

2017 Karen Elizabeth Cruise options

7/31/2017



NOAA
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Science Center



Initial guidance on cruise planning

- The following priorities were provided by NTAP
 - Flounders in groundfish fishery
 - Red hake and skates
 - Summer flounder.
- 10 days of shiptime
- Focus on Western Gulf of Maine or Southern New England or Mid Atlantic Bight or a combination



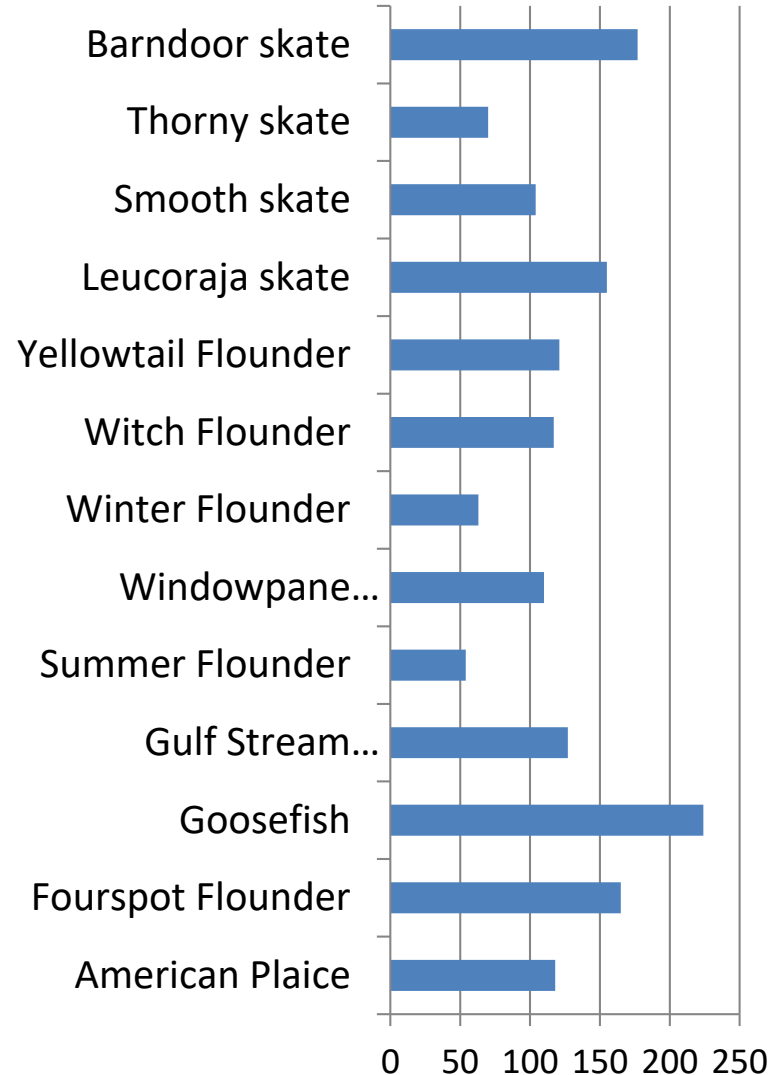
Assessment considerations

- 2017 KE Survey Data will not be ready in time for the 2017 operational groundfish assessments
 - Next opportunity for groundfish is 2019
- Summer Flounder benchmark assessment in 2018
 - First chance to use data from 2017
 - 2018 sampling would not be used in 2018 assessment
- NEFSC Fiscal Year 18 Funding is currently not available for 2018 sampling

