

Alaska Fisheries Science Center FY22 State of the Center

Robert Foy
AFSC Research and Science Director

Presentation to North Pacific Fisheries Management Council
February 07, 2022



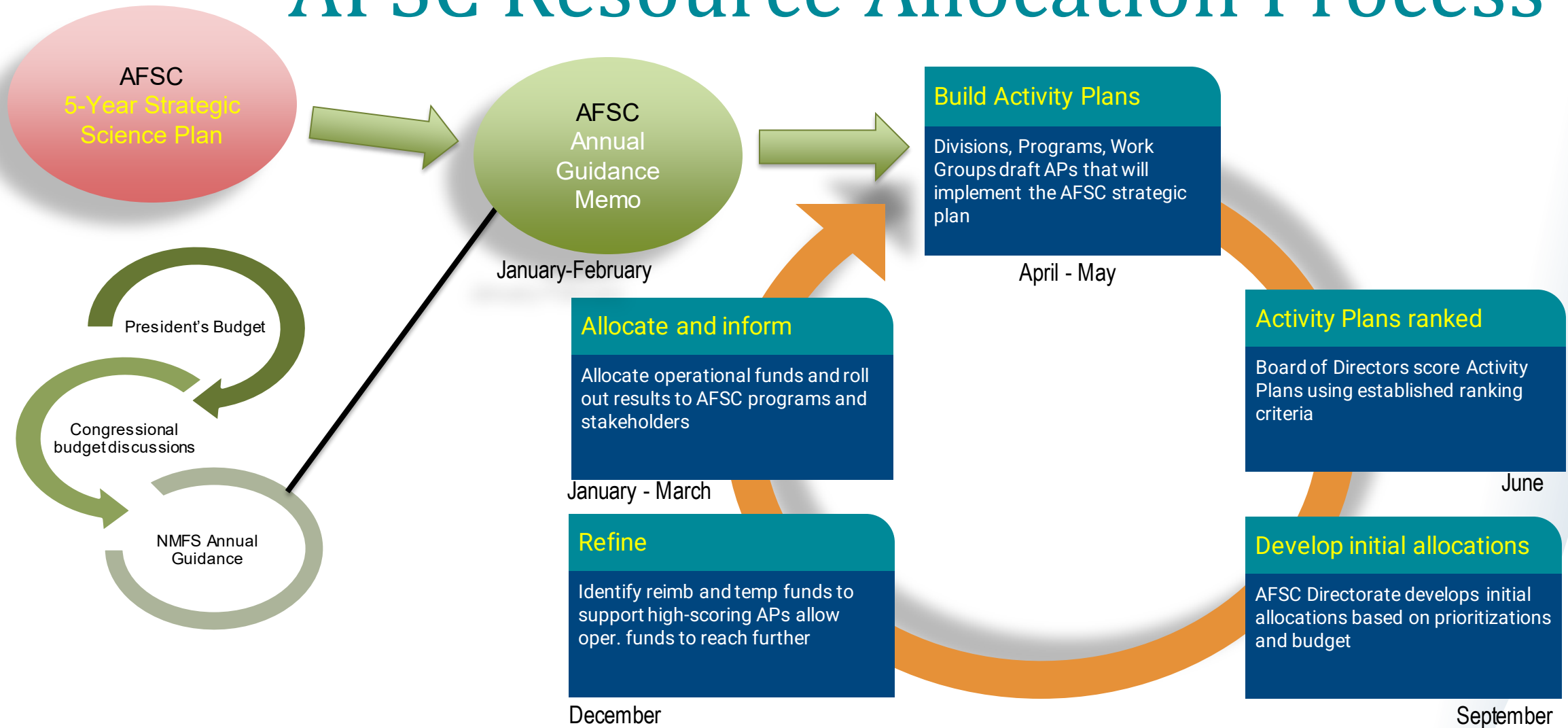
Outline

- AFSC resource allocation process
- FY23 - FY27 Strategic Science Plan
- Budget trends and FY22 expectations
 - FY22 Underfunded priority research (under Continuing Resolution – **CR** budget)
 - FY22 Fully funded high priority research (including surveys)



