

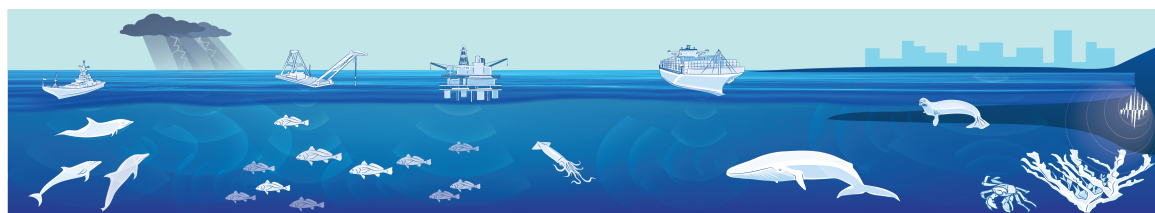
# **ATTACHMENT X**



# Ocean Noise Strategy

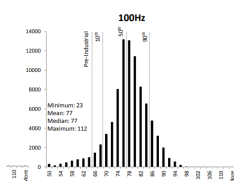
## What is the problem?

Sound is a fundamental component of underwater habitat that many animals have evolved to rely on over millions of years. Over the past century, human activity that generates noise has increased. Higher noise levels can reduce the ability of animals to communicate with potential mates, other group members, their offspring, or feeding partners. Noise can also reduce an ocean animal's ability to hear environmental cues that are vital for their survival.



## What is the Purpose of the Strategy?

The purpose of NOAA's Ocean Noise Strategy is to articulate the agency's vision for addressing ocean noise impacts to the species, ecosystems and places it is entrusted to protect and guide science and management actions towards that vision.



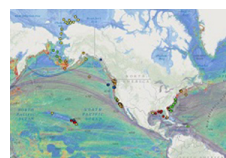
### Science

Working with partners to fill critical knowledge



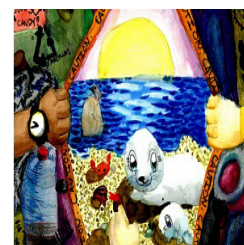
### Management

Integrating actions across the agency to minimize the acute, chronic and



### Decision Support Tools

Developing publicly available



### Outreach

Educating the public on noise

gaps and build understanding of noise impacts over ecologically-relevant scales

cumulative effects of noise on marine species and their habitats.

tools for assessment, planning and mitigation of noise-making activities over ecologically-relevant scales.

impacts, engaging with stakeholders and coordinating with related efforts internationally.

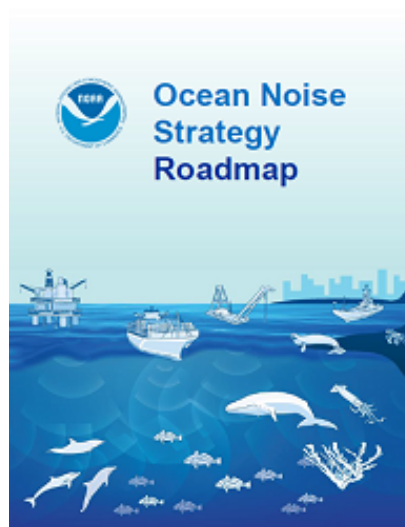
## How did NOAA's Approach Evolve?

NOAA's approach to managing ocean noise aims to reduce negative physical and behavioral impacts to trust species, as well as conserve the quality of acoustic habitats. In 2010, NOAA committed to improving the tools used by the Agency to manage underwater noise impacts more comprehensively, including to better address cumulative impacts to whales, dolphins, and porpoises. This commitment led to two phases:



### Phase I: CetSound

CetSound, or Cetacean & Sound Mapping, was an initial effort (2010-2012) to create two mapping tools: CetMap and SoundMap, to assist in evaluating the impacts of underwater noise on whales, dolphins, and porpoises.



### Phase II NOAA Ocean Noise Strategy

- CetMap provides cetacean density and distribution maps that are time-, region- and species-specific. The Marine Mammal Data Availability and BIA products have continued to evolve.
    - [Cetacean Data Availability](#)
    - [Biologically Important Areas](#)
    - [Cetacean Data Hierarchy](#)
  - SoundMap provides maps of the temporal, spatial, and frequency characteristics of man-made underwater noise resulting from various activities. [Project Overview](#) and [Sound Field Data](#). Updated SoundMap pages coming soon!
  - CetSound Symposium 2012: Tools were presented at a stakeholder meeting which discussed their further development and possible management applications. [CetSound Symposium Final Report](#)
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Following the successful conclusion of the 2012 CetSound Symposium, NOAA leadership recommended that we expand our Phase 1 focus to:

- identify a 10-yr vision for reducing ocean noise impacts on NOAA trust resources
- develop an integrated strategy to implement this vision through our statutory authorities and expertise
- guide further development of the most effective science-based tools
- expand outreach to stakeholders and educating the public

The development of a NOAA-wide, forward looking [Ocean Noise Strategy](#) to achieve these goals was then initiated.

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