Overview of data available

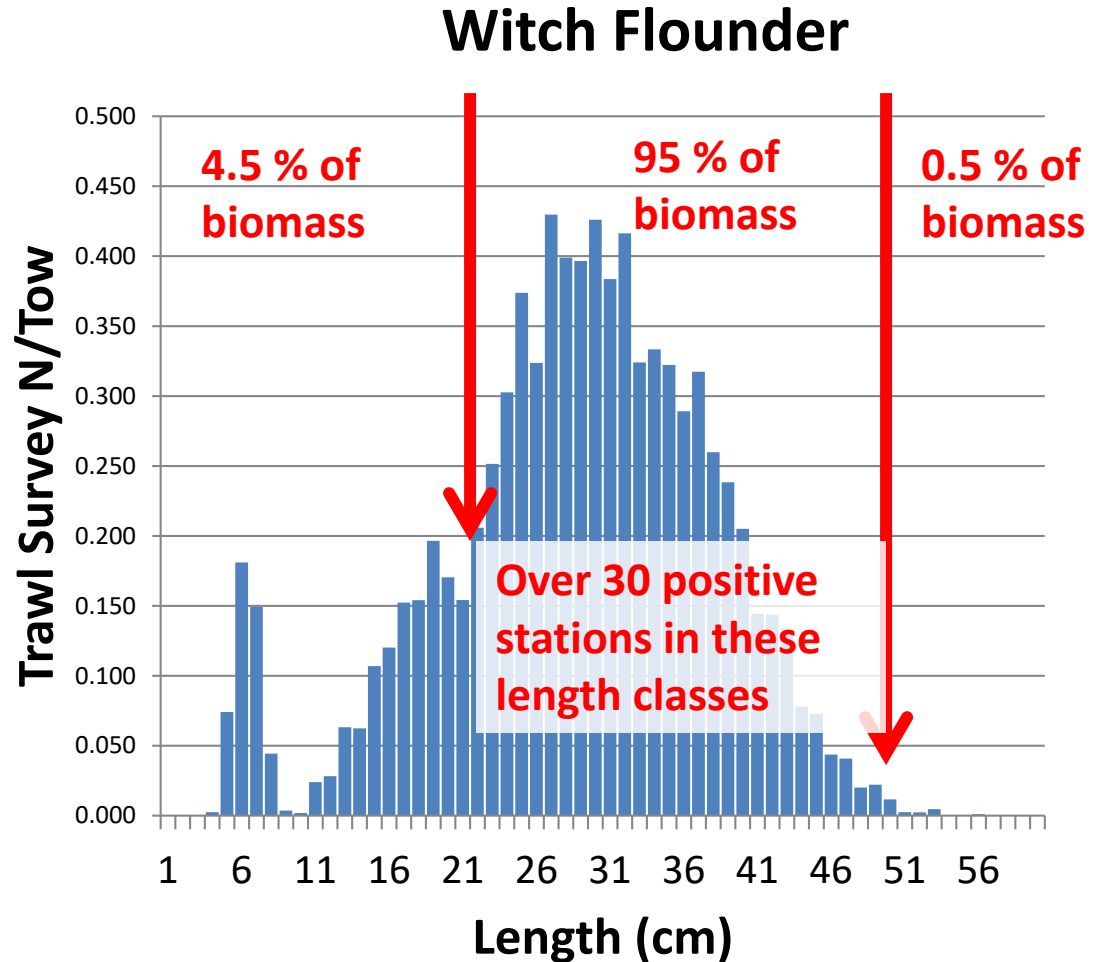
- Number of stations collecting a species is an important measure
- < 100 stations collected Winter Flounder and Summer Flounder
- Summer Flounder and Winter Flounder currently with the highest uncertainty in sweep efficiency estimates

