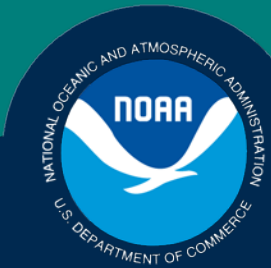


*Science, Service, Stewardship*

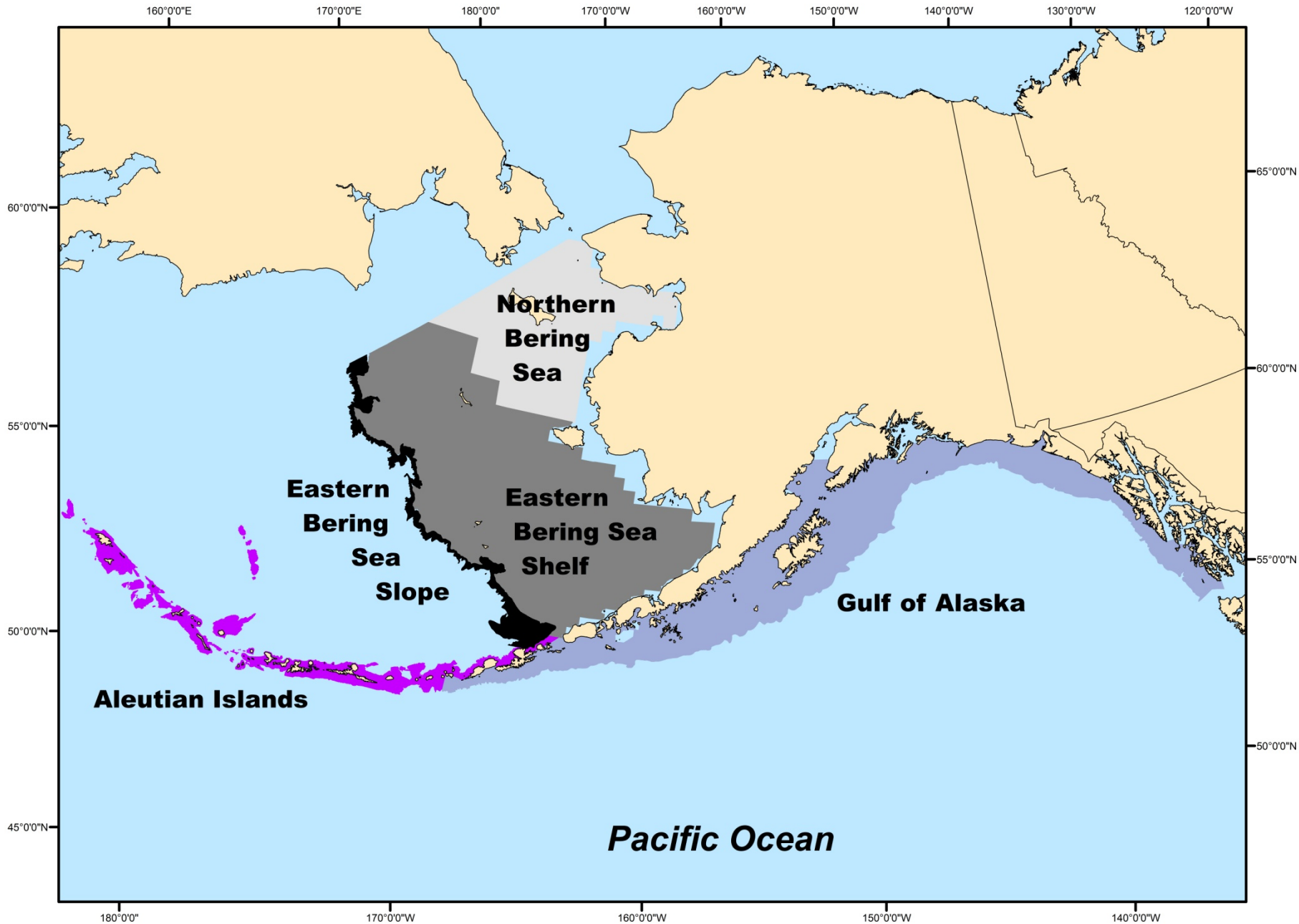


## Comparing Trawl Surveys – NEFSC/AFSC

Michael H. Martin

December 16, 2015

**NOAA  
FISHERIES  
SERVICE**





HENRY B. BIGELOW

NOAA  
R 225



# Advantages:

- Knowledgeable and Experienced captains
- Experienced Crew (Critical for Gear Maintenance)
- Cost Savings/Flexibility
- Improved Relationships with Fishing Community

# Disadvantages:

- Standardization Issues – Survey Platform Changes over Time
- Set-up/Break-Down Issues
- Less Data Available (Tow, Environmental, Weather etc.)
- Government Contracting
- Potential for Conflict of Interest



## Survey Attribute comparison

<b>Attribute</b>	<b>NEFSC</b>	<b>Gulf of Alaska</b>	<b>Aleutian Islands</b>	<b>Bering Sea</b>	<b>Bering Sea Slope</b>
