



RESEARCH PRIORITIES

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ACKNOWLEDGEMENTS

- Public participation and input
- Review Teams (BSFEP, CPT, GPT, SPT, SSPT, SSC Subgroup)

Thank you for your input and participation!

You have helped guide research priorities for this review and have helped to form the updated priorities based on your input.



OUTLINE

- Action for this agenda item
- Purpose of setting research priorities
- Description of 2024 review process
- Review of 2021 top priorities
- SSC Top Priorities recommendations for 2024
- SSC Critical Ongoing Monitoring (COM) priorities for 2024



ACTION FOR THIS AGENDA ITEM

Review SSC recommendations for 5-year research priorities for North Pacific fisheries, and advise Council

- “top ten” list
- critical ongoing monitoring (COM) priorities



PURPOSE OF RESEARCH PRIORITIES

- Magnuson-Stevens Act requires Councils, in conjunction with the SSC, to identify 5-year research priorities for fisheries, fisheries interactions, habitat and other areas of research that are necessary for management purposes
- NPFMC identifies 5-year priorities on a triennial basis, based on how well they align with or inform management for the federal fisheries the Council manages
 - Last review was in [2021](#)
- Council's approved research priorities are provided to:
 - Secretary of Commerce, NMFS Alaska Fisheries Science Center
 - Other research and funding entities such as North Pacific Research Board, University of Alaska, University of Washington, Oregon State University, Alaska Department of Fish and Game, Alaska Ocean Observing System, and a number of others.....

DESCRIPTION OF 2024 REVIEW PROCESS

■ Builds on existing process:

1. Plan Teams as initial filter of research priorities – both of comprehensive list ([database](#)) plus top immediate priorities

2. SSC amalgamates all inputs and identifies top 8-12 priorities

← May 2024 SSC virtual mtg

3. Council reviews SSC recommendation and adopts priorities

← June 2024 Council mtg

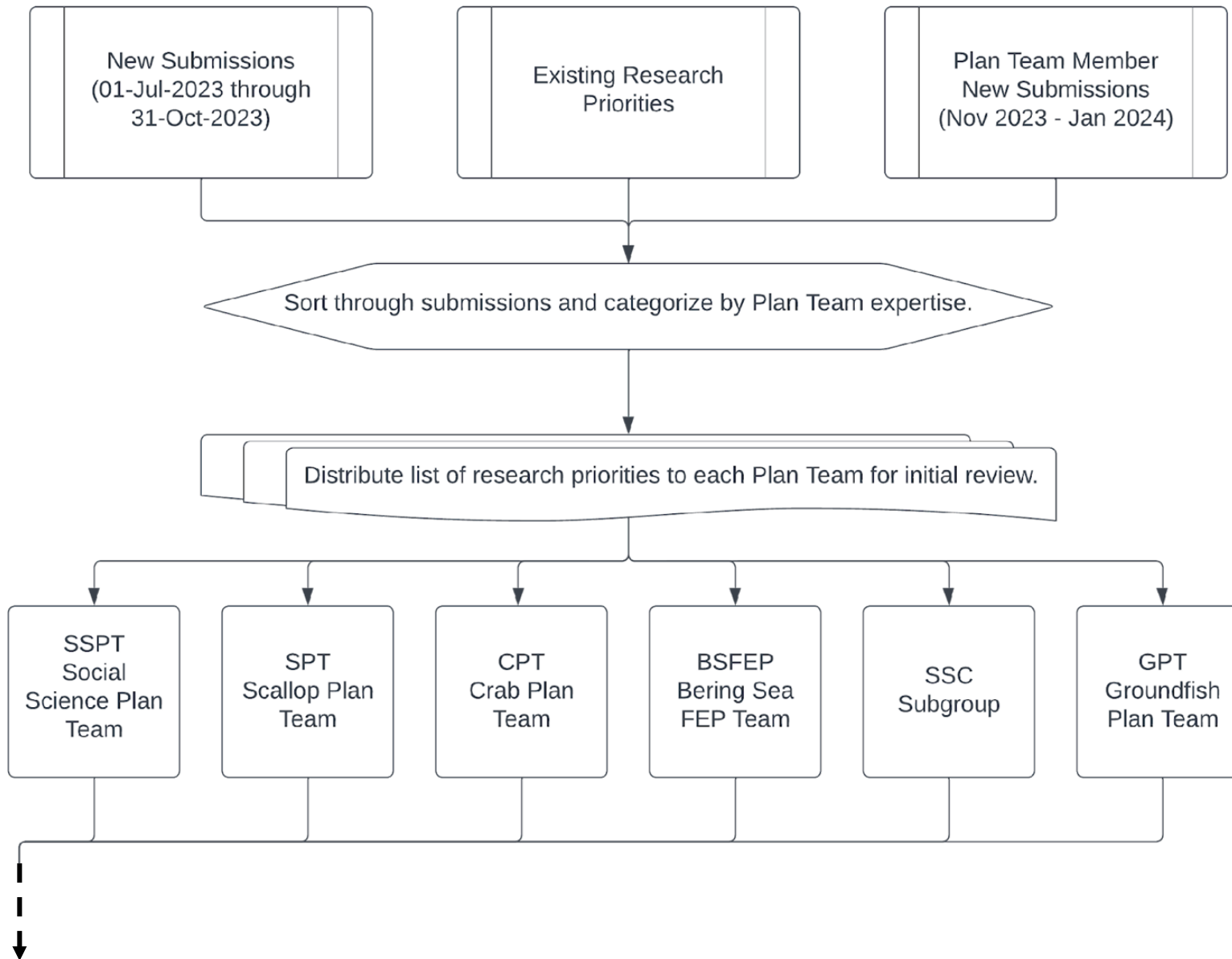
■ Added new defined pathway for public input