Number of tows



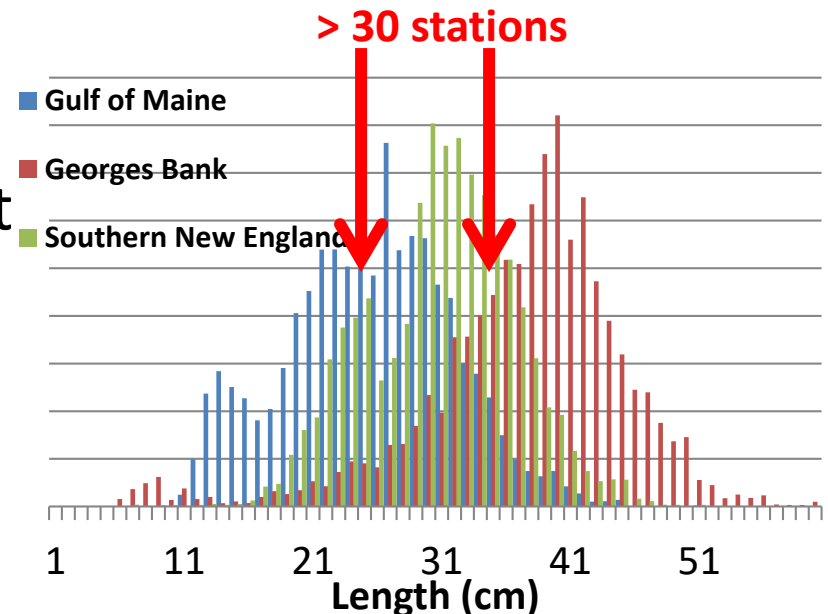
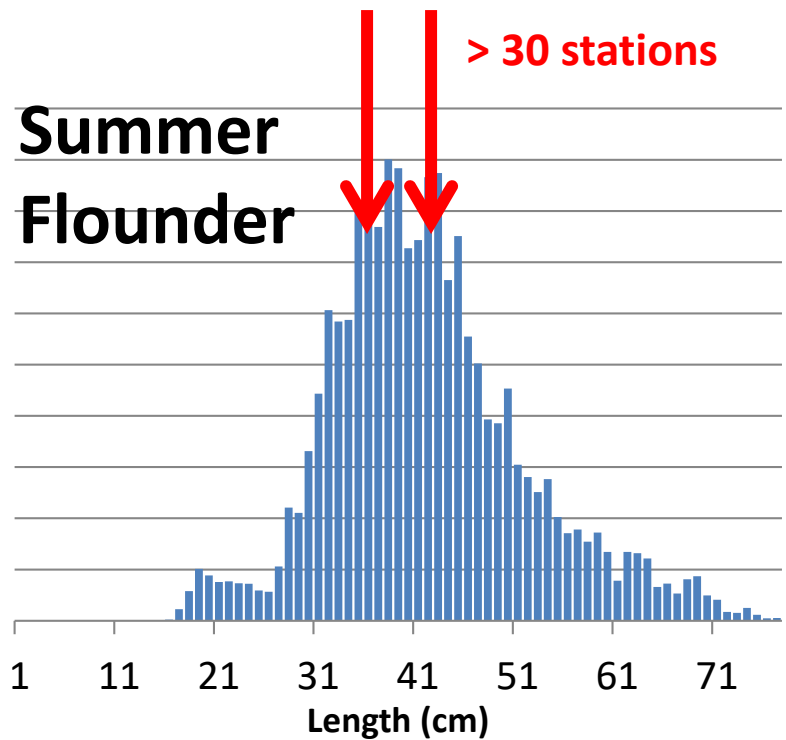
Length-Structure of collections

- A good coverage of the length structure of each species is important
- Witch Flounder had great coverage, particularly at the large sizes



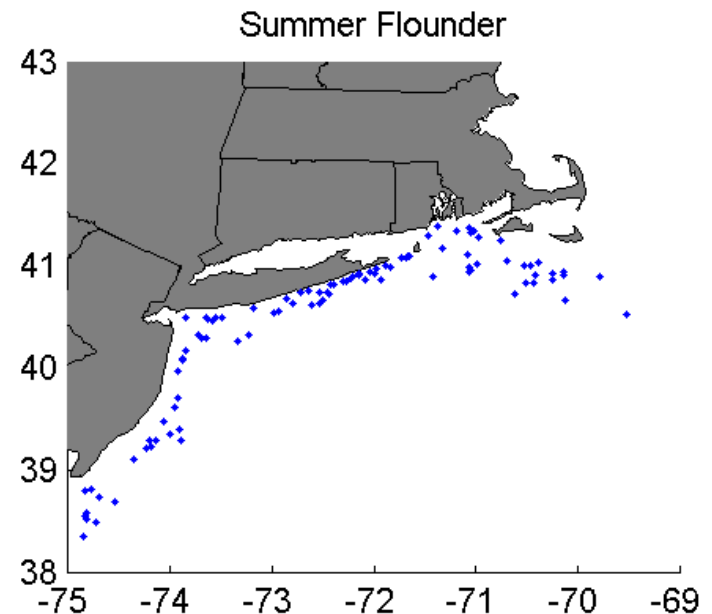
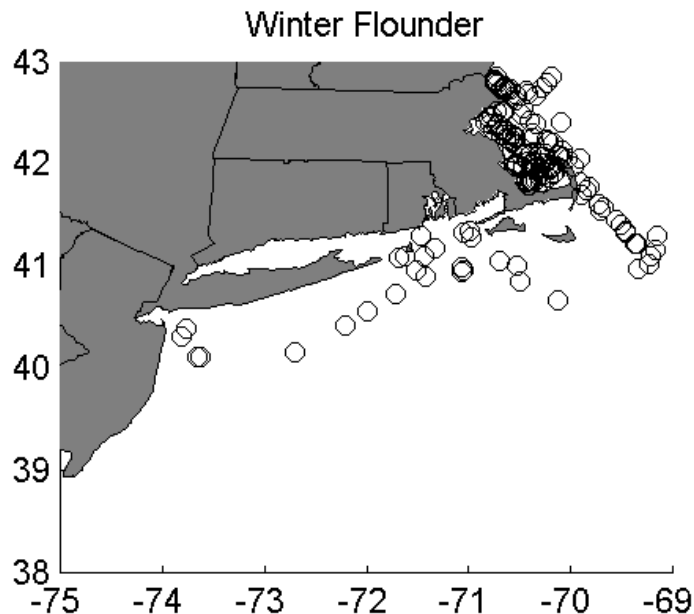
Other Species

