



NOAA
FISHERIES

Offshore Wind Issues

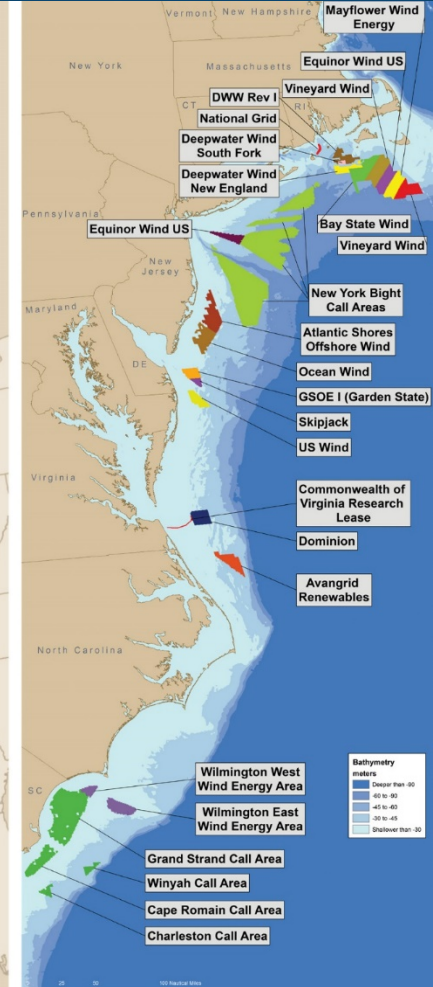
Candace Nachman, Mike Pentony and Jon Hare
Council Coordination Committee Mtg