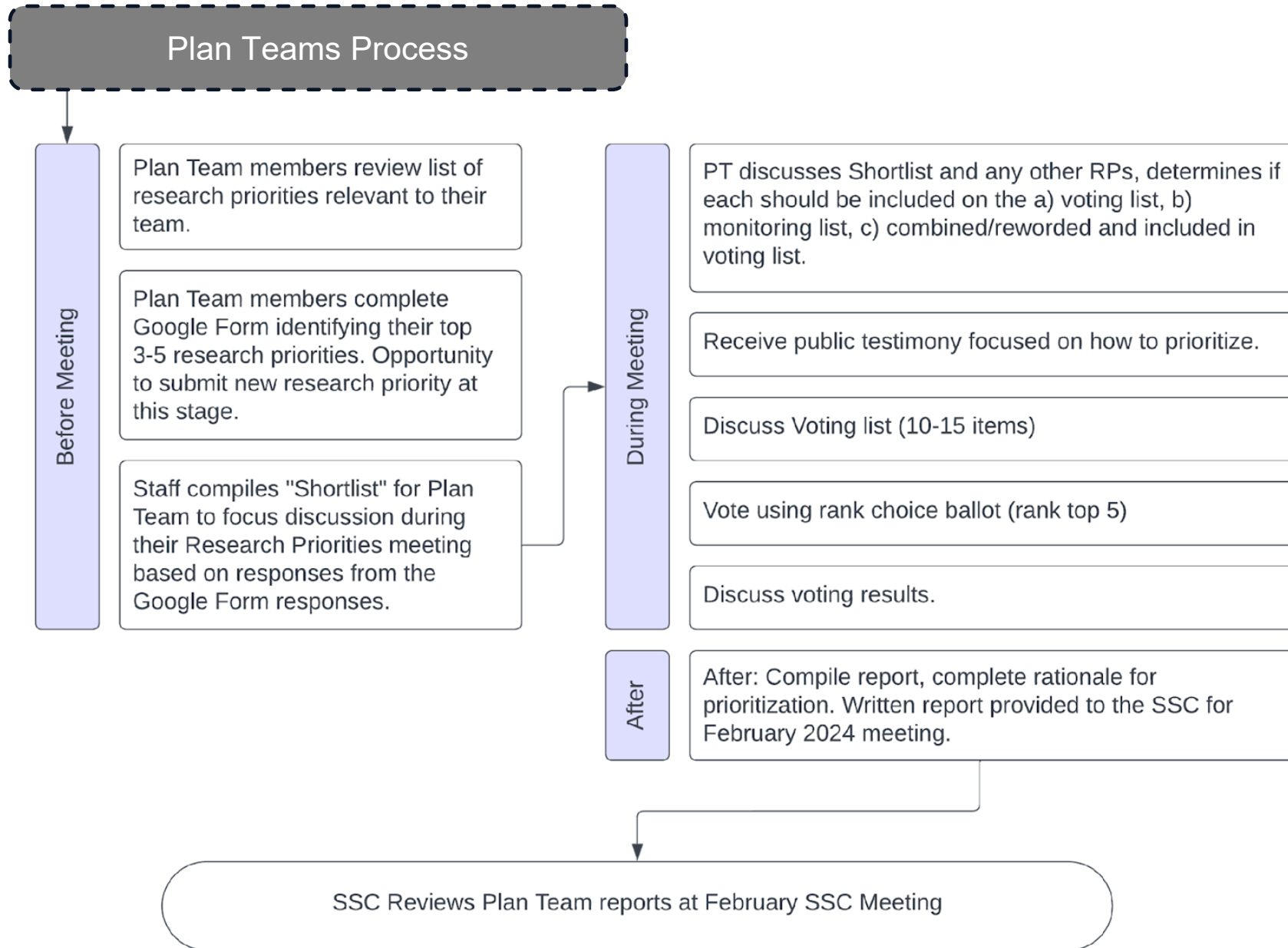
■ Opportunity to suggest **new research priorities** through [online](#) public solicitation period, open July to October 31, 2023

