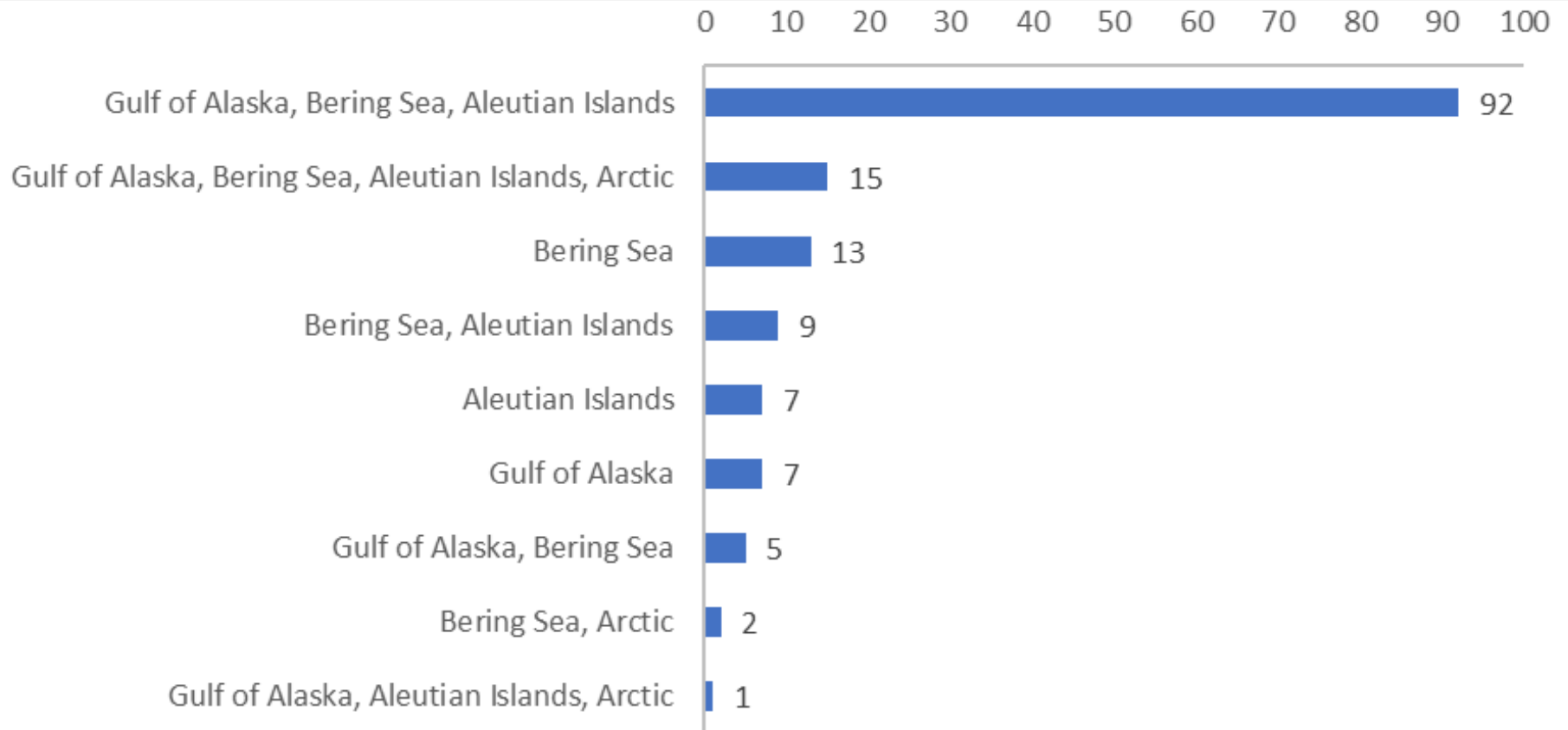
Number of Projects Added by Year



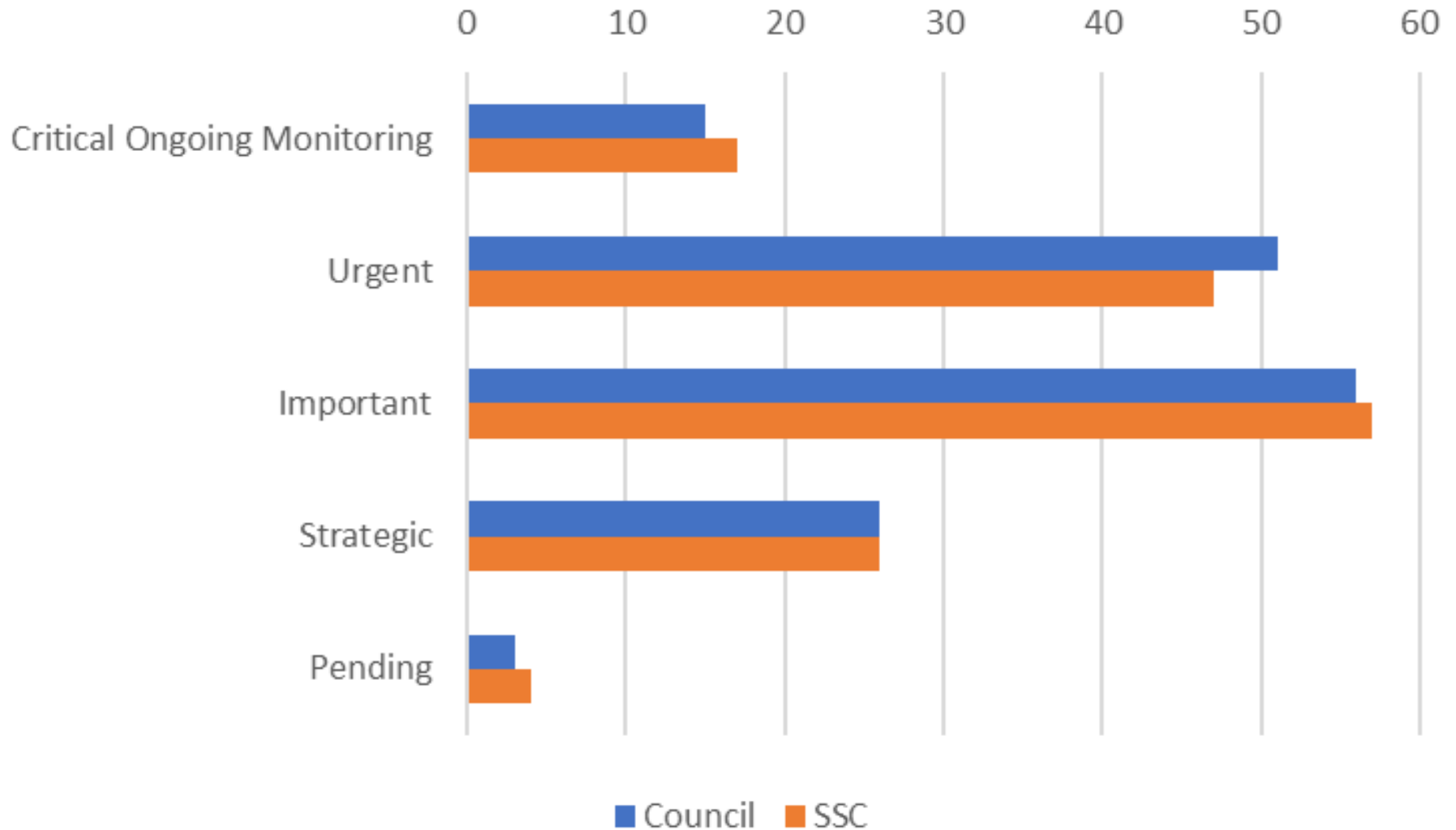
Research Status



FMP Area



Council and SSC Rankings



Top Ten Research Priorities

148 Spatial distribution and movement of crabs relative to environmental variability, life history events, and fishing

Crab Plan Team	– Urgent
SSC	– Urgent
Council	– Urgent

- Environmental conditions changing
- Changing distribution of crab stocks
- Fishing behavior and life history influenced by changes
- Data critical for models to predict abundance, stock boundaries, stock production, management strategies.

Top Ten Research Priorities

163 Conduct routine fish, crab, and oceanographic surveys in the Arctic Ocean

GF Plan Team	– Important
SSC	– Important
Council	– Urgent

- Arctic is changing rapidly
- Fish / crab populations expand into or increase in the Arctic
- Routine surveys in Arctic waters important to monitor changes.

Top Ten Research Priorities

179 Conduct pre- and post- implementation studies of the benefits and costs, and their distribution, associated with dedicated access privileges

GFPT, CPT	– Urg/Imp
SSC	– Urgent
Council	– Urgent

- Economic / social data needed for recurring program reviews
- Halibut/sablefish, AFA pollock, and BSAI crab fisheries
- Product markets, quota share markets, vessel and quota ownership
- Crew compensation, fishing community engagement and dependency
- Community protection measures

Top Ten Research Priorities

182 Conduct pre- and post- implementation studies of the benefits and costs, and their distribution, associated with dedicated access privileges

GFPT, CPT	– Urg/Imp
SSC	– Urgent
Council	– Urgent

- Economic / social data needed for recurring program reviews
- Halibut/sablefish, AFA pollock, and BSAI crab fisheries
- Product markets, quota share markets, vessel and quota ownership
- Crew compensation, fishing community engagement and dependency
- Community protection measures

Top Ten Research Priorities

189 Develop stock-specific ecosystem indicators and incorporate into stock assessments

GFPT	– Urgent
SSC	– Important
Council	– Important

- Ecosystem approach to single- (or multi-) species assessments
- Link ecosystem variability and changes to variability in growth, survival and recruitment of fish stocks
- Pacific cod
- Linking ecosystem changes to reference points such as OFL and ABC.