May 27, 2020

NATIONAL SNAPSHOT OF OFFSHORE WIND

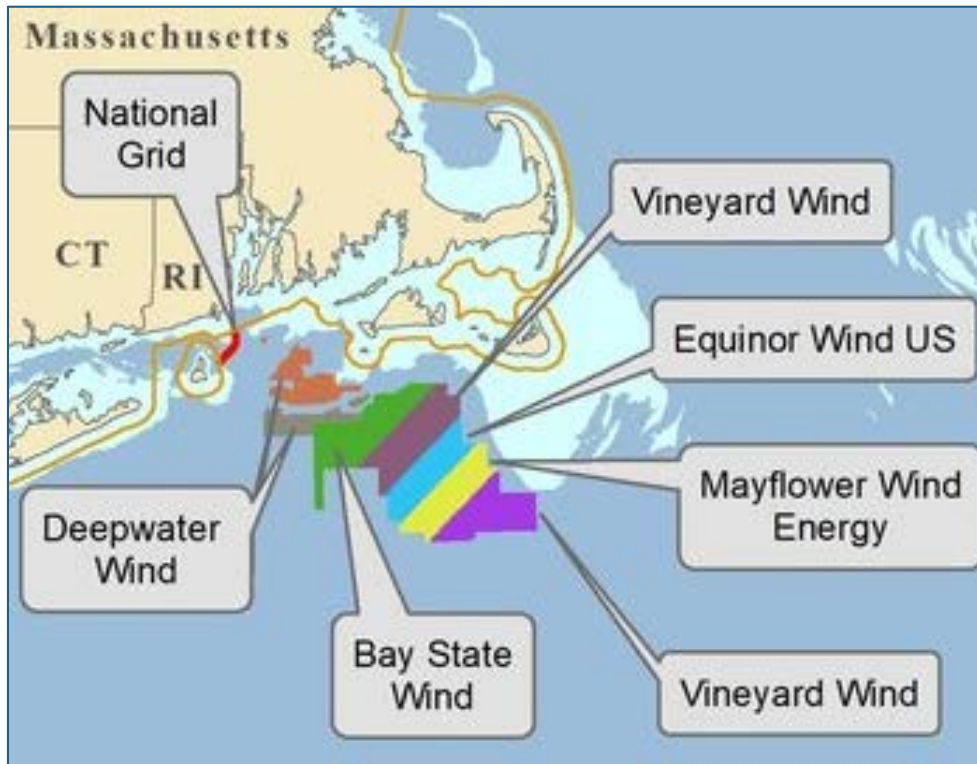


Renewable Energy Program by the Numbers

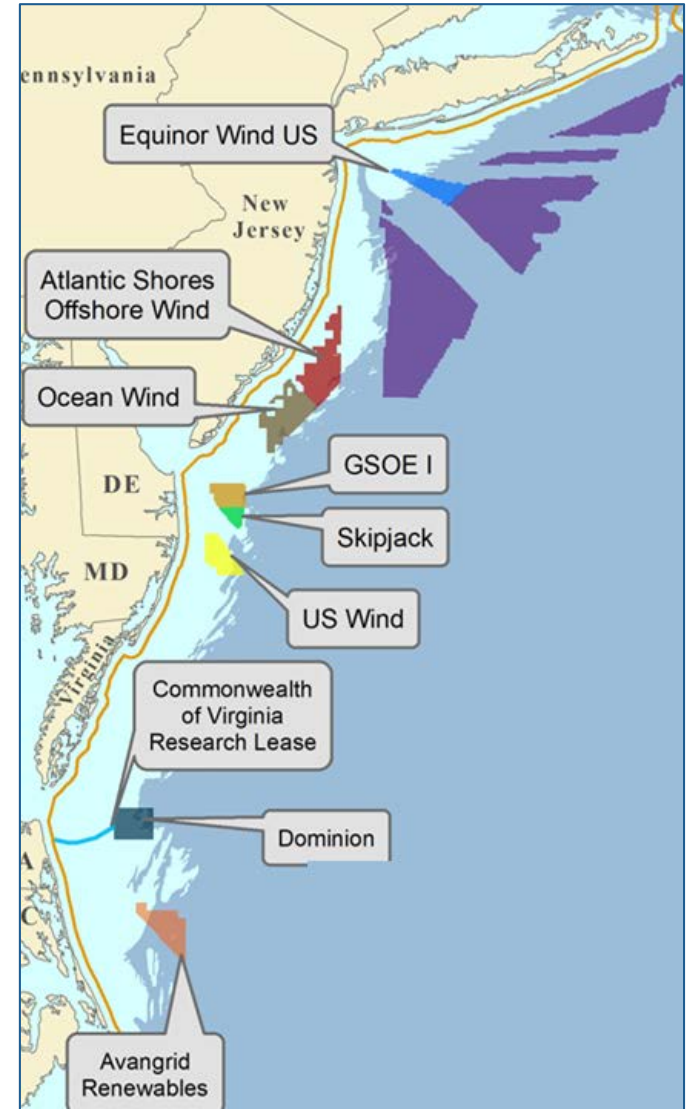


Slide provided by



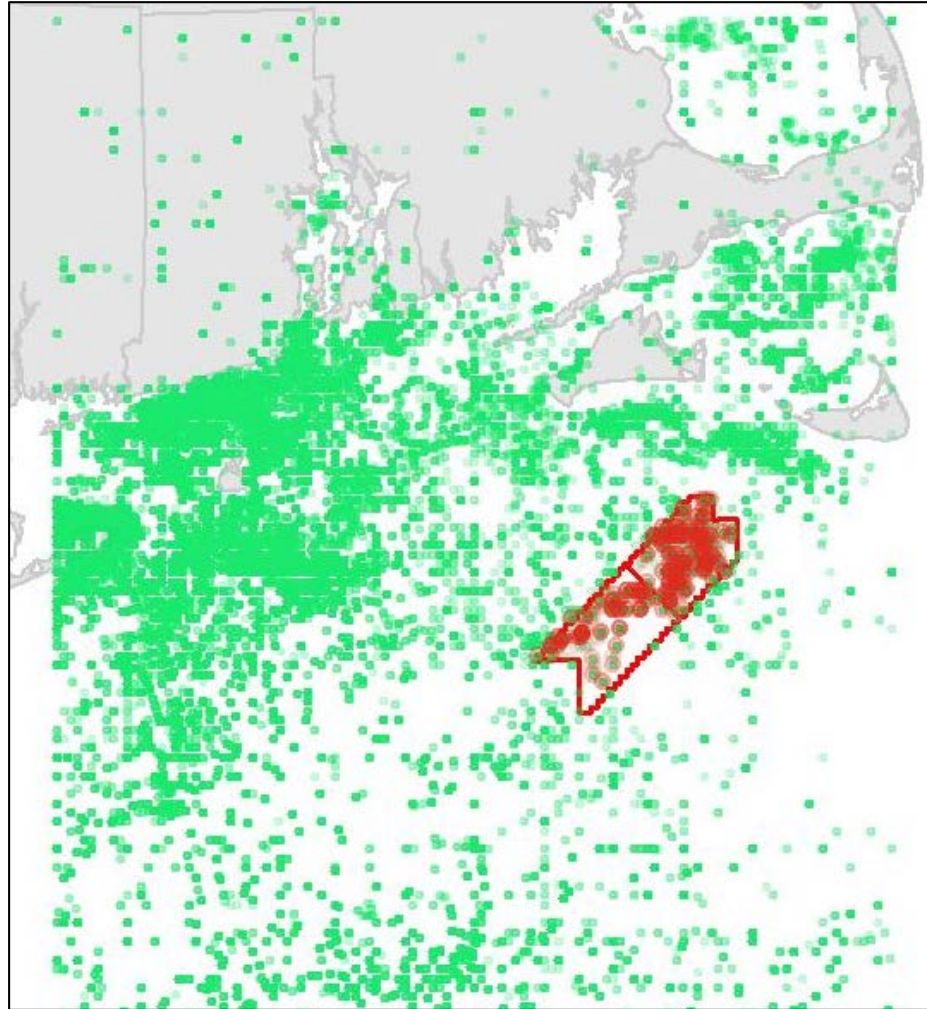


