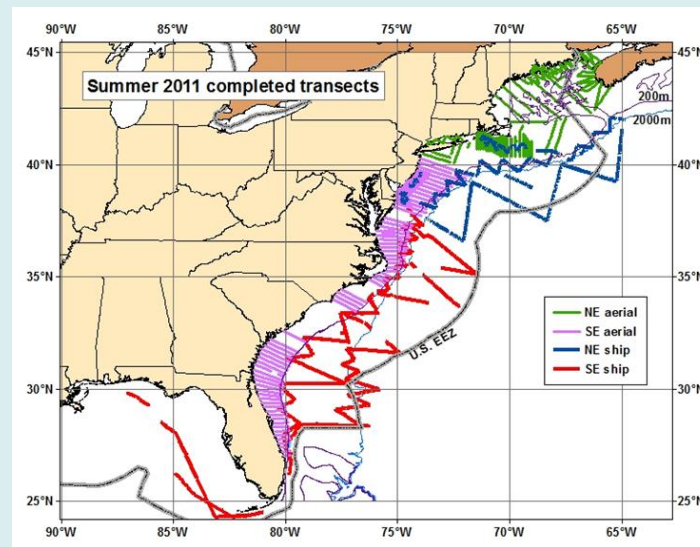


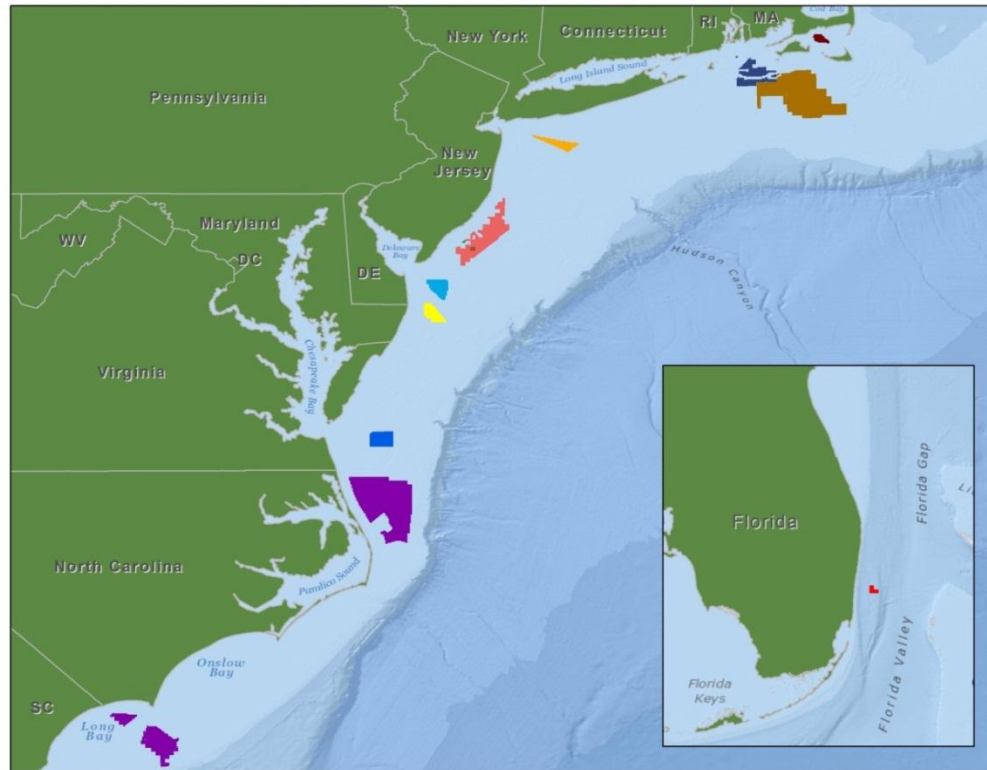
# Atlantic Marine Assessment Program for Protected Species (AMAPPS)



**Desray Reeb, Ph.D.**  
Marine Biologist  
Office of Renewable Energy Programs  
Desray.Reeb@boem.gov



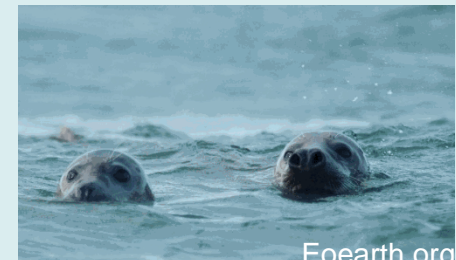
- **Information Need:**
- Assessment of the potential environmental impacts to resources on the OCS;
- Enable determination and evaluation of the effects of OCS activities on natural resources and the appropriate monitoring and mitigation of those effects.



- North Atlantic and Mid/South Atlantic lease and call area ESA and MMPA current and future consultations