<b>Survey Frequency</b>	2 per year	1 every 2 years	1 every 2 years	1 per year	1 every 2 years
<b>Number of Tows</b>	377	825	420	376	195
<b>Survey Area (km<sup>2</sup>)</b>	235,777	320,006	64,415	492,898	33,540
<b>km<sup>2</sup>/Station</b>	625	388	153	1,311	172
<b>Number of Vessels</b>	1	3	2	2	1
<b>Tow Duration (min)</b>	20	15	15	30	30
<b>Tow Speed (knots)</b>	3	3	3	3	2.5
<b>Depth Range (m)</b>	18-366	10-1000	10-500	10-200	200-1200
<b>Vessel Length (ft)</b>	209	120-160	120-160	120-160	120-160
<b>Vessel Horsepower</b>	2*1500	min 1500	min 1500	min 1500	min 1500
<b>Scientific Crew</b>	15	6	6	6	6
<b>Vessel Crew</b>	23	5	5	5	5
<b>Door Size (m<sup>2</sup>)</b>	2.2	4.86	4.86	4.86	4.86
<b>Door Weight (kg)</b>	550	18	818	818	1000
<b>Vertical Opening (m)</b>	3.5	7	7	2.5	7
<b>Time of Day</b>	24 hours	Daylight only	Daylight only	Daylight only	Daylight only
<b>Autotrawl?</b>	Y	Y	Y	Y	Y



