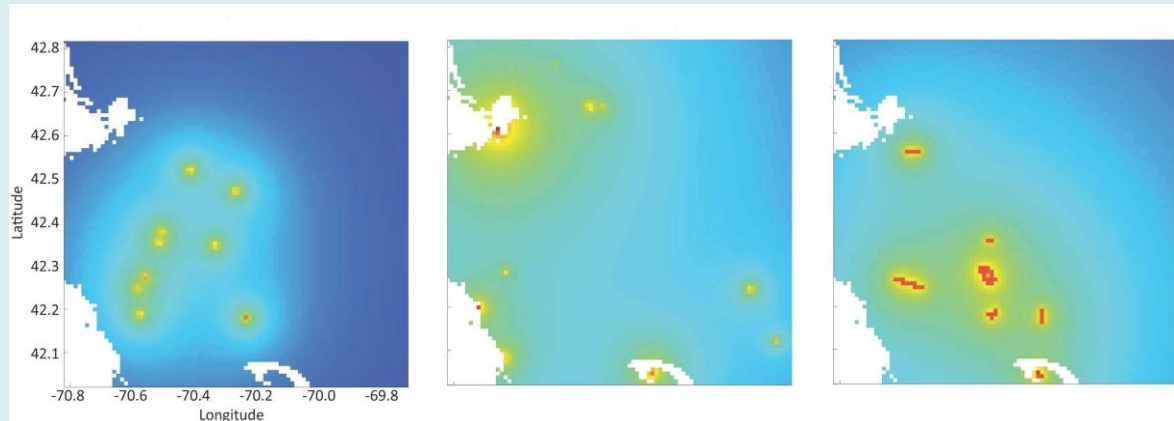


Determining offshore use by marine mammals and ambient noise levels using Passive Acoustic Monitoring (PAM)



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Responsible for NEPA, ESA, MMPA compliance:

BOEM Information Need:

- Geographic information describing marine mammal presence, distribution and seasonality;
- Information regarding baseline noise levels in order to determine the potential impacts from underwater noise that may occur during construction and operation of offshore wind energy facilities, upon marine mammals and other marine species.

Recommended JSOST Federal Research Action Area : Long-term biological and ambient noise measurements in high-priority areas (Southall *et al.* 2009).

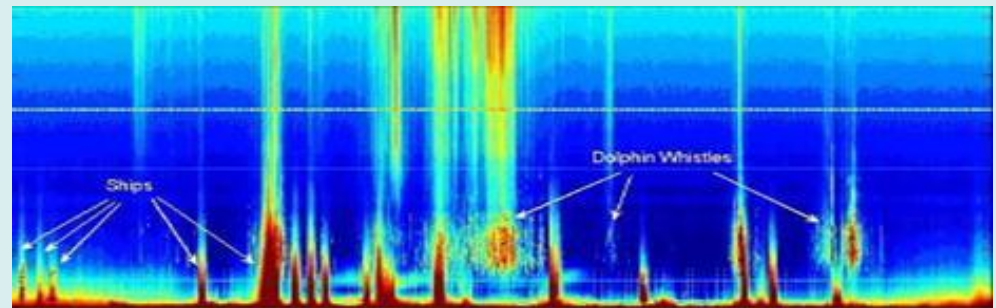
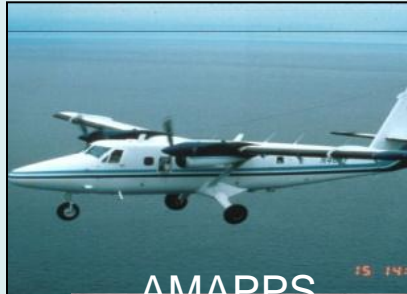