■ Opportunity to comment on **which projects are prioritized** at Plan Team review meetings scheduled Nov-Jan, and SSC in February

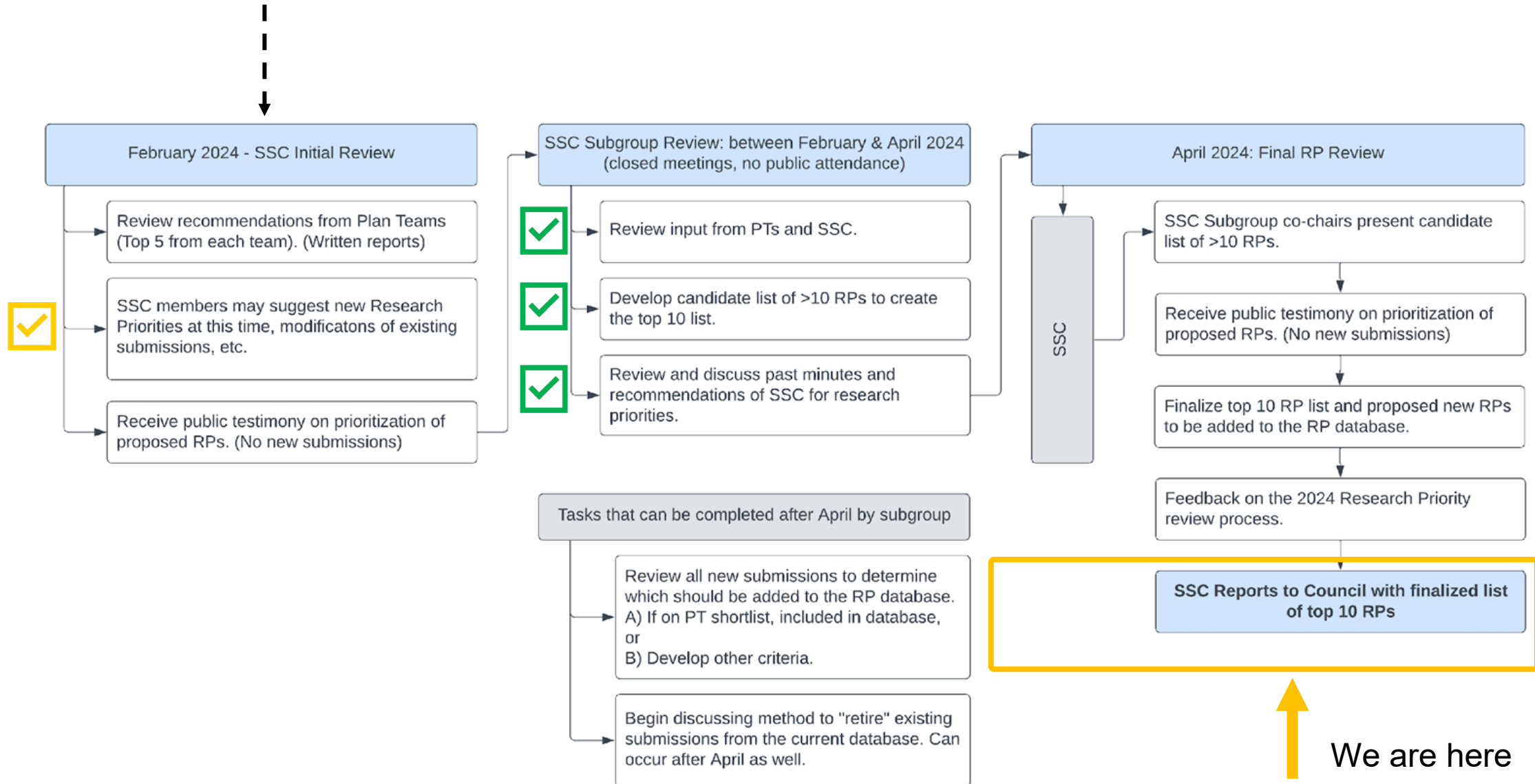


THE 2024 REVIEW PROCESS





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RECAP OF 2021 RESEARCH PRIORITIES



2021 SSC AND COUNCIL RESEARCH PRIORITIES

RID	Category	2021 Top 10 Priorities	Changed by Council?
148	Urgent	Spatial distribution and movement of crabs relative to life history events and fishing	No
163	Important	Conduct routine fish, crab, and oceanographic surveys in the Arctic Ocean	No
178	Urgent	Develop a framework and collect economic information	No
189	Urgent	Develop stock-specific ecosystem indicators and incorporate into stock assessments	No
246	Important	Cooperative research efforts to supplement existing at-sea surveys that provide seasonal, species-specific information on upper trophic levels	No
431	Important	Develop tools for analyzing coastal community vulnerability to fisheries management changes	No
592	Urgent	Maturity estimates for Bering Sea and Aleutian Island crab stocks	No
611	COM	Collection of socio-economic information	No
712	Urgent	Gap Analyses on loss of biological samples due to implementation of EM	Yes
731	Urgent	Norton Sound Red King Crab case study	No

2021 SSC AND COUNCIL

RID	Category	2021 Top 10 Priorities	Changes?
<p>The April 2021 Council motion added the following language to the description of the new research priority 712: “... as well as an evaluation of alternative sources or proxies for biological data as EM use increases.”</p> <p>RID 712 description: Research to determine the effects of loss of biological data collections due to Electronic Monitoring (EM). As the use of EM increases in different fisheries, fewer at-sea observer observations and collections are being made which reduces haul specific data collections. Evaluations of the effects of this on catch accounting estimates and stock assessment are needed as well as an evaluation of alternative sources or proxies for biological data as EM use increases.</p>			
712		Gap Analyses on loss of biological samples due to implementation of EM	Yes
731		Norton Sound Red King Crab case study	No



