

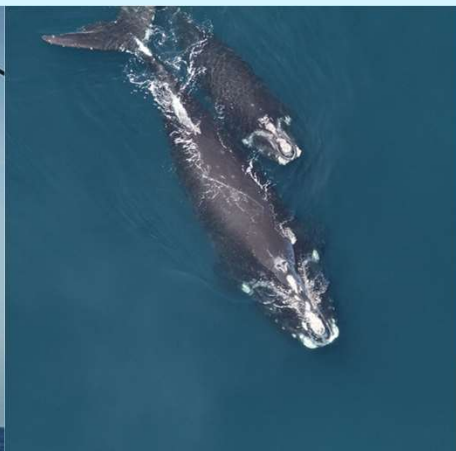


**NOAA**

**National Oceanic  
and Atmospheric  
Administration**

# NOAA's Roles in Offshore Wind

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# NOAA's Roles in Offshore Wind



## **Protection of Coastal & Marine Resources**

Environmental reviews and regulatory authorizations to ensure compliance with NOAA trust resource statutes.

## **Interagency & Stakeholder Engagement**

Multi-scale engagement with State, Tribal, Federal partners and constituents.

## **Environmental Intelligence**

Data, tools, science, modeling, mapping and services to inform offshore wind siting and decision making.

## **Research & Operations**

Understand and monitoring impacts, provide and improve wind forecasts.

# NOAA's Statutory Roles and Responsibilities



## Lead Action Agency

- Marine Mammal Protection Act (MMPA)

## Consulting Agency

- Endangered Species Act (ESA)
- Magnuson-Stevens Fishery Conservation and Management Act (MSA)
- Fish and Wildlife Coordination Act (FWCA)
- National Marine Sanctuaries Act (NMSA)

## Cooperating and Adopting Agency

- National Environmental Policy Act (NEPA)

## Other Interacting Statutes

- Coastal Zone Management Act (CZMA)

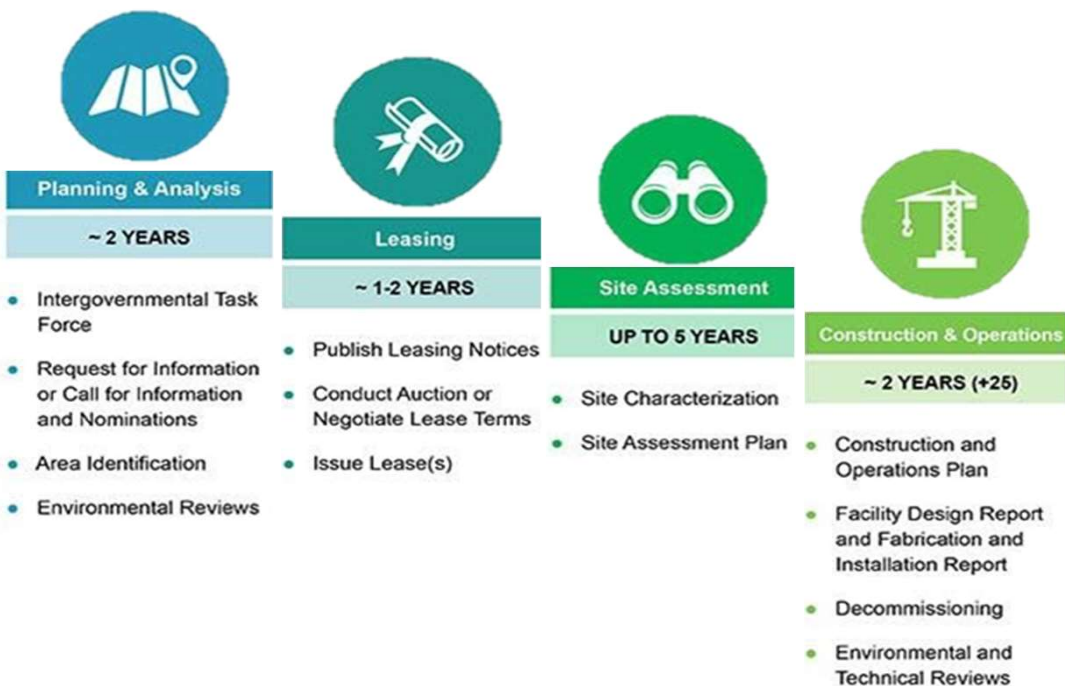
## Scientific Support

- Ensure informed management decisions based on best available science
- Address impacts on scientific surveys and advice



# Permitting Process

## BOEM Process



## NOAA Fisheries

### Environmental Review & Regulatory Processes

- Marine Mammal Protection Act
- Endangered Species Act
- Magnuson-Stevens Act (Essential Fish Habitat)
- Fish and Wildlife Coordination Act
- National Environmental Policy Act
- Interagency coordination and streamlining requirements under Title 41 of Fixing America's Surface Transportation Act (FAST-41)