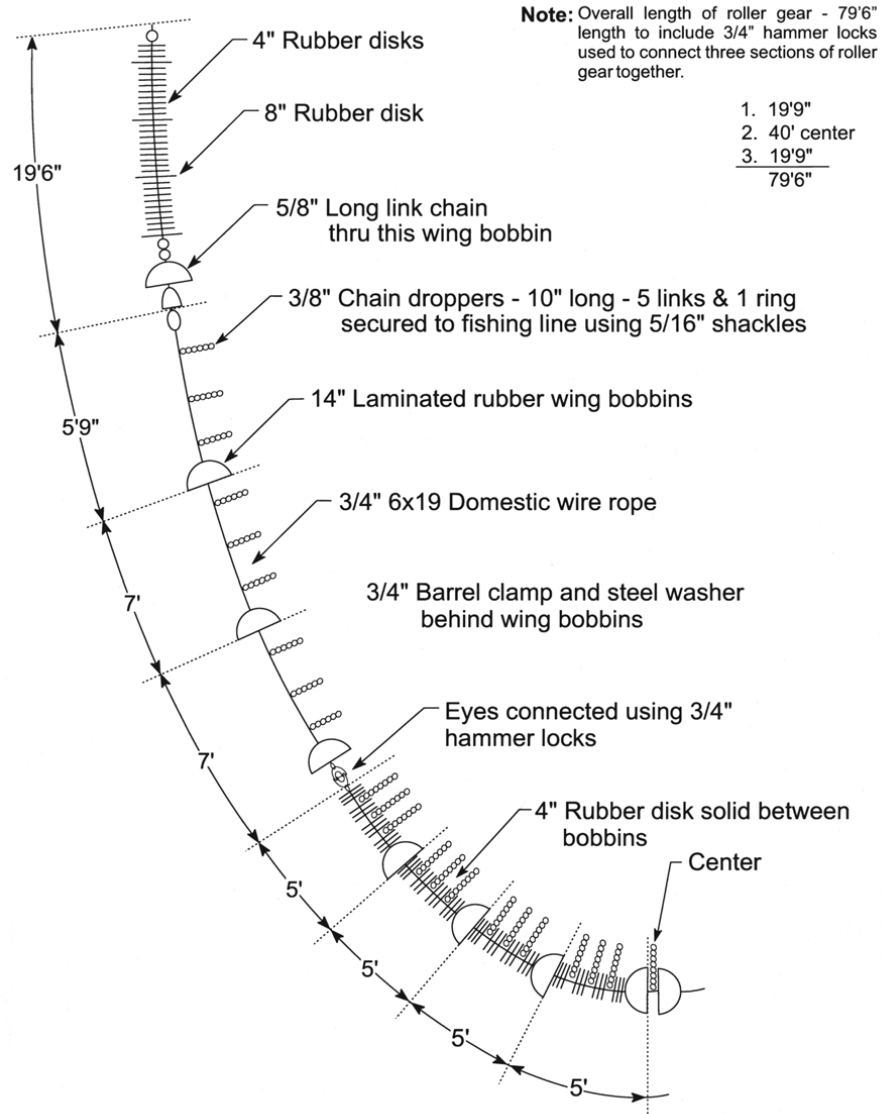
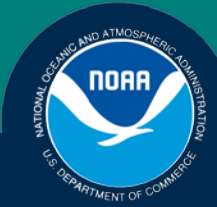


# Poly Nor'eastern Net Characteristics

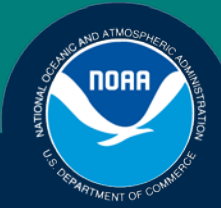
- 4 seams
- 3 bridles
- 5 in. 4-5 mm polyethylene
- 1.25 in. liner
- 14 in. bobbins
- 4 in. disks
- Net width: ~16.5 m
- Net Height: ~7.5 m