Source: BOEM



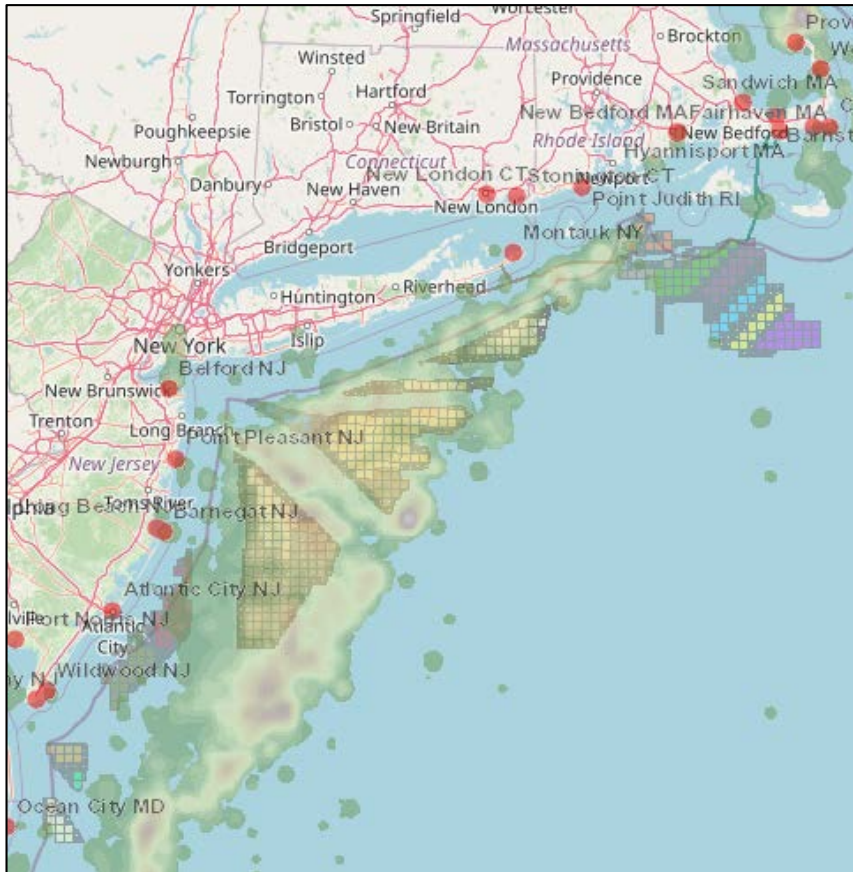
Current Wind Lease and Call Areas

All Vessel Trip Report Data

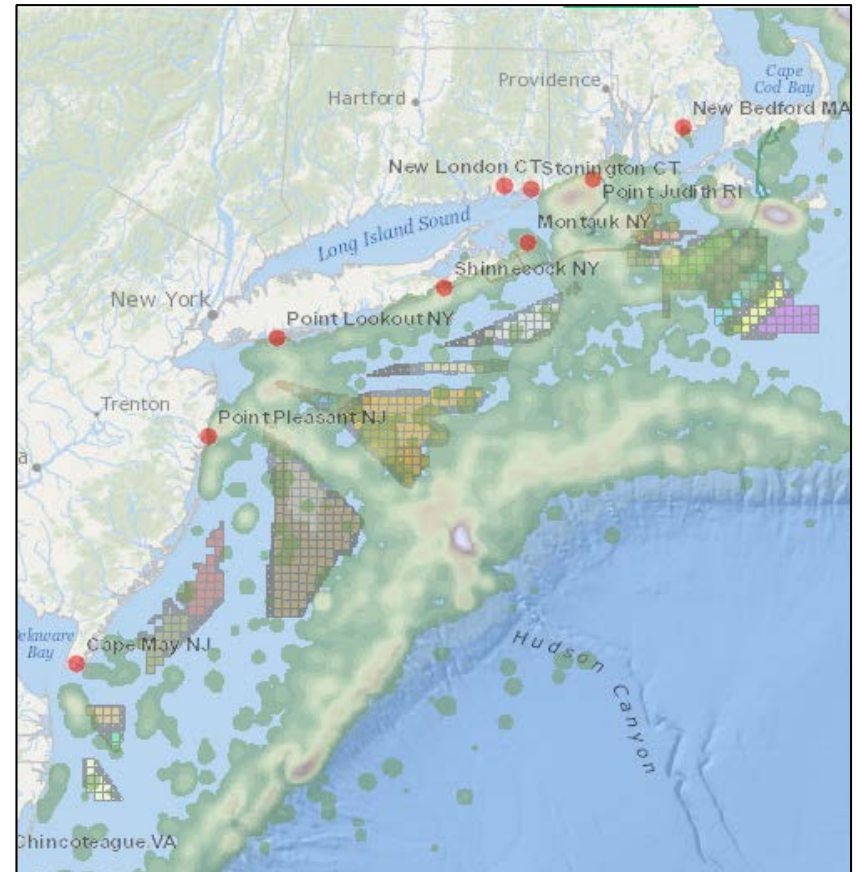


2016

Vessel Trip Report Fishing Location



Dredge Gear



Bottom Trawl >65'