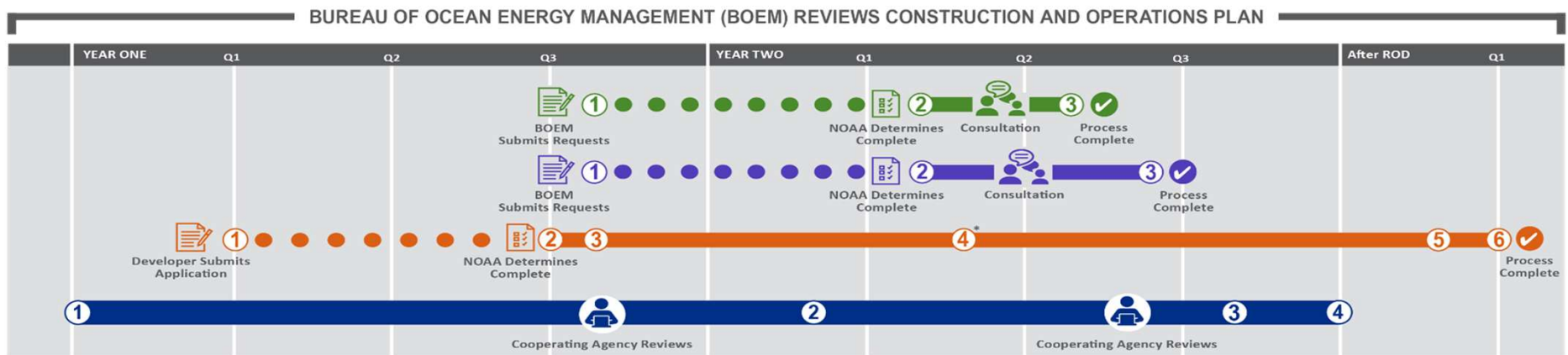
**Science support during environmental review and planning and leasing phase**

**Science to understand impacts**

# One Timeline for All Reviews



## NOAA Fisheries' Participation in the Permitting Process for Offshore Wind Projects



**Essential Fish Habitat Consultation** 1. Consultation request package submitted 2. Consultation initiated 3. NOAA Fisheries issues Conservation Recommendations

**Endangered Species Act Consultation** 1. Consultation request package submitted 2. Formal Consultation initiated 3. NOAA Fisheries issues Biological Opinion

**Marine Mammal Protection Act Letter of Authorization** 1. Initial Application Submitted 2. Complete application submitted 3. Notice of Receipt published in Federal Register 4. Proposed incidental take authorization published in Federal Register 5. Final incidental take authorization published in Federal Register 6. Decision made

**BOEM Environmental Impact Statement Process** 1. Notice of Intent (NOI) in Federal Register published 2. Draft environmental impact statement published in Federal Register 3. Final environmental impact statement published 4. Record of Decision (ROD) signed

NOTE: Documents shown above are required and must be complete for NOAA Fisheries to move to the next step. NOAA Fisheries adopts the environmental impact statement.

KEY ●●● Review of submissions and coordination of information needs

\* This could be extended if deemed a significant regulatory action.