# NOAA FISHERIES SERVICE





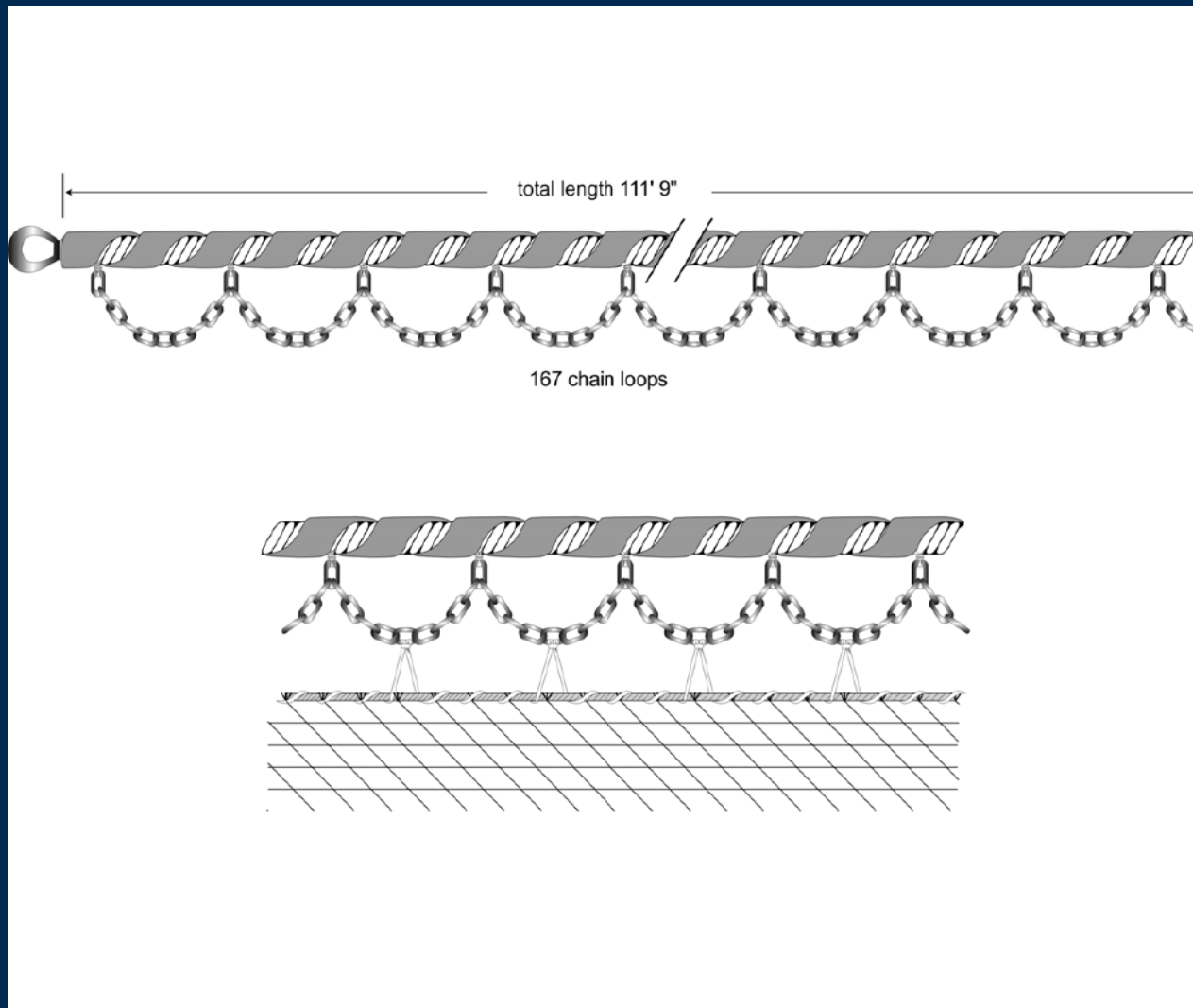


## 83-112 Net Characteristics

- 2 seams
- 2 bridles
- 4 in. #60T nylon mesh
- 1.25 in. liner
- 5/8" fiber core wire rope
- 5/16" chain
- Net spread: ~17 m
- Net Height: ~2.5 m







## Data Currently Collected on Surveys

<b>Data</b>	<b>NEFSC</b>	<b>Gulf of Alaska</b>	<b>Aleutian Islands</b>	<b>Bering Sea</b>	<b>Bering Sea Slope</b>
<b>GPS</b>	X	X	X	X	X
<b>Wing Spread</b>	X	X	X	X	X
<b>Temperature</b>	X	X	X	X	X
<b>Depth</b>	X	X	X	X	X
<b>Headrope Height</b>	X	X	X	X	X
<b>Bottom Contact</b>		X	X	X	X
<b>Light Intensity</b>		X	X	X	X
<b>Sounder Information</b>	5 frequencies	1 frequency	1 frequency	1 frequency	1 frequency
<b>Door Spread</b>	X				
<b>Door Pitch/Roll</b>	X				
<b>Wire out (continuous)</b>	X				
<b>Wire Tension</b>	X				
<b>RPM</b>	X				
<b>Trawl Speed through water</b>	X				
<b>Wind Speed/Direction</b>	X				
<b>Vessel Heave/Pitch/Roll</b>	X				
<b>Trawleye</b>	X				
<b>Multibeam Acoustics</b>	X				