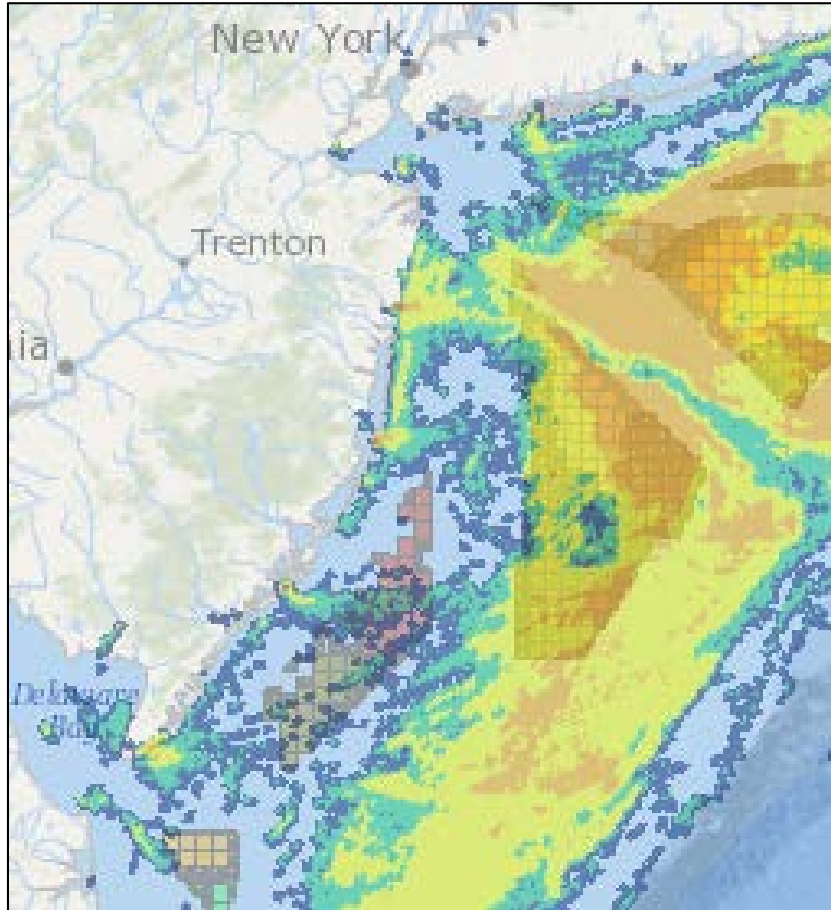
2011-2015

All VMS Data

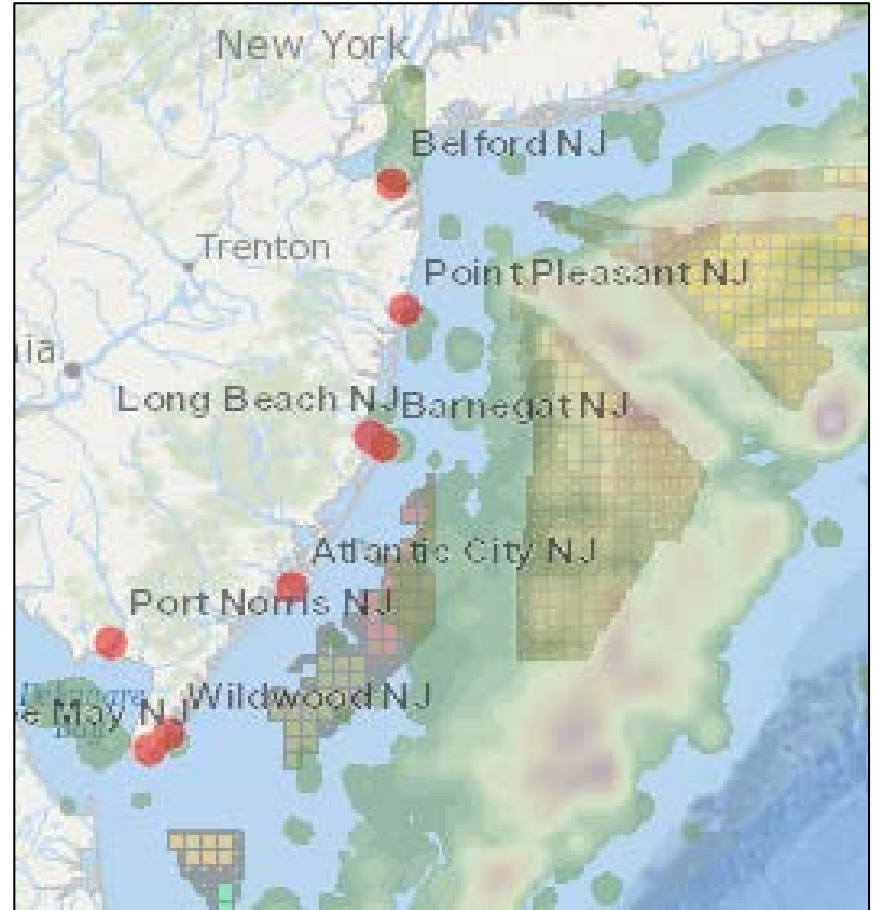


2015-2016

VMS vs. VTR Data



VMS Scallop Data

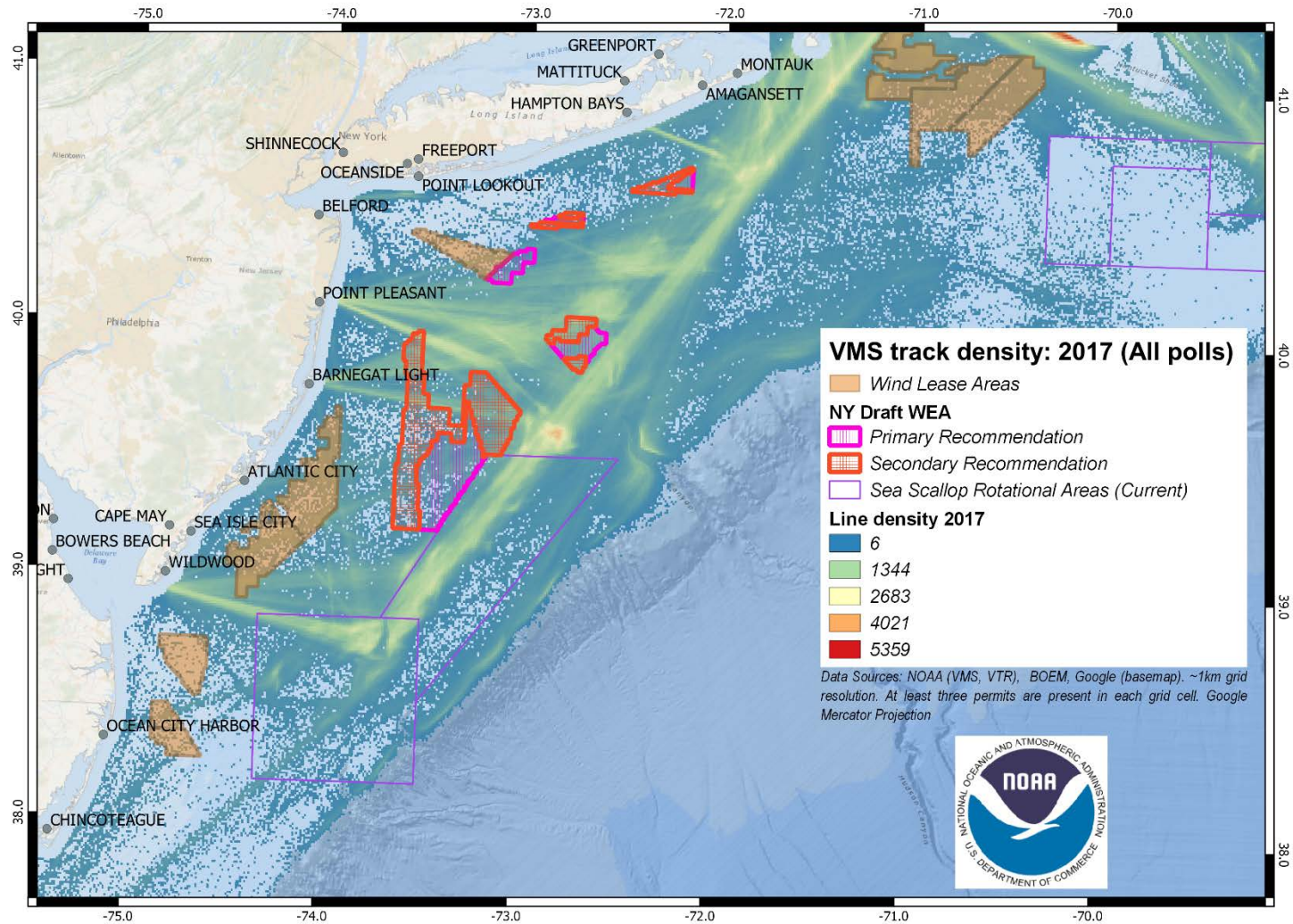


VTR Dredge Data

Source: www.portal.midatlanticocean.org

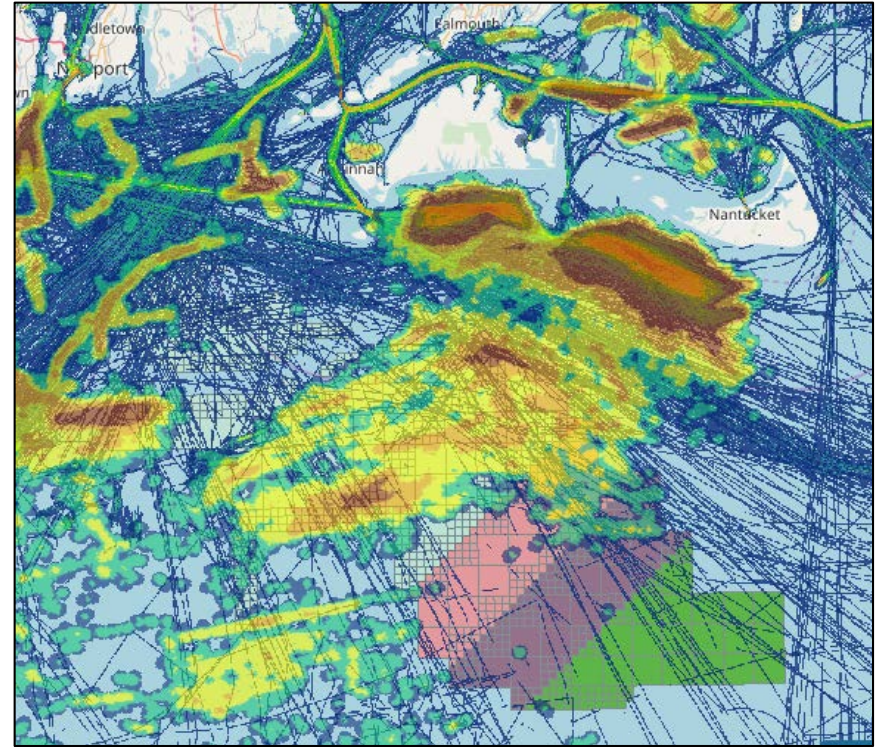
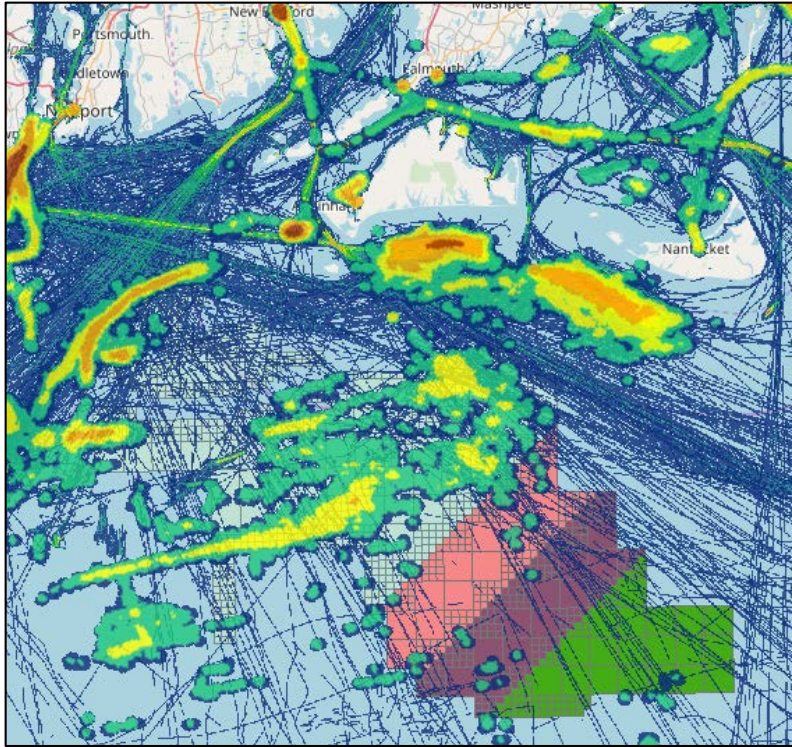
2011-2014 (VMS) and 2011-2015 (VTR)

VMS Transit Maps



2017

Fishing and Transit

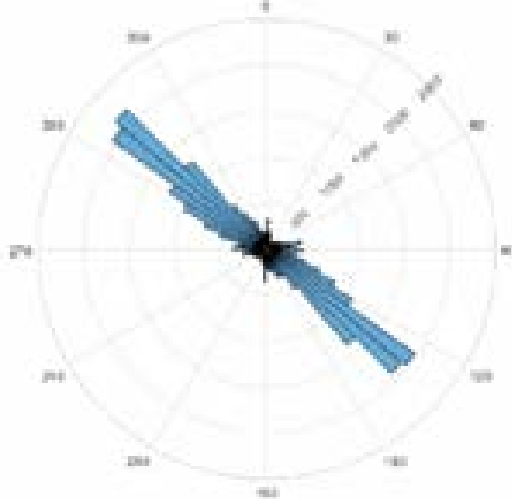