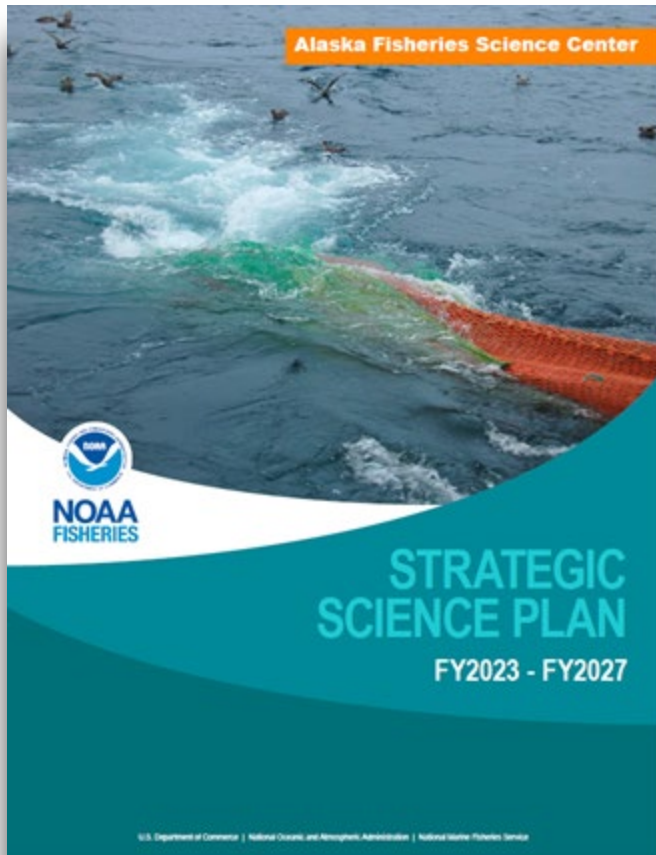
NOAA
FISHERIES

AFSC Resource Allocation Process



NOAA
FISHERIES

AFSC Strategic Science Plan (SSP)



- Identifies priorities for the next five years (FY2023-FY2027)
- Designed to support and advance the mission of NOAA and NMFS
- Aligned with NMFS Strategic Plan
- Informs the AFSC Annual Guidance Memo
- <https://www.fisheries.noaa.gov/resource/document/alaska-fisheries-science-center-strategic-plan-fy2023-fy2027>



NOAA
FISHERIES

SSP Opening

- Introduction
 - Vision, mission, and core values
- AFSC Overview
 - Laws, policies, and EOs that direct our activities
 - Organizational and federal budget structure
 - Human capital resources and facilities assets
 - Challenges and opportunities



NOAA
FISHERIES

SSP Organizational Excellence

- Overarching goal is to achieve the highest standards of **integrity, transparency, and service** in all AFSC operations so that we may succeed in carrying out our mission as an organization.
- Underpins all of the work conducted by AFSC



NOAA
FISHERIES

SSP Organizational Commitments

1. AFSC culture: transparency, engagement, accountability and respect
2. Diversity, equity, inclusion, and accessibility
3. Integrity of business operations, safe work environment, and proactive and strategic communication
4. State-of-the-art information technology
5. Change management
6. Resilience to crises
7. Develop and promote partnerships and collaborations



NOAA
FISHERIES

SSP Science Goals

- **Goals:** reflect NMFS' core mission to maintain sustainable fisheries and conserve and recover protected species.
 - **Objectives:** describe more specifically what outcomes or impact we are trying to achieve with each goal
 - **Strategies:** we have further identified a series of strategies that we will use to achieve each objective.
- **Three goals** will guide our work over the next five years.



NOAA
FISHERIES

SSP Science Goal 1

- **Goal 1:** monitor and assess fish, crab, and marine mammal populations, fisheries and marine ecosystems.
 - Objective 1.A: conduct assessments
 - Objective 1.B conduct applied ecosystem and socioeconomic analyses
 - Objective 1.C: create next generation assessments
 - Objective 1.D: reduce bycatch



NOAA
FISHERIES

SSP Science Goal 2

- **Goal 2:** Investigate, model, and predict ecosystem and climate impacts on living marine resources
 - Objective 2.A: Investigate ecosystem-level changes with field and modeling studies.
 - Objective 2.B: hindcast, forecast, and project effects of climate change
 - Objective 2.C: High Arctic research priorities



NOAA
FISHERIES

SSP Science Goal 3

- **Goal 3:** Advance new initiatives and innovations
 - Objective 3.A: Data innovation and improvement
 - Objective 3.B: Innovative technologies
 - AI, EM, UxS, tagging, acoustic sensing
 - Objective 3.C: 'Omics
 - Objective 3.D: Aquaculture