- Summer Flounder and Winter Flounder: Most size classes poorly covered
- Windowpane Flounder: Great coverage at large sizes, low at sizes 20-cm and below (about 15% of biomass)
- Yellowtail flounder: good coverage at all but the smallest sizes
- American Plaice: good coverage at all but the largest sizes



Species Distributions

- Western Gulf of Maine :
 - Winter flounder, yellowtail flounder, and windowpane overlap
 - Red hake and plaice often in deeper waters
- Southern New England:
 - Overlap of winter flounder, summer flounder, windowpane
 - Red hake and yellowtail flounder further offshore
- Long Island – Mid Atlantic Bight
 - Summer flounder and windowpane



Assumptions in cruise planning

- 9-10 days
- Ship speeds of 8 knots
- Station times of 1.75 hours to locate a tow, make the tow, and work up the sample
- 5-10% of attempted stations have problems with the tow and will not be used in analyses
- Time for gear repair-net mending
- When a species is targeted >90% of tows will catch that species
- Estimated number of representative tows around 70-80 for the cruise depending on the option chosen
- Station locations will be chosen by the captain and the chief scientist
- Guidance is in terms of general regions to sample and to reduce clustering of stations

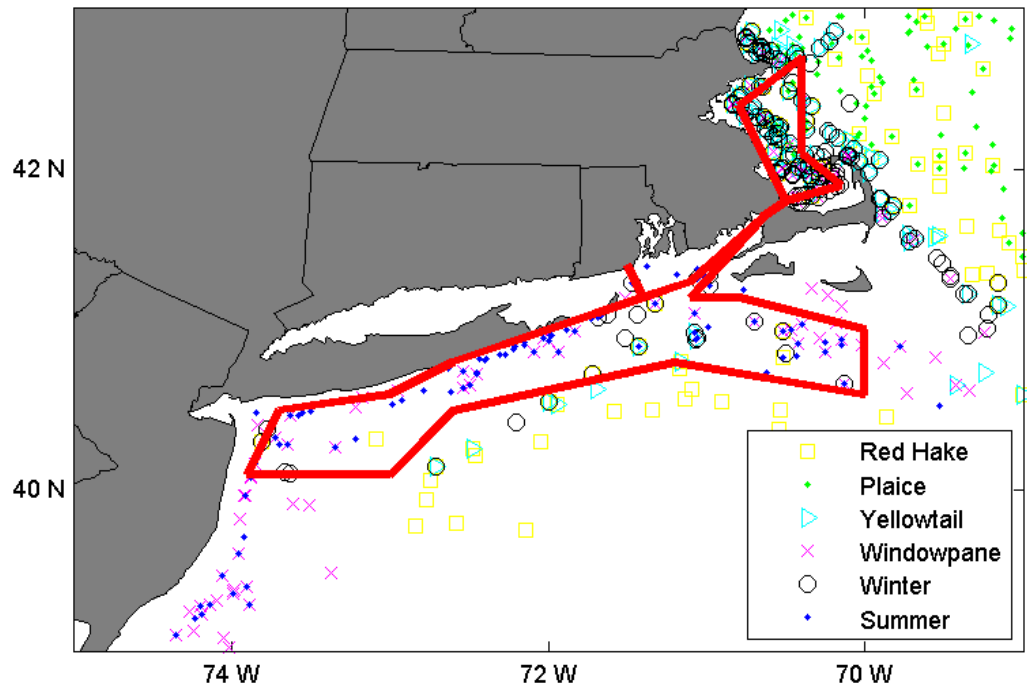
Cruise Option # 1:

- Western Gulf of Maine through northern Mid-Atlantic Bight
- Attempt to cover a broad set of species: Winter Flounder, Red Hake, Summer Flounder, Yellowtail
- 65-70 tows due to longer cruise track

Negative aspects

Most species would occur in about half of the tows

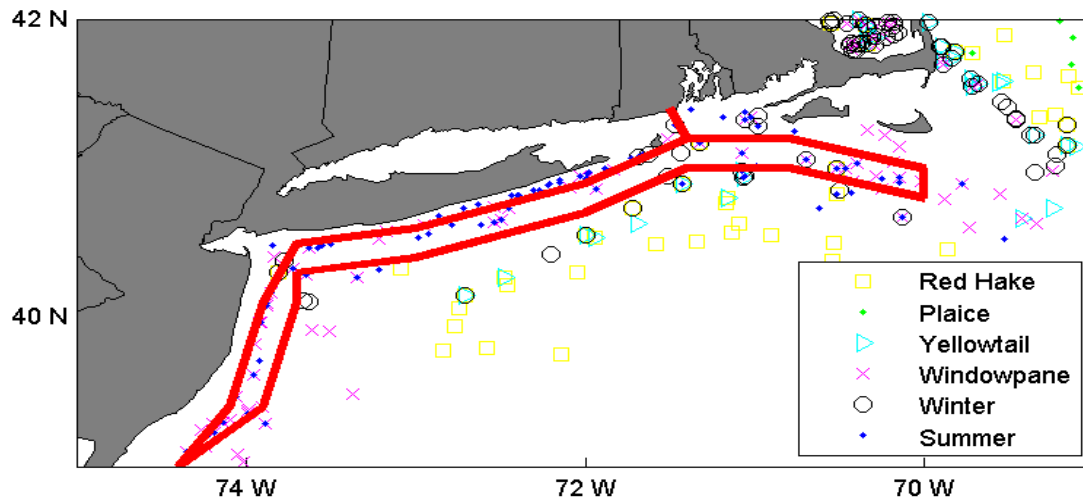
Unlikely to provide adequate coverage for Winter Flounder or Summer Flounder



Cruise Option #2: Summer flounder focus

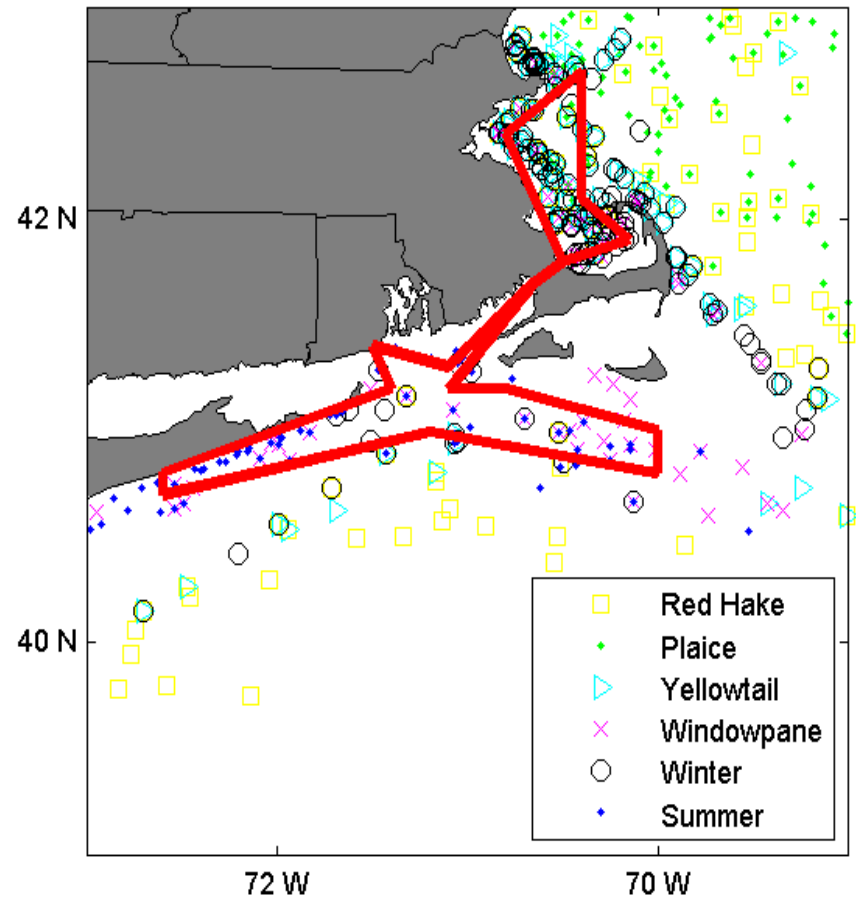
(NEFSC RECOMMENDED ALTERNATIVE)