Top Ten Research Priorities

246 Cooperative research efforts to supplement existing at-sea surveys that provide seasonal, species- specific information on upper trophic levels

GFPT	– Important
SSC	– Important
Council	– Important

- Seabirds and marine mammals provide indicators of prey
- Pollock or Pacific cod
- Ecosystem "health"
- Top predators inadvertently impacted by fisheries
- Distributions important for where fisheries impacts occur.

Top Ten Research Priorities

365 Retrospective analysis of the impact of Chinook PSC avoidance measures on communities of western Alaska

PT	– na
SSC	– Urgent
Council	– Urgent

- Reduced salmon runs in western Alaska
- Impacts to those communities
- Availability of genetic information
- Differential distribution of impacts

Top Ten Research Priorities

431 Develop tools for analyzing coastal community vulnerability to fisheries management changes

GFPT, CPT	– Important
SSC	– Important
Council	– Important

- Economic and social impact assessments
- Community vulnerability and resilience
- Vulnerabilities interact with the nature, direction, and magnitude of proposed changes

Top Ten Research Priorities

491 Assess dependence and impacts of halibut management actions on communities

PT	– na
SSC	– Urgent
Council	– Urgent

- Halibut PSC abundance-based management
- Community engagement and dependence on the halibut and groundfish fisheries.

Top Ten Research Priorities

592 Maturity estimates for Bering Sea and Aleutian Island crab stocks

CPT	– Urgent
SSC	– Urgent
Council	– Urgent

- Maturity data incomplete
- Size at maturity, proportion mature at size, biennial reproductive cycles uncertain for many stocks
- Spatial and temporal variability needed to characterize mature biomass

RB
ME

CORE
PROGRAM

LONG TERM
MONITORING PROGRAM

GRADUATE STUDENT
RESEARCH AWARDS

ARCTIC
PROGRAM

BERING SEA
PROJECT

GULF OF ALASKA
PROJECT

THE PROGRAMREQUEST FOR PROPOSALSPROJECT SEARCH & DATABASEPUBLICATION LIBRARYRESOURCES & REQUIREMENTS

◀ 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 year-round resolution throughout the year, including the under-sampled and poorly understood seasons of summer and fall. The mooring will record physical, nutrient and carbonate chemistry, particulate, phytoplankton, and zooplankton, 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 carbon 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 whale prey).

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

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Online links

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

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- Andrew McDonnell
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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 Integrated Ecosystem Research Program (GOAIERP), Bering Sea Project (BSP), and Graduate Student Research Program (GSRA)). If you are a researcher in the Bering Sea or Gulf of Alaska research program (i.e., Gulf of Alaska, Bering Sea, or Graduate Student) enter the abbreviation.

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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." Marine Ecology Progress Series 268. Marine Ecology Progress Series: 231-43. http://s3.pubs.nprb.org/project_0301_ryer_meps_2004.pdf .	Link to Publication

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A sequential algorithm for testing climate regime shifts

Sergei N. Rodionov

First published: 6 May 2004Full publication history

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Volume 31, Issue 9
16 May 2004

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 in broad headings

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- develop hierarchical structure to group research priorities in broad headings

NPRB

- provide link in RFP to NPFMC priorities and AKFIN website to enable researchers to determine relevance to specific Council priorities
- add information in proposal submission system to allow researchers to link their proposal to NPFMC priorities
- develop a keyword function in project catalogue to associate projects to specific NPFMC priorities
- develop database and interface to support queries

Database Changes

Separate SSC and
Council Priorities

**Alaska Fisheries Information Network**

HOME

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 -

Council Priority -

SSC Priority -

Research Status -

10 records per page

Search:

ID	Title	Council Priority	SSC Priority	Research Status	Ecosystem Area	Related Council Action
144	District-wide survey for demersal shelf rockfish in Southeast Alaska	Critical Ongoing Monitoring	Critical Ongoing Monitoring	Partially underway	Gulf of Alaska	Harvest specifications
145	Continuation of State and Federal annual and biennial surveys	Critical Ongoing Monitoring	Critical Ongoing Monitoring	Underway	Gulf of Alaska, Bering Sea, Aleutian Islands	Harvest specifications
146	Improve surveys in untrawlable habitat, particularly for rockfish, Alaska mackerel, and sculpins	Urgent	Urgent	Underway	Gulf of Alaska, Bering Sea, Aleutian Islands	Harvest specifications
147	Life history research on data poor or non-recovering crab stocks	Important	Important	Partially underway	Bering Sea	Harvest specifications
148	Spatial distribution and movement of crabs relative to life history events and fishing	Urgent	Important	Partially underway	Bering Sea	Harvest specifications
149	Improve handling mortality rate estimates for crab	Important	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	Critical Ongoing Monitoring	Critical Ongoing Monitoring	Underway	Gulf of Alaska, Bering Sea, Aleutian Islands, Arctic	Ecosystem impacts

Propose New Research Priorities

Research ID	Title	Description	SSC Priority	Research Status

Action

- Review existing/new research priorities
- Review “top” priorities
- Recommend priorities to Council
- Other Issues:
 - Database changes
 - NPRB coordination

Questions / Discussion