AIS Data with VMS Fishing Speed (<4 knots) Overlay

VMS Vessel Direction

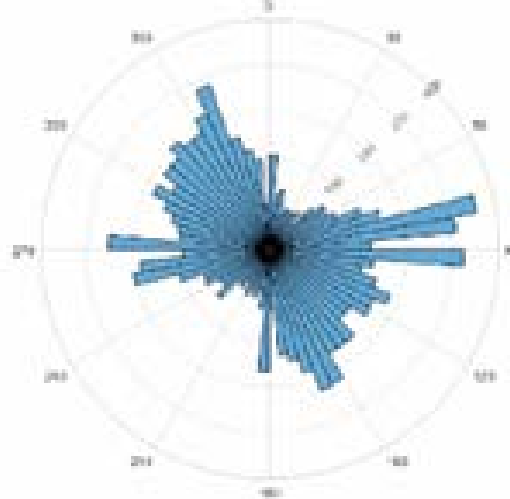
All Vessels

VMS Activity by Course
Vineyard Wind Lease Area
Jan 2014 - Aug 2019
All VMS Fisheries



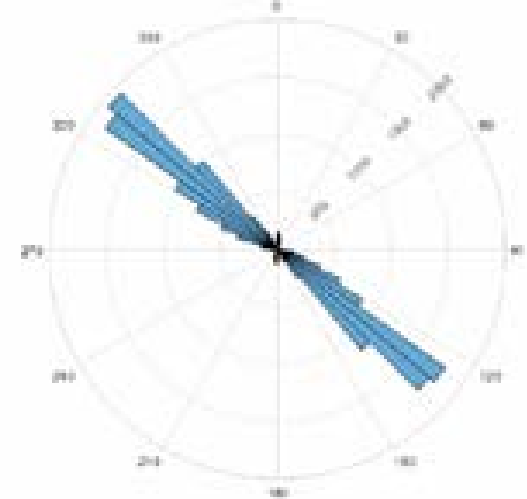
Fishing Only

VMS Activity by Course - Actively Fishing
Vineyard Wind Lease Area
Jan 2014 - Aug 2019
All VMS Fisheries



Transiting Only

VMS Activity by Course - Actively Transiting
Vineyard Wind Lease Area
Jan 2014 - Aug 2019
All VMS Fisheries