- Southern New England to Mid Atlantic Bight
- Winter Flounder would also be picked up in the east (maybe 30 tows) and Windowpane throughout
- 80 tows with nearly all containing summer flounder
- Should provide good data for summer flounder assessment, and add to windowpane, but winter flounder may continue to have poor coverage



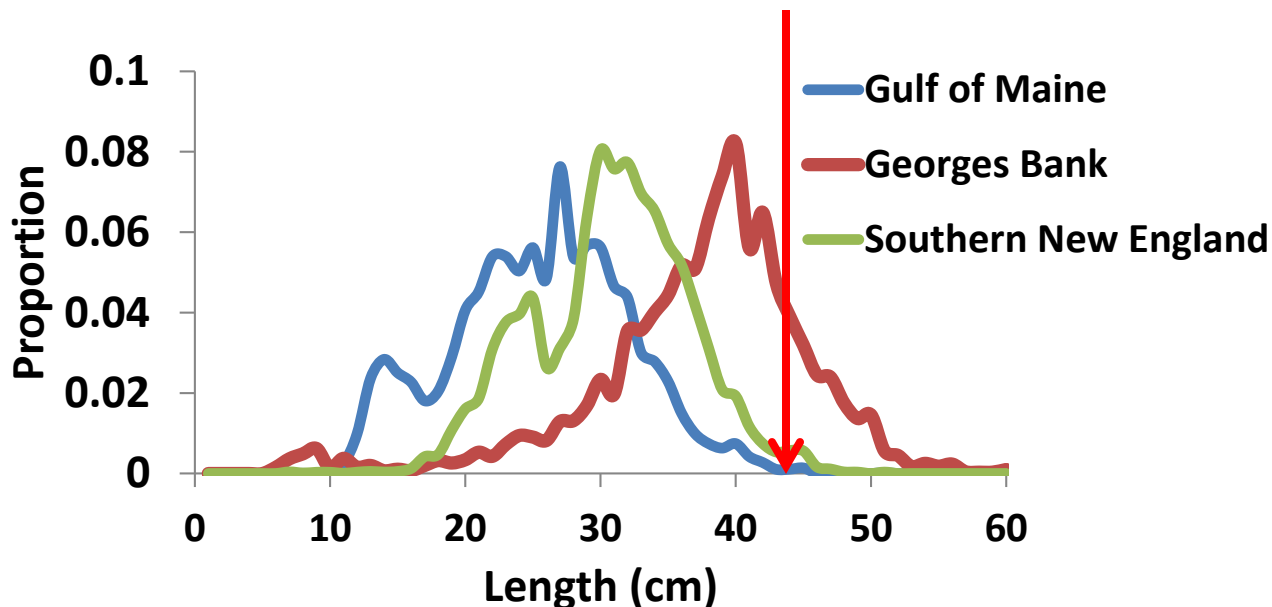
Cruise option # 3: Winter Flounder focus

- Western Gulf of Maine through Southern New England (in either direction) possibly 75 stations
- Summer flounder picked up in Southern New England (30-35 stations)
- Windowpane in both areas, yellowtail and red hake in GOM
- Should provide good data for winter flounder and windowpane, but poor coverage for summer flounder



Notes/Comments on Winter Flounder

- The largest winter flounder are on Georges Bank followed by Southern New England
- Sampling Southern New England and Gulf of Maine will leave the largest size classes (>45 cm) of winter flounder with poor coverage; these size classes correspond to 25% of the GB winter flounder biomass



Discussion and decision criteria

- Assessment timing and prioritization
- Data gaps from previous twin trawl sampling