NOAA
FISHERIES

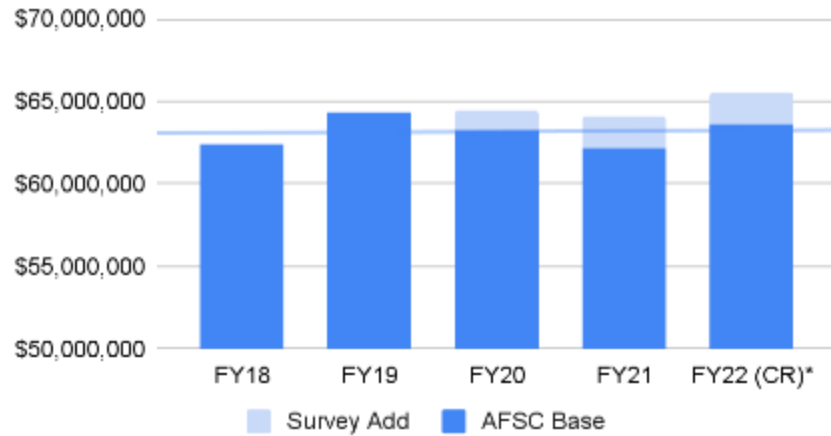
Budget trends and FY22 expectations (CR)



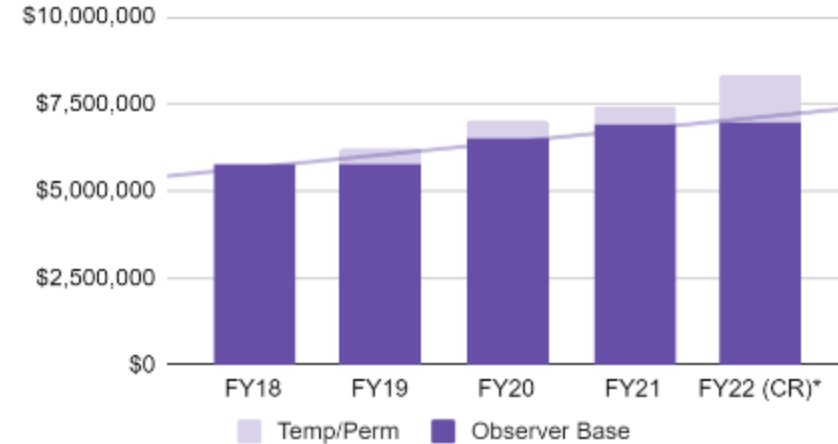
NOAA
FISHERIES

AFSC Budget Trends

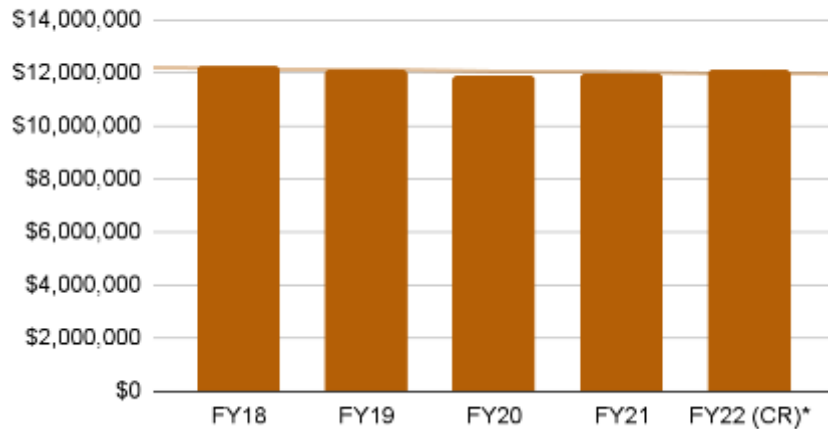
AFSC Total Permanent Funding



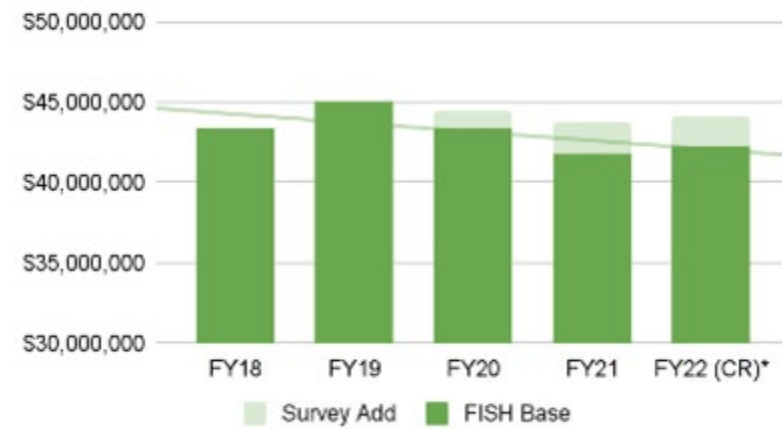
Observers & Training



Protected Resources



Fisheries (w/o NCRP)