## Background:

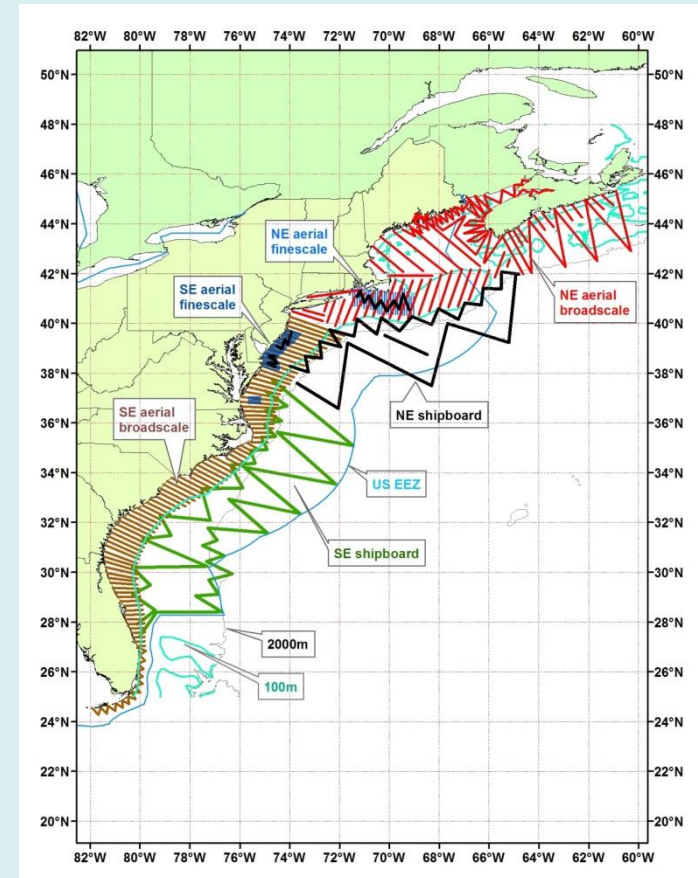
- **Critical gaps** in the data available for population assessments:
  - very limited data available outside of summer months (June-August);
  - visual line-transect surveys suffer from known negative biases, especially for marine turtles and deep diving marine mammals i.e. Corrections for dive-surface intervals are a critical gap in assessments of population status;
  - relatively limited assessment of seabird and pinniped (e.g., harbor seal, gray seal) abundance in U.S. Atlantic Ocean waters. Both of these taxa have the potential to be impacted by offshore energy projects and require dedicated assessment efforts





## Study's Objectives:

- To fill critical gaps in the data available for population assessments and seasonal, spatial distribution of protected species in the U.S. western North Atlantic Ocean.
- To improve the knowledge base of Federal agencies with living marine resource responsibilities through improved surveys of marine mammals, sea turtles, and avian species.

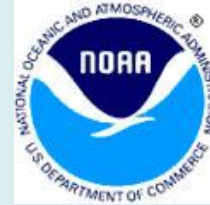




# Atlantic Marine Assessment Program for Protected Species (AMAPPS)

## Phase I Study Summary

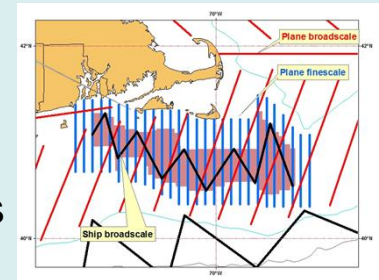
- Co-funded by multiple Federal Agencies
- Contract awarded: June 22, 2010
- Final Report due March 2014
- First 5 years made great strides in conducting broad scale surveys and developing spatially explicit models, with an additional focus on tagging of loggerhead sea turtles, given their propensity for long-duration dives and associated detection biases.
- **Products as of May 2013:**
  - Abundance estimates of cetaceans in US Atlantic and Canadian Scotian shelf waters: 19 species or species groups
  - First ever preliminary abundance estimate for loggerhead turtles in the US Atlantic waters
  - Refereed papers/technical reviews: 6
  - Papers in review: 4
  - Papers in preparation: 6
  - Conference presentations: 10
  - Ongoing technological, methodological and database developments: comparisons of various technologies, protocols
  - Contributions of data to update existing databases (Oracle, TETHYS, Marine Bird Compendium)



**BOEM Renewable Energy Programs**

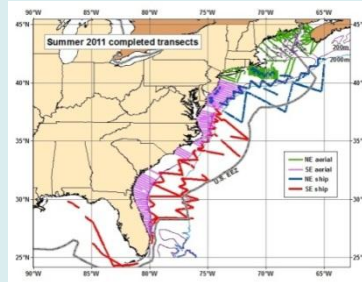
## Phase II Study Objectives :

- **2015-2019:**
  - Continue core survey work – given the dramatic inter-annual differences in oceanographic conditions within just the first 3 years of AMAPPS;
  - Fine or finer scale surveys will be required with continued efforts to integrate and cross-validate fine-scale and broad-scale survey results;
  - Additional emphasis on tagging seabirds, cetaceans and seals to inform survey corrections and gather information on behavior, seasonal movements, and habitat use;
  - Incorporate more passive acoustic survey and monitoring efforts to learn more about large whale behavior, movements and habitat use.
  - Analytical and modeling results from the first phase of AMAPPS will inform which topics to prioritize during the next 5 year phase.





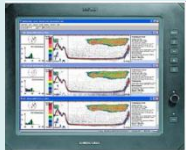
## Study Methods:



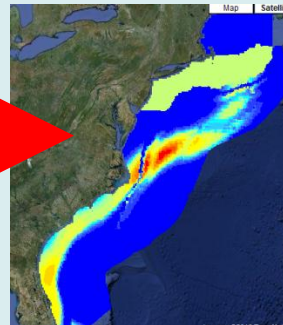
Quarterly collect distribution and abundance data via visual shipboard, aerial and acoustic surveys



Tag turtles, seals and seabirds to correct visual abundance data for animals not seen



chlorophyll  
Thermocline  
SST



Incorporate habitat characteristics to model seasonal, spatially-explicit density estimates

**Bottom characteristics**

## Questions?



Photo by Christin Khan, NOAA/NEFSC