

# Alaska Fisheries Science Center Survey prioritization

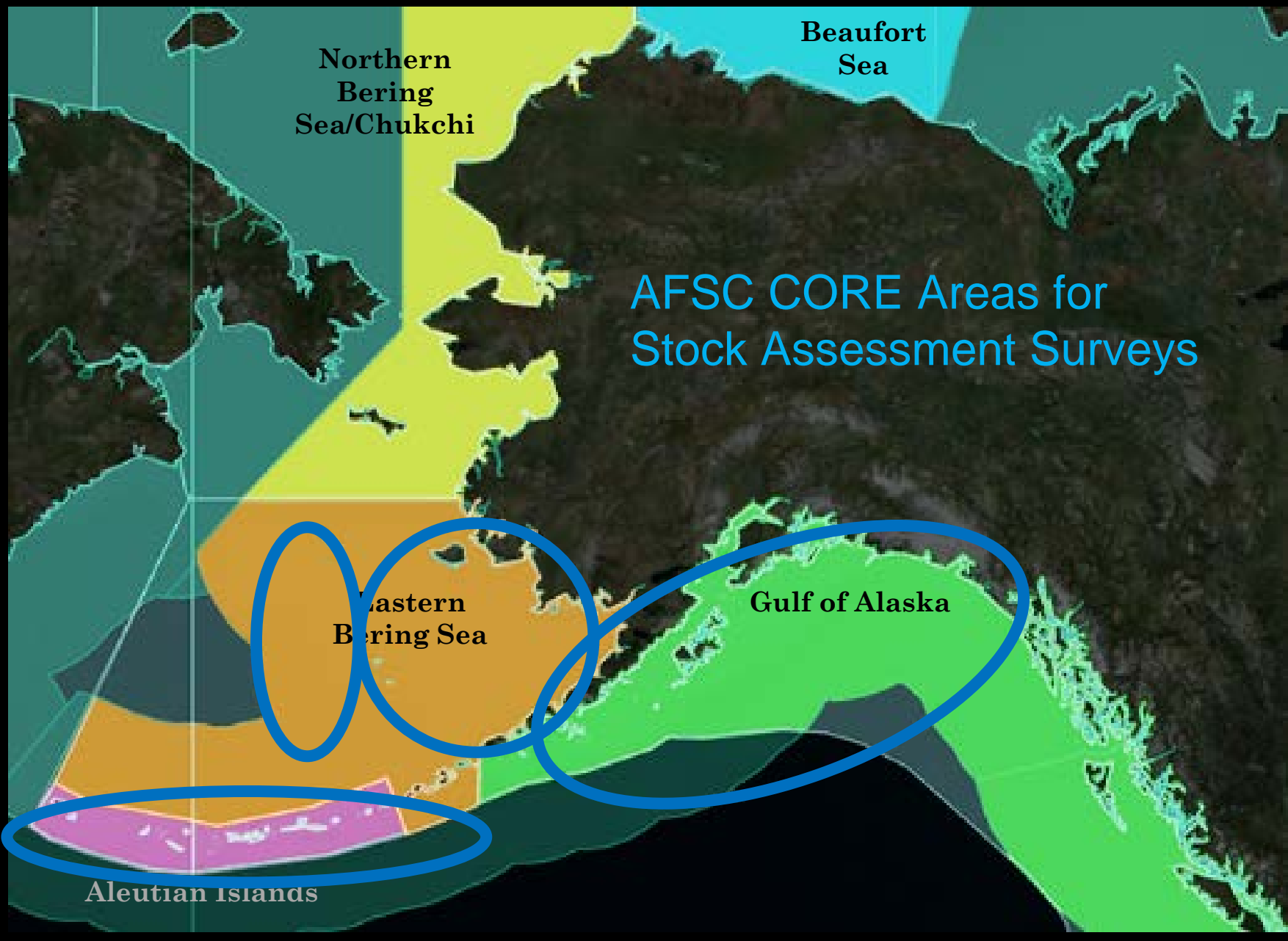


Presentation to NPFMC-SSC survey Workshop  
August 28, 2020

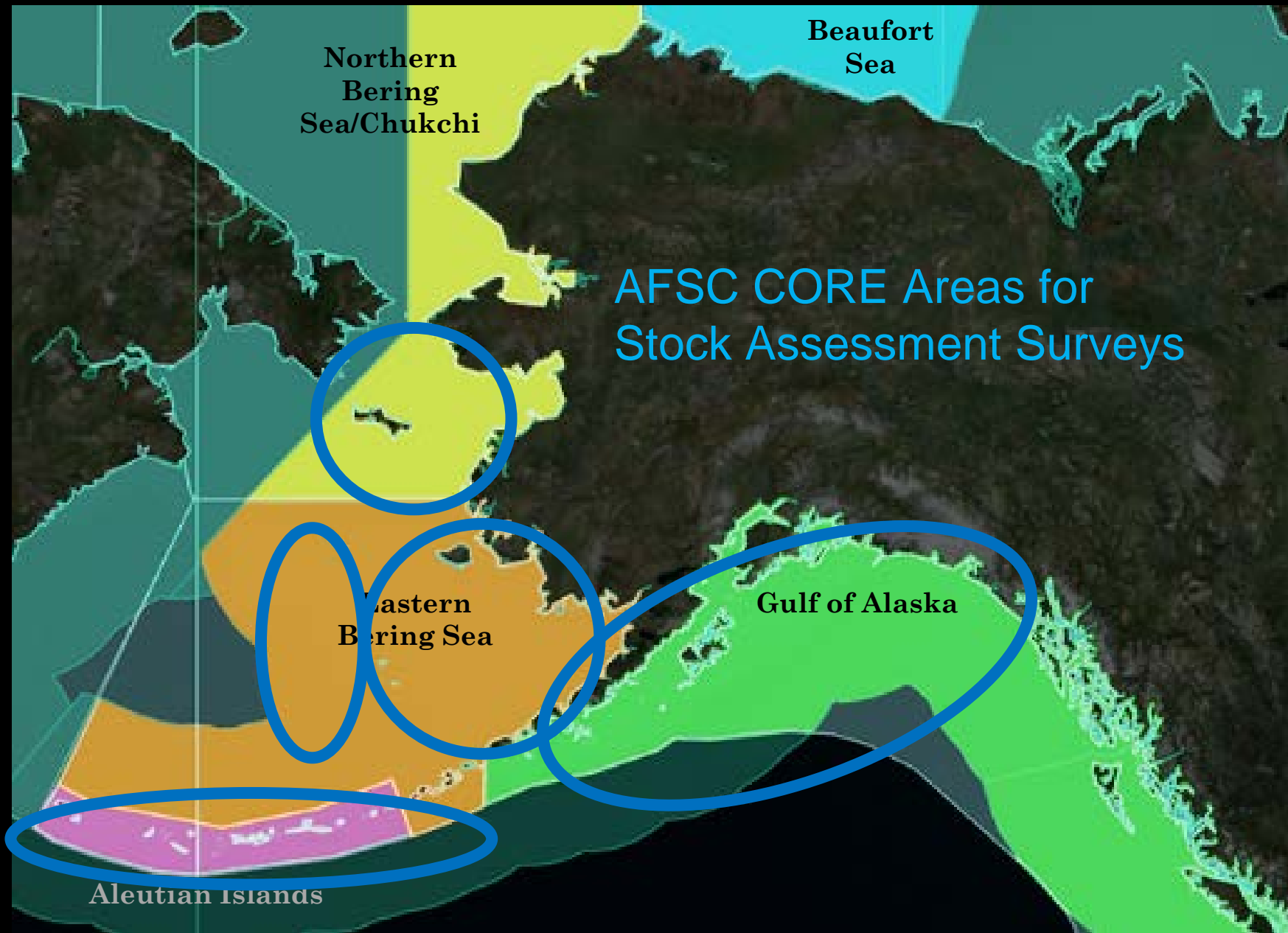


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# 5 Alaska LMEs



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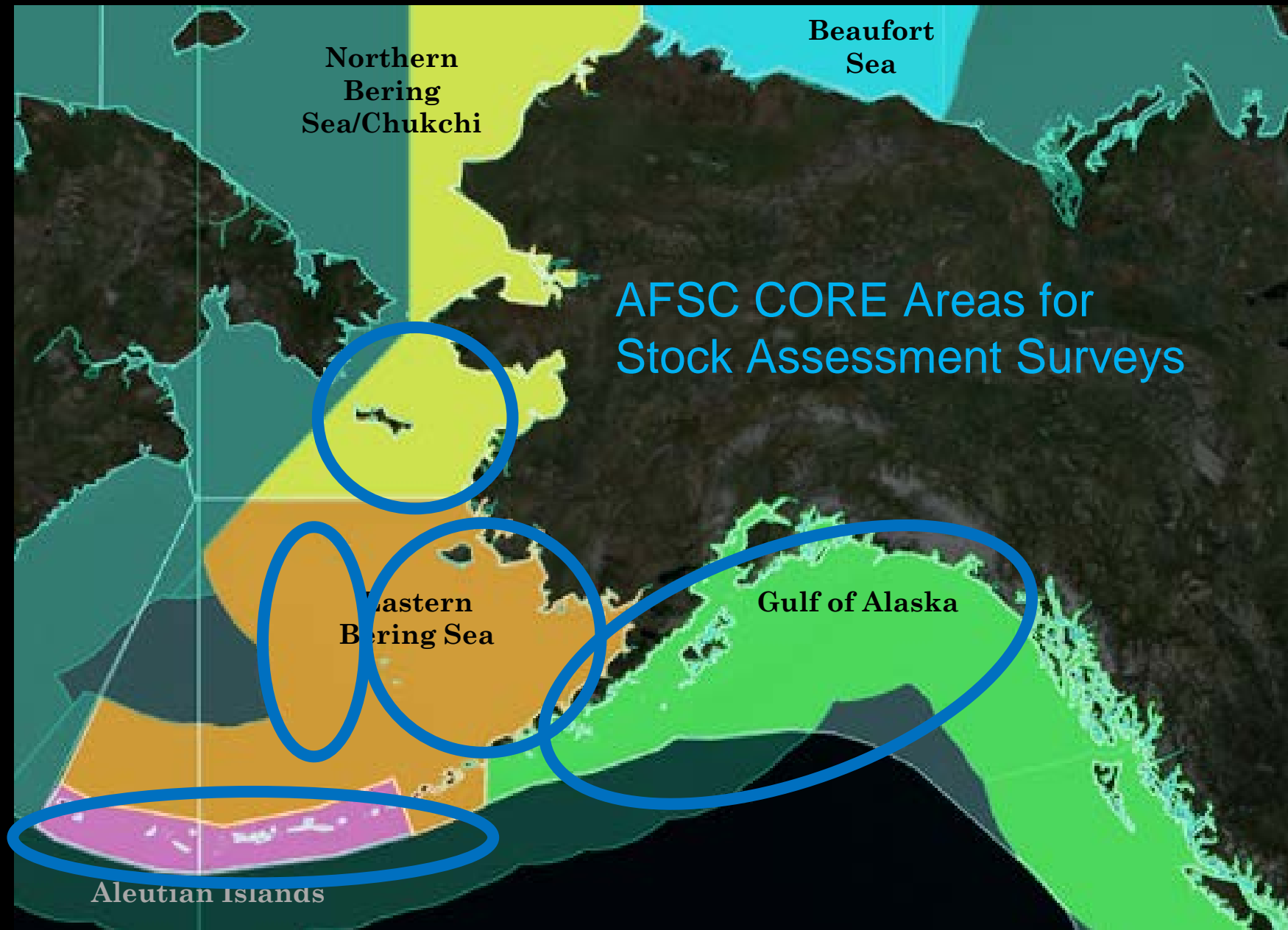


## Assumptions:

- 5 core areas
- Chukchi and Beaufort not core



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- Challenges:
- expansion
  - funding
  - staffing
  - pandemic



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# AFSC Scenarios for EBS-AI surveys

- 2020 Stock Assessments
  - BSAI: 25 full stock assessments and 2 reports due for Bering Sea and Aleutian Islands groundfish.
  - GOA: 9 full stock assessments, 5 partial assessments and 2 reports
- Stock Priority Considerations
  - Stock assessment expectations relative to survey data influence on TAC or scientific uncertainty (modeling or population dynamics concern)
  - Socio-economic considerations.