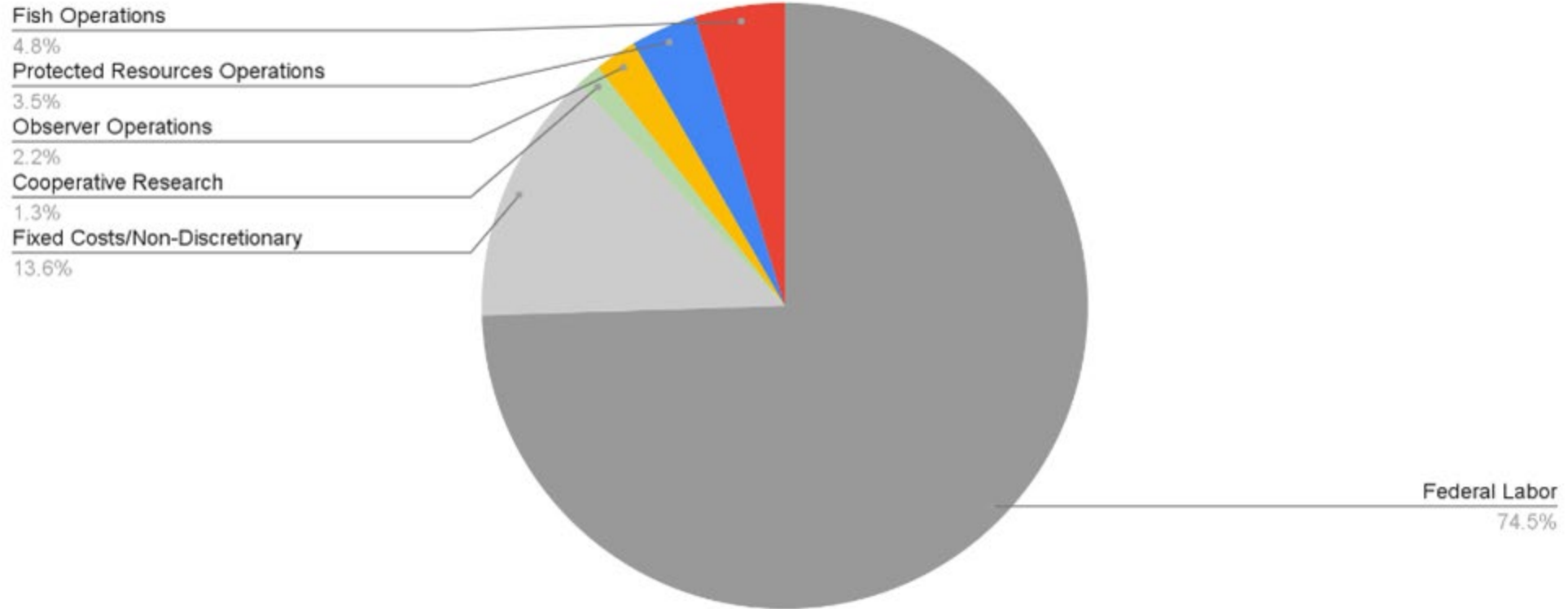
*FY22 estimated
Temporary and reimbursable funds are not included.



NOAA
FISHERIES

AFSC Preliminary FY22 Base Funding Profile (CR)