SSC RECOMMENDATIONS FOR 2024 RESEARCH PRIORITIES

CHRIS SIDDON, PhD

The SSC reviewed the 2021 top ten list, all new public submissions and Plan Team recommended RPs

2024 SSC TOP 10-12 LIST (UNRANKED)

Description	Citations
Further research to reduce western Alaska salmon bycatch in Bering Sea groundfish fisheries (e.g. research on salmon and drivers of salmon distribution, as well as drivers of groundfish fishery behavior including avoidance of other PSC species) (808).	Public, SSCsub, GPT, SSPT (Supp)
Quantify the magnitude of fishing gear (e.g., pelagic trawl vessels, derelict crab pots, and modified crab pots to reduce bycatch) impacts on crab and their associated benthic habitat and develop fishing gear innovations where needed (809).	Public, BSFEP, CPT, SSCsub, Council, GPT (Supp)
Evaluate direct marine mammal-fishery interactions (including feeding on discards and spatio-temporal trends in bycatch) and potential mitigation measures for marine mammal conservation (810).	Public, SSCsub (Supp), GPT (Supp)
* Examine the economic, social, and cultural effects of fisheries and fishery management policy on coastal communities over time (including impacts from fishery policy changes and Tribal citizen and Tribal Nation reliance on, participation in, and impacts of federally managed fisheries) (811).	Public, SSPT (x3), BSFEP, CPT (Supp)

* A similar research priority was included on the [2021 Top list](#).

2024 SSC TOP 10-12 LIST (UNRANKED)

Description	Citations
* Develop actionable ecosystem indicators relevant to single-species stock assessments and ecosystem assessments that address climate change impacts to managed stocks (812).	Public, BSFEP, GPT
* Continue to acquire basic life history information with an emphasis on improved estimates of size/age at maturity to advance understanding of the mechanisms for how maturity changes over space and through time (813).	Public, ScPT, CPT, GPT
* Increased understanding of the spatial distribution, habitat requirements, and movement of crabs relative to life history events and fishing (814).	Public, CPT, BSFEP
Develop predictive tools and models that evaluate the impact of multiple projected climate scenarios on managed resources to inform management options related to ecosystem production and resilience and adaptation of fishing communities (815).	BSFEP, GPT, CPT



* A similar research priority was included on the [2021 Top list](#).

2024 SSC TOP 10-12 LIST (UNRANKED)

Description	Citations
Develop predictive tools and models that evaluate the impact of multiple projected climate scenarios on managed resources to inform management options related to ecosystem production and resilience and adaptation of fishing communities (815).	BSFEP, GPT, CPT
Retrospective and meta- analysis regarding whether, how, when and why objectives and goals of fishery management plans are or are not achieved over time (e.g., Bmsy proxy evaluation) (816).	Public, SSCsub, GPT (Supp), SSPT (Supp)
* Norton Sound Red King Crab case study (731).	SSPT, CPT (Supp)
Improve surveys in untrawlable habitat, particularly for rockfish, Atka mackerel, sculpins, and snow crab (817).	Public, GPT
Improve discard mortality rate estimates for scallops, crab, and groundfish stocks by gear types (818).	Public, ScPT



* A similar research priority was included on the [2021 Top list](#).