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# AFSC Scenarios for EBS-AI surveys

- Potential for TAC changes (TAC/ABC)

- Blackspotted/Rougheye rockfish (1.0)
- Other rockfish (1.0)
- EAI/BS Atka mackerel (1.0)
- CAI Atka mackerel (1.0)
- CAI POP (0.99)
- EAI POP (0.96)
- EBS Pacific cod (0.91)
- EBS sablefish (0.86)
- Kamchatka flounder (0.70)
- Shortraker rockfish (0.69)

- 2020 survey data would be expected to substantially affect uncertainty:

- BB RKC, snow crab, EBS pollock, EBS Pacific cod, AI Pacific cod, Atka mackerel, BSAI blackspotted/rougheye rockfish, Greenland turbot

- Species by ex-vessel value (2018 data):

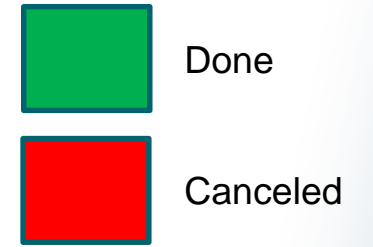
- BSAI pollock, BSAI Pacific cod, EBS/AI/GOA sablefish, Bering Sea snow crab, and BSAI yellowfin sole.



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# AFSC Bottom Trawl Surveys (2010-2020)

| Survey                       | 2010 | 2011     | 2012 | 2013     | 2014     | 2015     | 2016 | 2017     | 2018     | 2019     | 2020     |
|------------------------------|------|----------|------|----------|----------|----------|------|----------|----------|----------|----------|
| Aleutian Islands vessel 1    | Done |          | Done |          | Done     |          | Done |          | Done     |          | Canceled |
|                              | Done |          | Done |          | Done     |          | Done |          | Done     |          | Canceled |
| Bering Sea Slope             | Done |          | Done |          | Canceled |          | Done |          | Canceled |          | Canceled |
|                              | Done |          | Done |          | Done     |          | Done |          | Done     |          | Canceled |
| Eastern Bering Sea vessel 1  | Done | Done     | Done | Done     | Done     | Done     | Done | Done     | Done     | Done     | Canceled |
|                              | Done | Done     | Done | Done     | Done     | Done     | Done | Done     | Done     | Done     | Canceled |
| Gulf of Alaska vessel 1      |      | Done     |      | Done     |          | Done     |      | Done     |          | Done     |          |
|                              |      | Done     |      | Done     |          | Done     |      | Done     |          | Done     |          |
|                              |      | Canceled |      | Canceled |          | Canceled |      | Canceled |          | Canceled |          |
| Northern Bering Sea vessel 1 | Done |          |      |          |          |          |      | Done     | Canceled | Done     | Canceled |
|                              | Done |          |      |          |          |          |      | Done     | Canceled | Done     | Canceled |



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# AFSC Questions for discussion

1. In odd years, northern Bering Sea or increase GOA station density and deep station coverage?
2. Annual GOA survey?...priority over other surveys in **EVEN** year?
3. Northern Bering Sea: becomes a standard survey:
  - Biennial? Norton Sound? Station spacing (20nm, 30nm, random strat)?
4. Worst case scenario: focus on a **full** survey in one core area OR partial surveys in multiple core areas?
5. Value of Chukchi Sea surveys to assess the northern edge of gadid distributions or full Chukchi survey? Priority over core survey area (e.g. EBS slope or NBS full station density)?