FY22 Amount

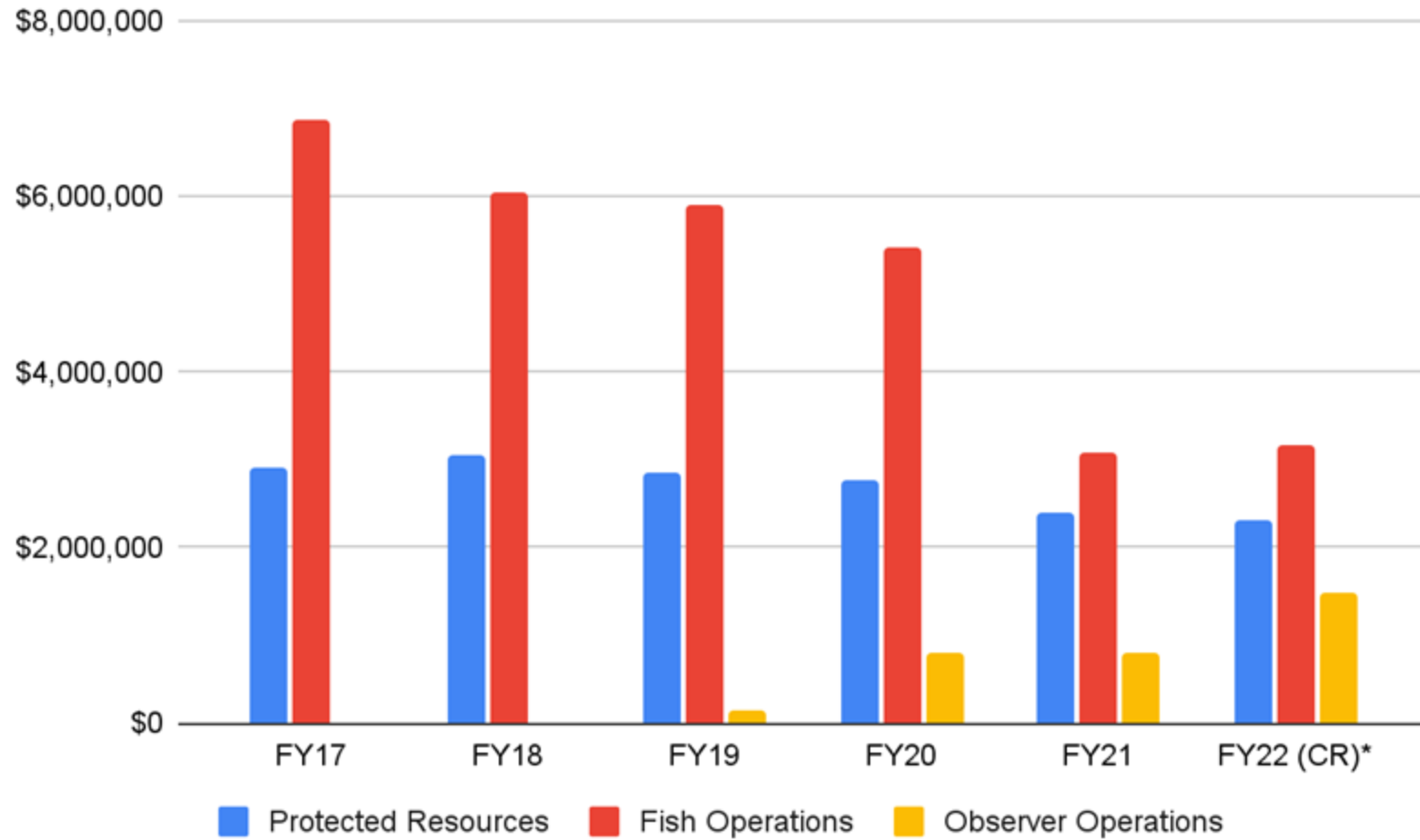


- Fixed Costs/Non-Discretionary includes facilities, mandatory travel, and other costs that are required to be paid annually.
- Temporary and reimbursable funds are not included.



NOAA
FISHERIES

Operational Funding Trends



*FY22 estimated



NOAA
FISHERIES

Future Predictions

FY22 budget scenarios	Year of potential impact to research portfolio (if no other increases)
stable budget (CR)	FY23
increased budget directed to surveys	FY24
increase budget directed to surveys and climate	FY25



FY22 high priority **underfunded** research

Protected Resources and Observer (**CR**)

- North Pacific right whale assessment
- Abundance and distribution of endangered large cetaceans – Bering, Chukchi, and Beaufort Seas
- Uncrewed aerial systems to assess Aleutian pinnipeds
- Alaska Marine Mammal Observer Program.