Source: BOEM

2014-2019 within the Vineyard Wind Lease Area

Socioeconomic Impact Tables

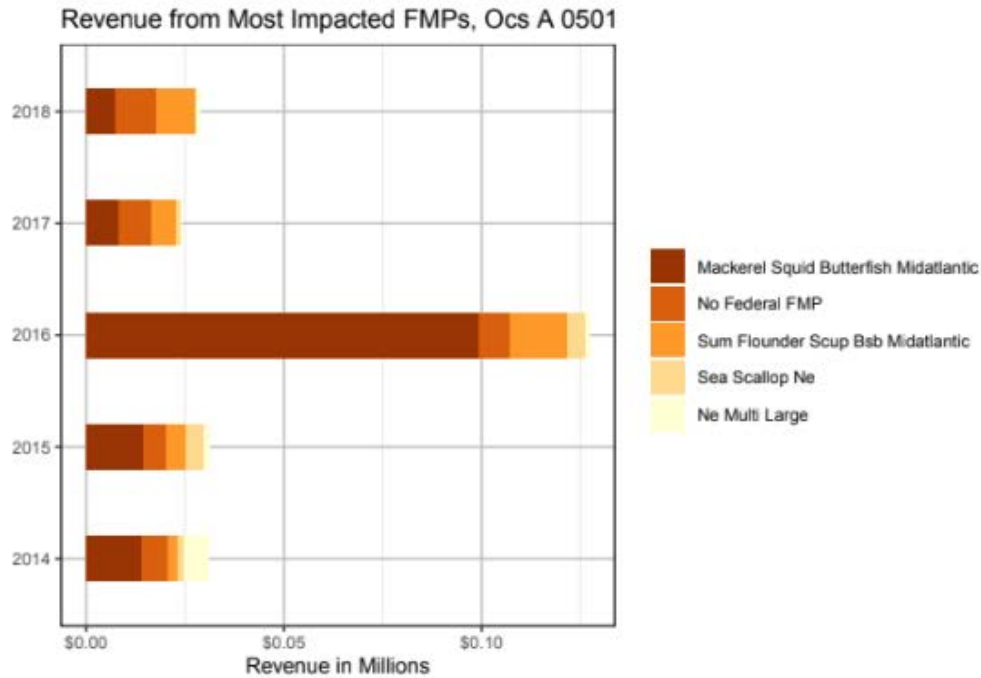
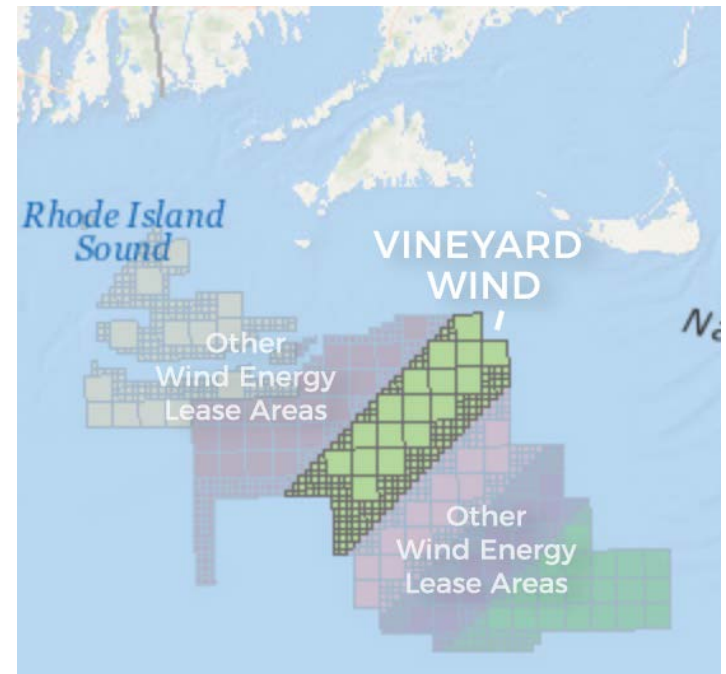


Table 8: Five Year Total Revenue for Most Impacted FMPs, Ocs A 0501

FMP	Five Year Revenue
Mackerel Squid Butterfish Midatlantic	\$143,000
No Federal FMP	\$39,000
Sum Flounder Scup Bsb Midatlantic	\$38,000
Sea Scallop Ne	\$12,000
Ne Multi Large	\$10,000
Total	\$242,000



Source: Northeast Ocean Data Portal

Combines Vessel Trip Reports and Dealer Reports

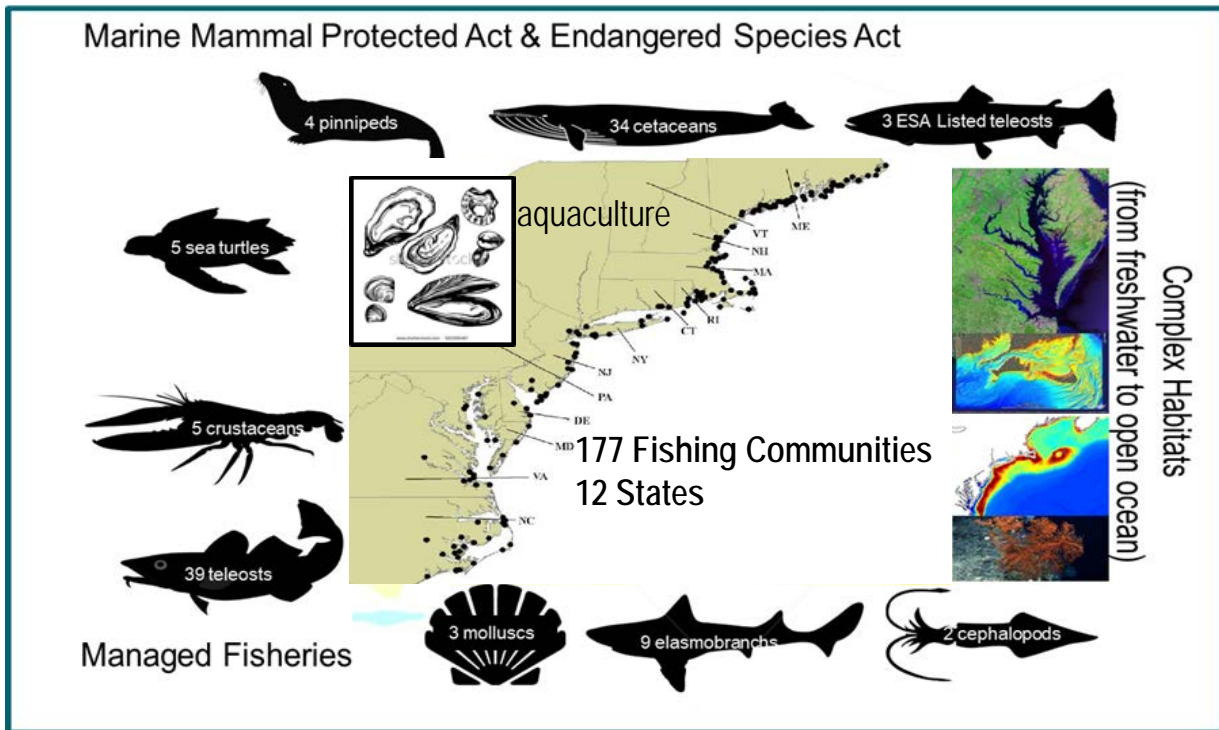
Some caveats!