2024 CRITICAL ONGOING MONITORING (COM)

- The SSC recommends adopting the 21 COM priorities identified in 2021 with no changes (20 were listed in the [letter](#), but 21 in the [database](#); RID 735 was omitted from the letter in error).
- Based on the Social Science Plan Team recommendation and the Council's overall goal to facilitate the increased use of Traditional Knowledge within the Council process, the SSC recommends the addition of a general statement to the Critical Ongoing Monitoring category in the Research Priorities definition descriptions write up regarding Traditional Knowledge:

The Council has adopted the LKTKS Protocol and has committed to incorporating LKTKS information into ongoing management decision making processes when available and relevant. Research focused on ongoing monitoring of the incorporation of LKTKS would increase the transparency and identify gaps in inclusivity of the process. There are numerous ways Traditional Knowledge will strengthen all Research Priorities, including offering new frameworks for analysis; fostering relationships between Indigenous and Western scientific researchers and communities.





QUESTIONS?

2021 & 2024 TOP RESEARCH PRIORITIES

2021 Top Priorities	2024 Top Priorities
Cooperative research efforts to supplement existing at-sea surveys that provide seasonal, species- specific information on upper trophic levels	Further research to reduce western Alaska salmon bycatch in Bering Sea groundfish fisheries (808).
Conduct routine fish, crab, and oceanographic surveys in the Arctic Ocean	Quantify the magnitude of fishing gear impacts on crab and their associated benthic habitat and develop fishing gear innovations where needed (809).
Develop a framework and collect economic information	Evaluate direct marine mammal-fishery interactions (including feeding on discards and spatio-temporal trends in bycatch) and potential mitigation measures for marine mammal conservation (810).
Develop tools for analyzing coastal community vulnerability to fisheries management changes	* Examine the economic, social, and cultural effects of fisheries and fishery management policy on coastal communities over time (including impacts from fishery policy changes and Tribal citizen and Tribal Nation reliance on, participation in, and impacts of federally managed fisheries) (811).
Develop stock-specific ecosystem indicators and incorporate into stock assessments	* Develop actionable ecosystem indicators relevant to single-species stock assessments and ecosystem assessments that address climate change impacts to managed stocks (812).
Maturity estimates for Bering Sea and Aleutian Island crab stocks	* Continue to acquire basic life history information with an emphasis on improved estimates of size/age at maturity to advance understanding of the mechanisms for how maturity changes over space and through time (813).
Spatial distribution and movement of crabs relative to life history events and fishing	* Increased understanding of the spatial distribution, habitat requirements, and movement of crabs relative to life history events and fishing (814).
Collection of socio-economic information	Develop predictive tools and models that evaluate the impact of multiple projected climate scenarios on managed resources to inform management options related to ecosystem production and resilience and adaptation of fishing communities (815).
Gap Analyses on loss of biological samples due to implementation of EM	Retrospective and meta- analysis regarding whether, how, when and why objectives and goals of fishery management plans are or are not achieved over time (e.g., Bmsy proxy evaluation) (816).
Norton Sound Red King Crab case study	* Norton Sound Red King Crab case study (731).
	Improve surveys in untrawlable habitat, particularly for rockfish, Atka mackerel, sculpins, and snow crab (817).
	Improve discard mortality rate estimates for scallops, crab, and groundfish stocks by gear types (818).

* RP similar on [2021 Top list](#) Related RIDs: ≥800 = new/edited; <800 = [existing](#) priority; NXXX = [public](#) submission; other alpha-numeric = [Plan Team](#) submission

ADDITIONAL RESOURCES: NPFMC RESEARCH PRIORITY CATEGORIES

■ 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. (e.g., agency fish surveys, socioeconomic data collections)

■ 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. (e.g., genetic analyses to resolve stock delineation questions for harvest specifications, fishery interaction studies to provide important input for Biological Opinions or NEPA analyses)

■ 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 time-limited 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. (e.g., studies to improve stock assessment parameters, gear research to reduce bycatch, MSEs, social science surveys to inform new rationalization programs)

■ Strategic (future needs)

Research that is valuable but is not associated with an immediate need or near-term (e.g., <5years) Council action. (e.g. long-term climate change studies, ichthyoplankton surveys that have not yet been linked to a stock assessment, monitoring contaminant levels in living marine resources)