NOAA
FISHERIES

FY22 high priority **underfunded** research

Fish (**CR**)

- Salmon bycatch– (aging support)
- Food habits
- Pacific cod research (process and tagging)
- Eastern Bering Sea Fisheries Surveys and Ecosystem Assessments (RPA)
- Little Port Walter research
- Midwater survey tool
- Sablefish tagging
- Pollock transboundary movements



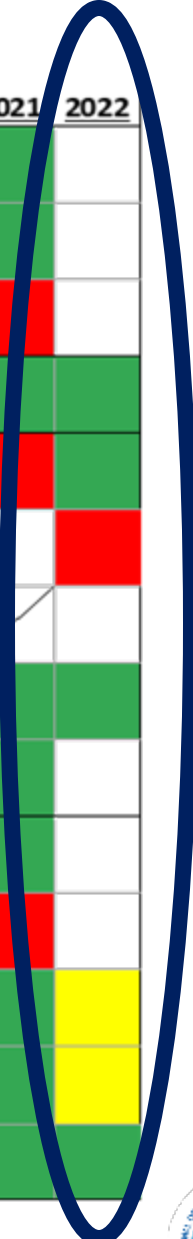
FY22 fully funded high priority research (CR)



NOAA
FISHERIES

Gulf of Alaska Fish & Ecosystem Surveys

Survey	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GOA BT vessel 1		Green		Green		Green		Green		Green		Green	
vessel 2		Green		Green		Green		Green		Green		Green	
vessel 3		Red		Red		Red		Red		Red		Red	
Deep shelf and slope groundfish longline	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Winter Acoustic-Trawl Shumagin/Sanak	Green	Red	Green	Green	Green	Green	Green	Green	Green	Red	Green	Red	Green
Winter Acoustic-Trawl Bogoslof		Red	Green		Green		Green		Green		Green		Red
Winter Acoustic-Trawl PWS/Kenai	Green					Green		Green		Red			
Winter Acoustic-Trawl Shelikof	Green	Red	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Summer Acoustic-Trawl GOA		Green		Green		Green		Green		Green		Green	
Spring GOA Ichthyoplankton		Green		Green		Green		Green		Green		Green	
Summer GOA Age-0	Green					Green		Green		Green		Red	Red
Kodiak Pacific cod nursery habitat	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow
Large-Scale GOA Pacific cod nursery habitat									Green	Green	Green	Green	Yellow
GulfWatch oceanography&forage fish	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green



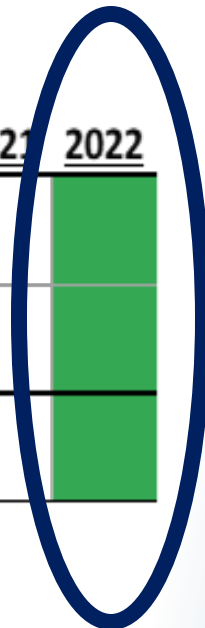
Bering Sea Fish & Ecosystem Surveys

Survey	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Eastern Bering Sea vessel 1	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green
vessel 2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green
Summer Acoustic-Trawl EBS	Green	White	Green	White	Green	White	Diagonal	White	Diagonal	White	Orange (Drone)	White	Green
Bering Sea Slope	Green	White	Green	White	Red	White	Green	White	Red	White	Red	White	Red
Northern Bering Sea vessel 1	Green	White	White	White	White	White	White	Green	Diagonal	Green	Red	Green	Green
vessel 2	Green	White	White	White	White	White	White	Green	Diagonal	Green	Red	Green	Green
Deep shelf/slope groundfish longline	White	Green	White	Green	White	Green	White	Green	White	Green	White	Green	White
Spring EBS Ichthyoplankton	Green	White	Green	White	Green	White	Green	White	Green	White	Red	White	Red
Summer EBS Age-0 (Inc. BASIS)	White	Green	Green	White	Green	White	Green	White	Green	White	Red	White	Yellow
Spring EBS Ecosystem/Moorings	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green
Fall EBS Ecosystem/Moorings	White	Green	White	White	White	Green	Green	Green	Green	Green	Diagonal	Green	Green
Northern Bering Sea juvenile fish	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green	Green
Fall NBS ECO-Foci/DBO	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Red	Green