- VMS not on all fisheries
- Limited time series for some vessels
- VMS data more precise than VTR, but 1-hour ping rates mean much is still lost
- Economic data not haul-by-haul

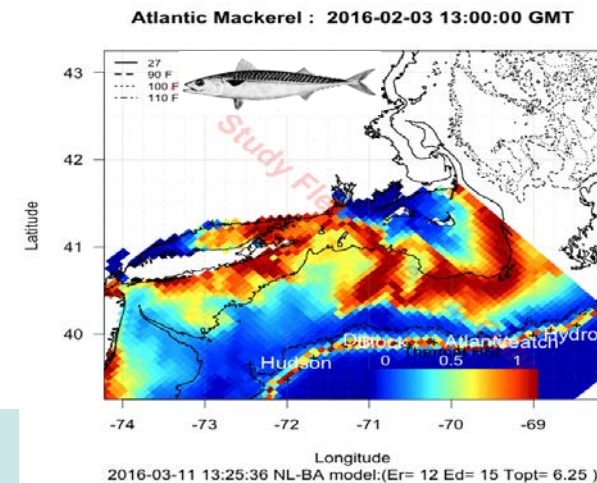
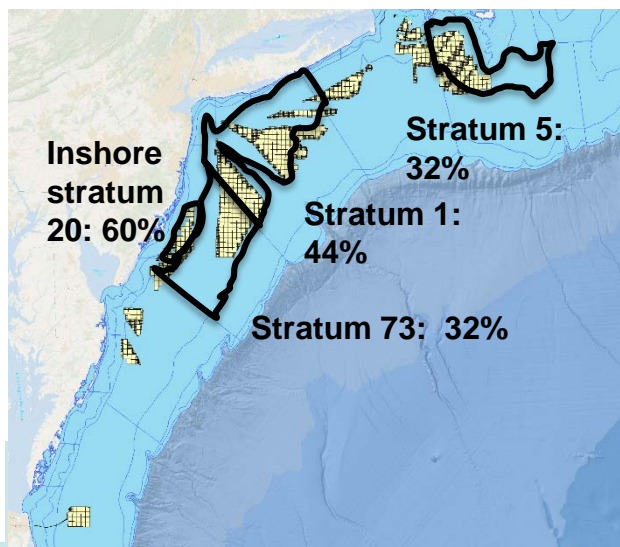
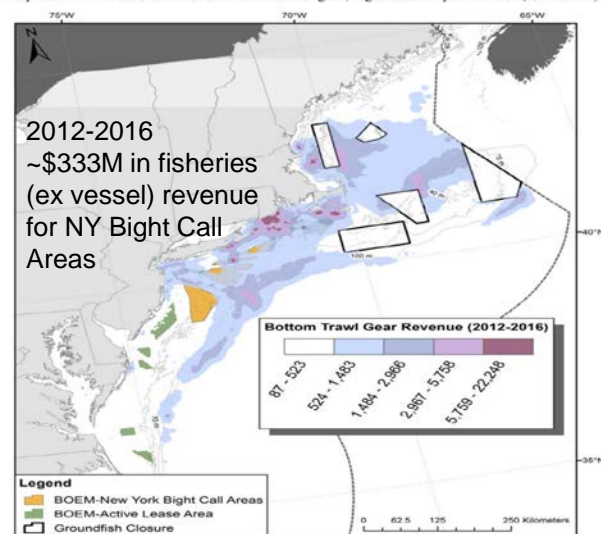


NOAA
FISHERIES

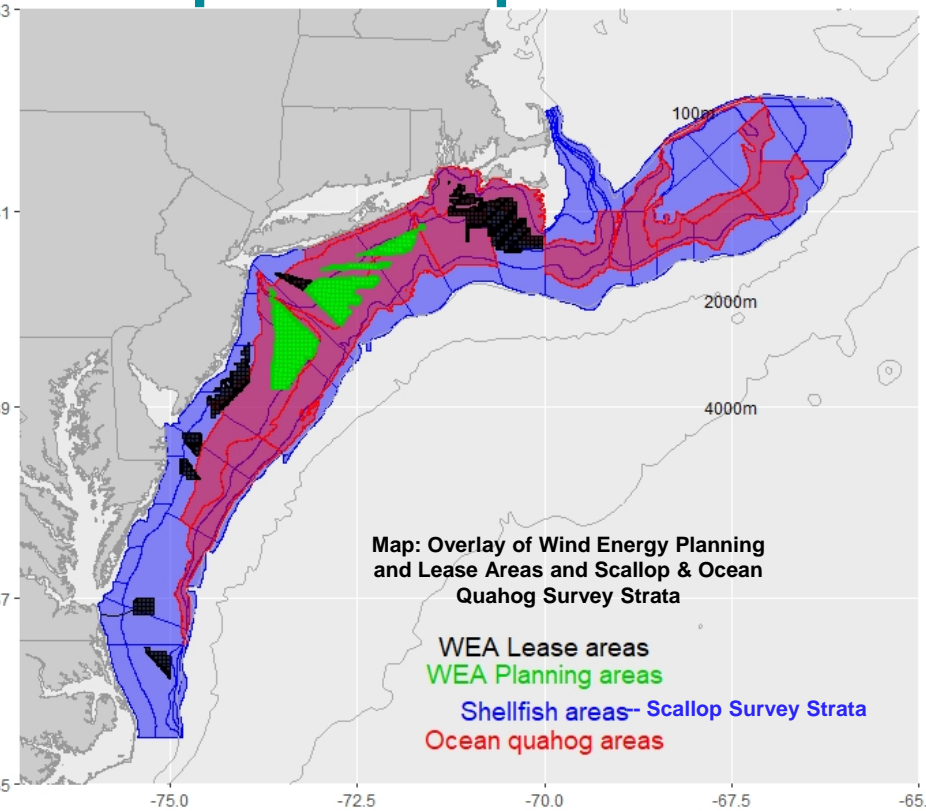
Interactions of Wind on Fisheries Scientific Enterprise



Map 13 – Sum of revenue across all bottom trawl gear, regardless of species/FMP (2012-2016)