Image by Dr. John Hildebrand, Scripps Institute of Oceanography

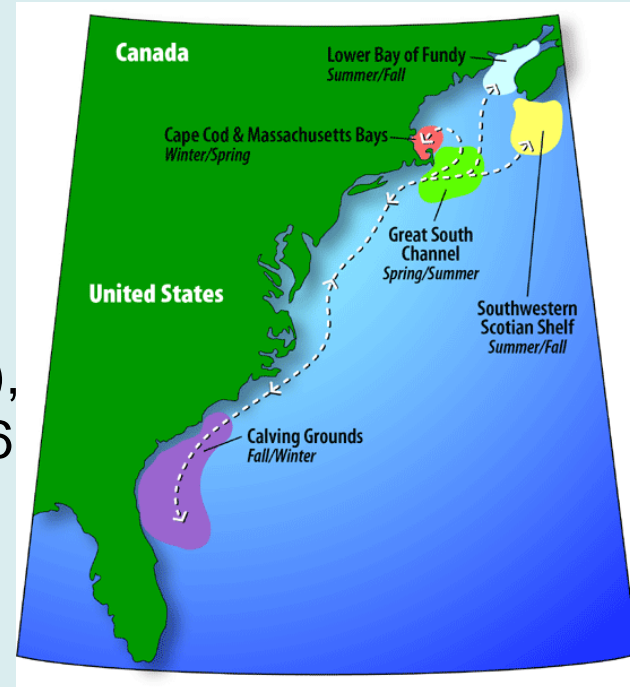
Background:



AMAPPS



- Current studies include ship-based/aerial surveys: Atlantic Marine Assessment Program for Protected Species (AMAPPS)(BOEM), Biodiversity Research Institute Study (DOE), Virginia Aquarium study (VA)
- Extremely useful but limited in duration of coverage.
- Gaps in migratory pattern data

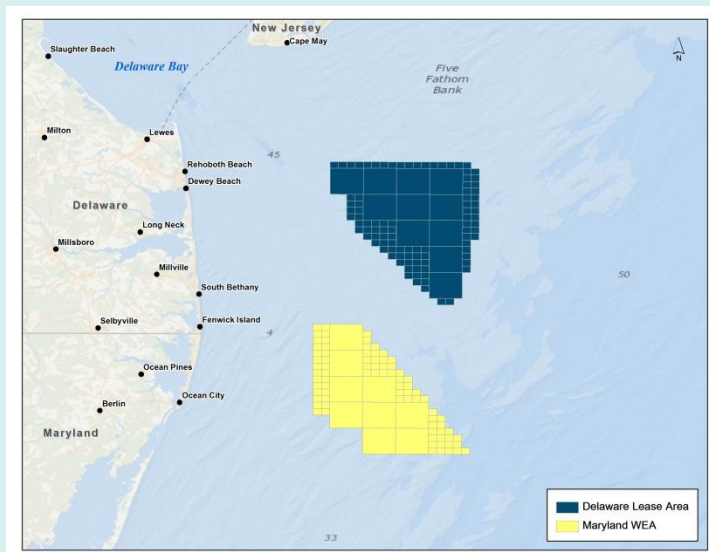


- Other PAM projects include: Stellwagen Bank Sanctuary Ocean Noise Research project (NOPP), RI/MA (MassCEC/BOEM), NJ, SC, GA (BOEM) , 6 MARU array off VA (incl. VA WEA) (Cornell).

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Study Objectives (within the vicinity of the MD WEA):

- Provide an assessment of the species and geographic distributions of marine mammals present;
- Provide localized positions of NARWs (migratory corridor) and other marine mammals;
- Provide a baseline of ambient underwater noise.



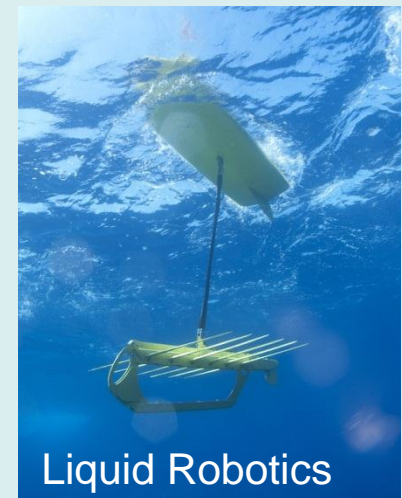
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- A contractor will be hired to deploy and maintain the instruments and collect and analyze data;
- Fixed seafloor sensors and a sensor mounted on a Wave Glider or other appropriate mobile device.



- High frequency acoustic recording packages will be used on both platforms, to provide broadband data.
- Data would be collected continuously for one year and analyzed during the following year.

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Questions?