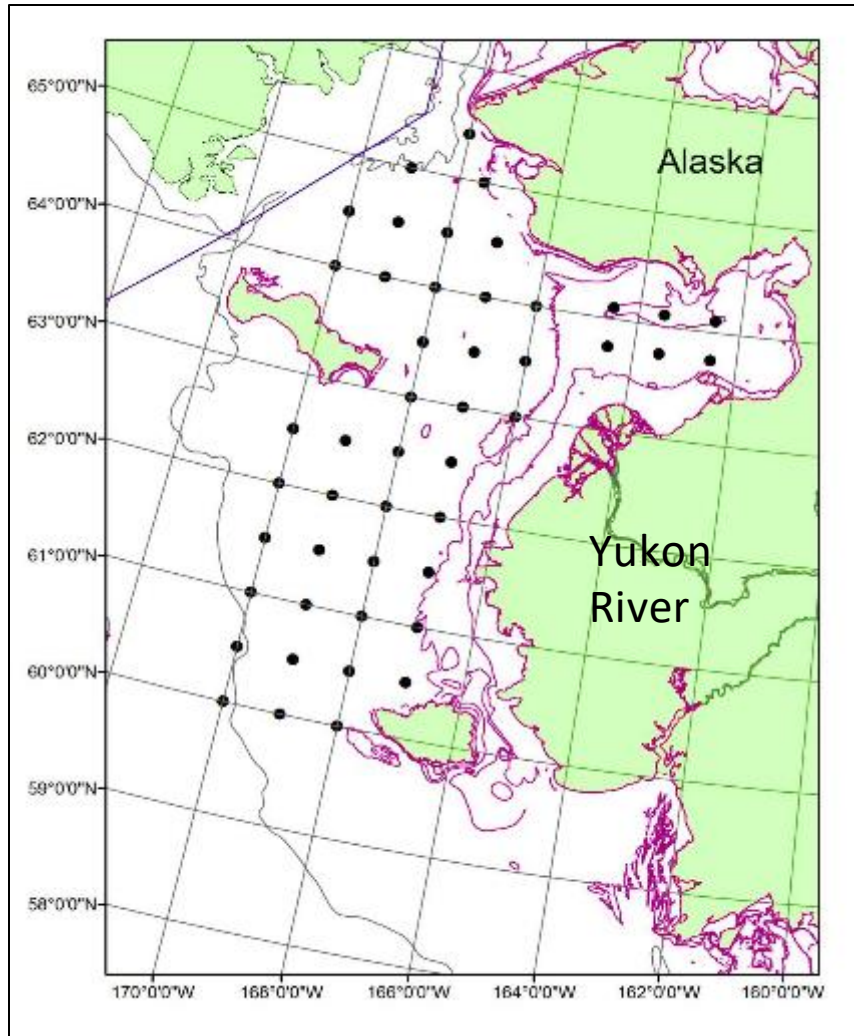
Aleutian Islands Fish Surveys

<u>Survey</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Aleutian Island vessel 1	Green	White	Green	White	Green	White	Green	White	Green	White	Red	White	Green
Aleutian Island vessel 2	Green	White	Green	White	Green	White	Green	White	Green	White	Red	White	Green
Deep shelf and slope groundfish longline	Green	White	Green	White	Green	White	Green	White	Green	White	Green	White	Green



NOAA
FISHERIES

AFSC – Focus on Salmon Marine Survival



When: September 2002 to Present

Where: Northeastern Bering Sea

Why: Understand how loss of sea ice will affect the distribution, abundance and fitness of fishes, seabirds, and mammals and the food they depend upon.