Scope of Impacts on Scientific Surveys



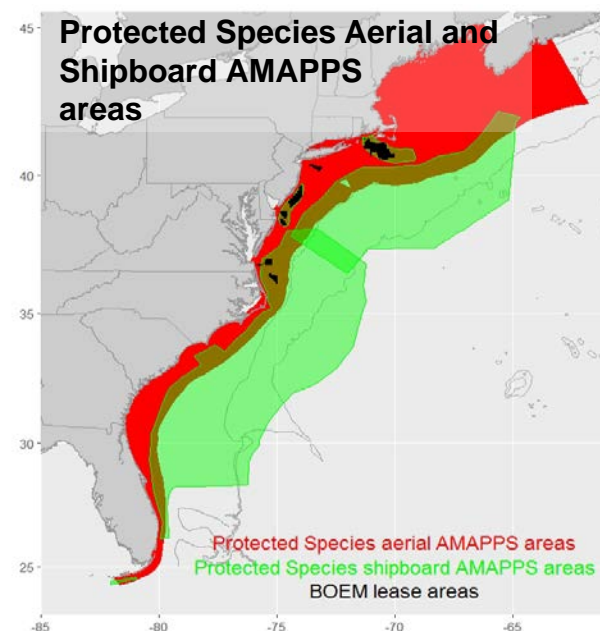
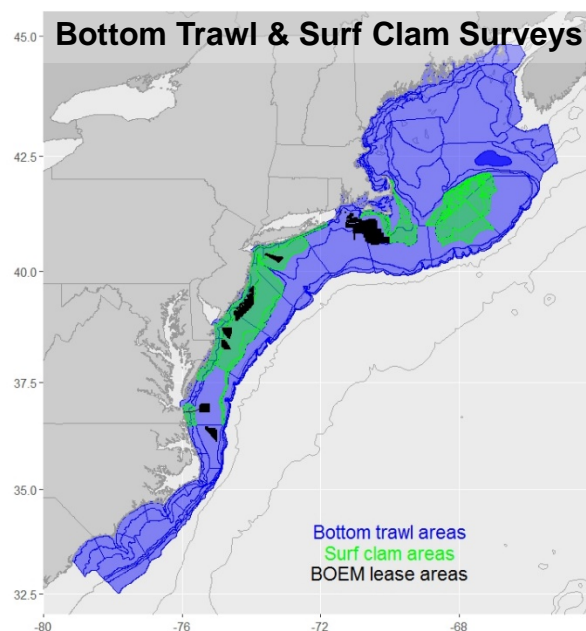
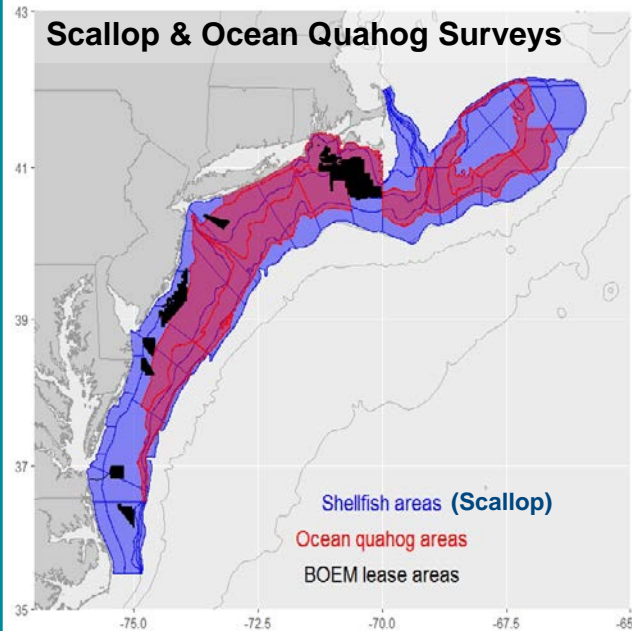
Survey	Year Started	Survey Design	Major Applications
Autumn Bottom Trawl Survey	1963	Random Stratified Design - North Carolina to Nova Scotia (bottom trawl)	abundance; length, age, sex, weight, diet, maturity samples, distribution, components of Ecosystem Monitoring survey
Spring Bottom Trawl Survey	1968	Random Stratified Design - North Carolina to Nova Scotia (bottom trawl)	abundance; length, age, sex, weight, diet, maturity samples, distribution, components of Ecosystem Monitoring survey
Scallop Survey	1979	Random Stratified Design (dredge); line transect (HabCam)	biomass, abundance, distribution, size and sex of sea scallops and other benthic fauna
Atlantic Surfclam and Ocean Quahog Surveys	1980	Random Stratified Design (hydraulic dredge)	biomass, abundance, distribution, size and sex of Atlantic surfclam and ocean quahog
Northern Shrimp Survey	1983	Random Stratified Design (commercial shrimp trawl)	biomass, abundance, length
Gulf of Maine Cooperative Bottom Longline Survey	2014	Randomly Stratified Design (bottom longline)	abundance, biomass, length, age, sex, weight, maturity samples, distribution, focused on hard-bottom habitat data
Ecosystem Monitoring Survey	1977	Random Stratified Design (linked to Trawl Survey Design); fixed stations embedded in design (plankton and oceanographic sampling)	Phyto/nkton, zooplankton, ichthyoplankton, carbonate chemistry, nutrients, marine mammals, sea birds
North Atlantic Right Whale Aerial Surveys	1998	Aerial line transects	Right Whale population estimates; dynamic area management
Marine mammal and sea turtle ship-based and aerial surveys	1991	Line transects for ship and aerial surveys. Plus opportunistic biological and physical oceanographic sampling from shipboard surveys	Abundance and spatial distribution of marine mammals, sea turtles, and sea birds

317 Years of Combined Survey Effort Support Fisheries that contribute \$14 Billion Annually to U.S. GDP

Potential Interactions with NMFS Activities

- Elimination of large areas from long-term survey strata
- Reduction in the accuracy and precision of survey-based information for scientific advice
 - Greater uncertainty in scientific assessments and adverse impacts to fishery participants and communities as well as recovery and conservation programs for protected species
 - Indirect impact on the setting of fishing quotas
- Interactions with research programs & international assessments related to such topics as ocean warming in the Gulf of Maine that rely upon long-term survey data sets

Map overlays of NMFS Survey Areas with Wind Energy Planning and Lease Areas



Thank you for
your attention!

Questions?



NOAA
FISHERIES