# AFSC Bottom Trawl Surveys (2010-2020)

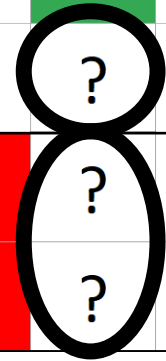
| <u>Survey</u>                       | <u>2010</u> | <u>2011</u> | <u>2012</u> | <u>2013</u> | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Aleutian Islands vessel 1</b>    | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
|                                     | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>Bering Sea Slope</b>             | Green       | White       | Green       | White       | Red         | White       | Green       | White       | Red         | White       | Red         | White       | ?           |
| <b>Eastern Bering Sea vessel 1</b>  | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
|                                     | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>Gulf of Alaska vessel 1</b>      | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
|                                     | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
|                                     | White       | Red         | White       | Red         | White       | Diagonal    | White       | Red         | White       | Red         | White       | ?           | ?           |
| <b>Northern Bering Sea vessel 1</b> | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |
|                                     | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |



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# Question 1

| <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> |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Aleutian Islands vessel 1</b>    | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>vessel 2</b>                     | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>Bering Sea Slope</b>             | Green       | White       | Green       | White       | Red         | White       | Green       | White       | Red         | White       | Red         | White       | ?           |
| <b>Eastern Bering Sea vessel 1</b>  | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>vessel 2</b>                     | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>Gulf of Alaska vessel 1</b>      | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 2</b>                     | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 3</b>                     | White       | Red         | White       | Red         | White       | Diagonal    | White       | Red         | White       | Red         | White       | ?           | ?           |
| <b>Northern Bering Sea vessel 1</b> | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |
| <b>vessel 2</b>                     | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |



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# Question 2

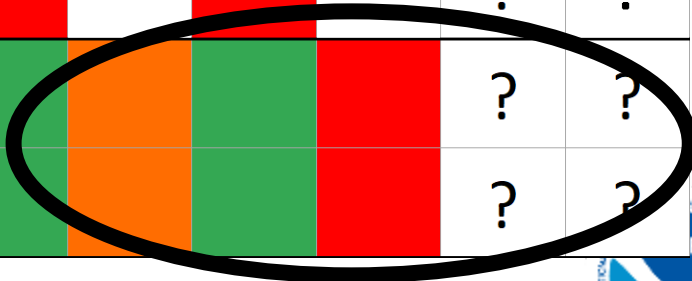
| <u>Survey</u>                       | <u>2010</u> | <u>2011</u> | <u>2012</u> | <u>2013</u> | <u>2014</u> | <u>2015</u> | <u>2016</u> | <u>2017</u> | <u>2018</u> | <u>2019</u> | <u>2020</u> | <u>2021</u> | <u>2022</u> |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Aleutian Islands vessel 1</b>    | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>vessel 2</b>                     | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>Bering Sea Slope</b>             | Green       | White       | Green       | White       | Red         | White       | Green       | White       | Red         | White       | Red         | White       | ?           |
| <b>Eastern Bering Sea vessel 1</b>  | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>vessel 2</b>                     | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>Gulf of Alaska vessel 1</b>      | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 2</b>                     | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 3</b>                     | White       | Red         | White       | Red         | White       | Diagonal    | White       | Red         | White       | Red         | White       | ?           | ?           |
| <b>Northern Bering Sea vessel 1</b> | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |
| <b>vessel 2</b>                     | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |



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# Question 3

| <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> |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Aleutian Islands vessel 1</b>    | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>vessel 2</b>                     | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Red         | ?           | Green       |
| <b>Bering Sea Slope</b>             | Green       | White       | Green       | White       | Red         | White       | Green       | White       | Red         | White       | Red         | White       | ?           |
| <b>Eastern Bering Sea vessel 1</b>  | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>vessel 2</b>                     | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Green       | Red         | Green       | Green       |
| <b>Gulf of Alaska vessel 1</b>      | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 2</b>                     | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | White       | Green       | ?           |
| <b>vessel 3</b>                     | White       | Red         | White       | Red         | White       | Diagonal    | White       | Red         | White       | Red         | White       | ?           | ?           |
| <b>Northern Bering Sea vessel 1</b> | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |
| <b>vessel 2</b>                     | Green       | White       | White       | White       | White       | White       | White       | Green       | Orange      | Green       | Red         | ?           | ?           |



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