Physical
Oceanography
Temperature



Biological
Oceanography
Prey

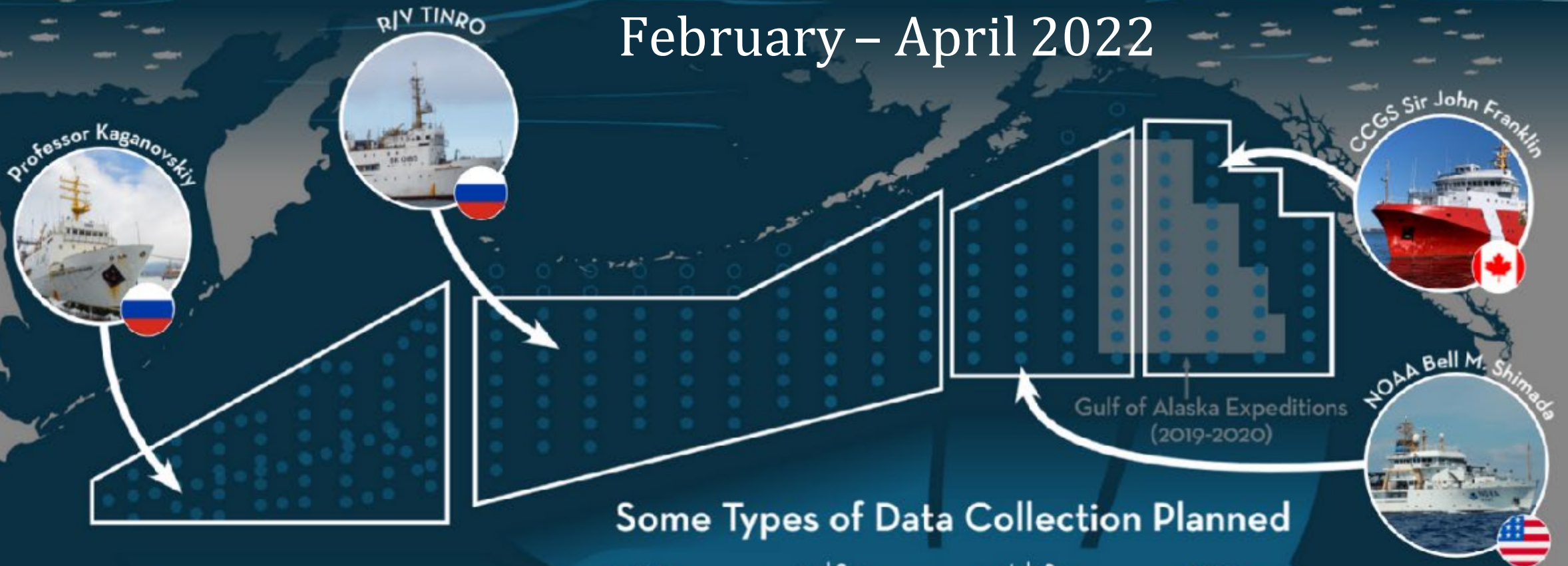


Fish
Size, Diet,
Energy,



AFSC – Focus on Salmon Marine Survival International Year of the Salmon

February – April 2022



Some Types of Data Collection Planned

- Environmental DNA (Icon: test tubes)
- Biological Sampling (Icon: microscope and petri dish)
- Food Web Sampling (Icon: fish and plankton)
- Physical Oceanography (Icon: chemical elements P, N, O₂, Si, Ph)

Other FY22 funded high priority research

- Stock assessments
- ACLIM
- Age and Growth
- Observer coverage
- Electronic monitoring
- EBS beluga abundance
- Cook Inlet Beluga abundance
- Pinniped vital rates



Adaptive Strategies for Uncertain Resources (ongoing)

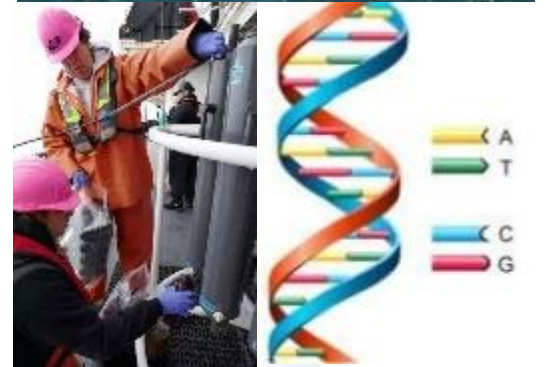
- Priority based resourcing
 - Achieving a balanced portfolio
- Streamlining our success
 - Finding efficiencies
 - Reducing some efforts
 - Investing in others
- Partnering with stakeholders



NOAA
FISHERIES

Next-Generation Data Acquisition Plan

- NOAA Fisheries' data needs are evolving rapidly.
- The NG-DAP will describe current and future data, platforms, and data collection methodology needs, laying the framework for acquisition of traditional, as well as new and expanded data sets, technologies, and approaches.
- We will use the NG-DAP to guide data acquisition within NMFS for the next 10 to 15 years.



NOAA
FISHERIES

Next-Generation Data Acquisition Plan

PUBLIC OPPORTUNITY to convey views on what data acquisition considerations they think are important for living marine resource management to enable the best predictions and decisions in a rapidly changing environment.

<https://www.eventbrite.com/cc/ng-dap-virtual-public-listening-sessions-120459>

Date		Time (EDT)	Session Topic	Meeting Registration
Tue	Feb 15	2-4pm	Session 1: Fisheries	Register: Listening Session 1: Fisheries
Thu	Feb 17	12-2pm	Session 2: Protected Resources	Register - Listening Session 2: Protected Resources
Tue	Feb 22	2-4pm	Session 3: Ecosystems	Register - Listening Session 3: Ecosystems
Thu	Feb 24	12-2pm	Session 4: Human Dimensions	Register - Listening Session 4: Human Dimensions
Tue	Mar 1	2-4pm	Session 5: Blue Economy	Register - Listening Session 5: Blue Economy



NOAA
FISHERIES

Alaska Fisheries Science Center FY22 State of the Center

Thank You!