# All Parts of NOAA Contribute to Wind

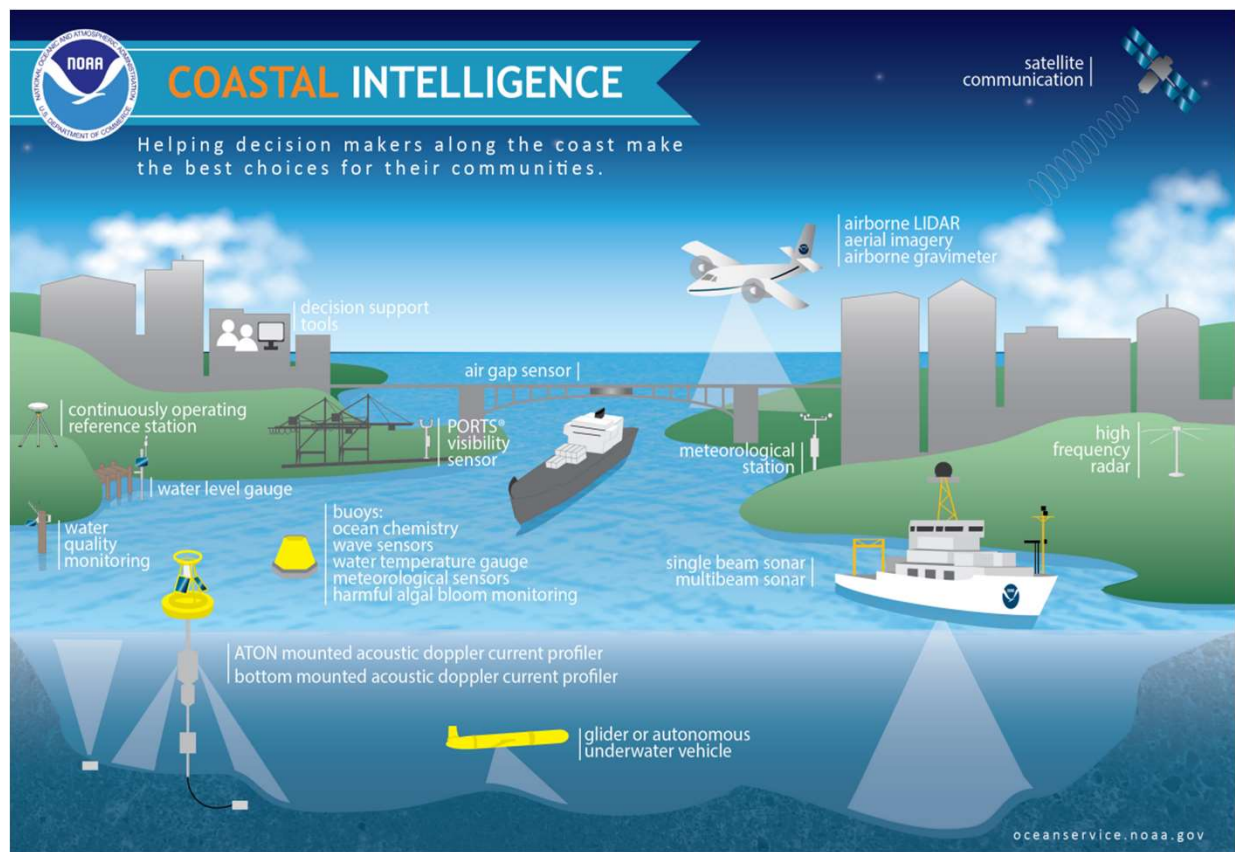


- **NOAA Fisheries (NMFS)** provides expertise and data in fisheries, protected resources, and their habitats and has the bulk of the agency's permitting and environmental review responsibilities related to offshore wind.
- **National Ocean Service (NOS)** maintains up-to-date nautical charts, oversees implementation of the Coastal Zone Management Act and the management of the National Marine Sanctuary System, and has partnered with BOEM through its National Centers for Coastal Ocean Science (NCCOS) to support marine spatial planning and modeling to help BOEM identify potential conflicts and deconflict areas as best as possible about leasing.
- **Ocean and Atmospheric Research (OAR)** supports predictive atmospheric and oceanic models and provides extension support via Sea Grant in partnership with the Department of Energy.
- **National Weather Service (NWS)** provides weather and climate predictions that inform wind siting, models wind farm wakes and other oceanic/atmospheric impacts, and evaluates radar mitigation needs.
- **National Environmental Satellite, Data, and Information Service (NESDIS)** manages several data and model products that inform decision-making.
- **Office of Marine and Aviation Operations (OMAO)** supports platforms used in NOAA missions, including problem-solving with NMFS in mitigating impacts from offshore wind to fisheries and other surveys.

# Environmental Intelligence

NOAA provides coastal and ocean environmental intelligence for **understanding and predicting interactions with wildlife, fisheries, habitats, and other ocean uses.**

- Foundational Data (Earth Observations, baselines, charts)
- Forecasts and projections
- Spatial Planning & Siting
- Research and Modeling





# Protection of Coastal & Marine Resources

Data, modeling, & other capabilities like AI and machine learning improve understanding and minimize impacts of offshore wind development on living resources and habitats

NOAA provides management, conservation, and protection of these ecosystems by ensuring activity compliance with environmental directives



Site AA509 video

0:14 / 1:50

Down Looking Oblique Looking

Location: 145.70564° E / 15.239° N

Results

Accuracy Assessment Points

1 feature

Habitat Name	Depth MLLW (meters)	Substrate - Abundance of Live Coral Reef	Substrate - Abundance of Upright Dead Coral Reef	Sul Ab Coi
Upright Dead and Live Coral Reef, Mixed Algae	5.9	20	60	20







# Research, Monitoring, & Operations



**Meteorological, oceanographic, and climate observations, forecasts, and warnings, fishery surveys** inform efficient offshore wind siting, design, and safe operations, and energy efficiency and integration



NOAA provides assessments on offshore wind impacts to **endangered or threatened species, marine mammals, fisheries, marine habitats, and fishing communities**



Experimental Wind Profiling Buoy Facility

Photo credit: AXYS Technologies / Pacific Northwest National Laboratory



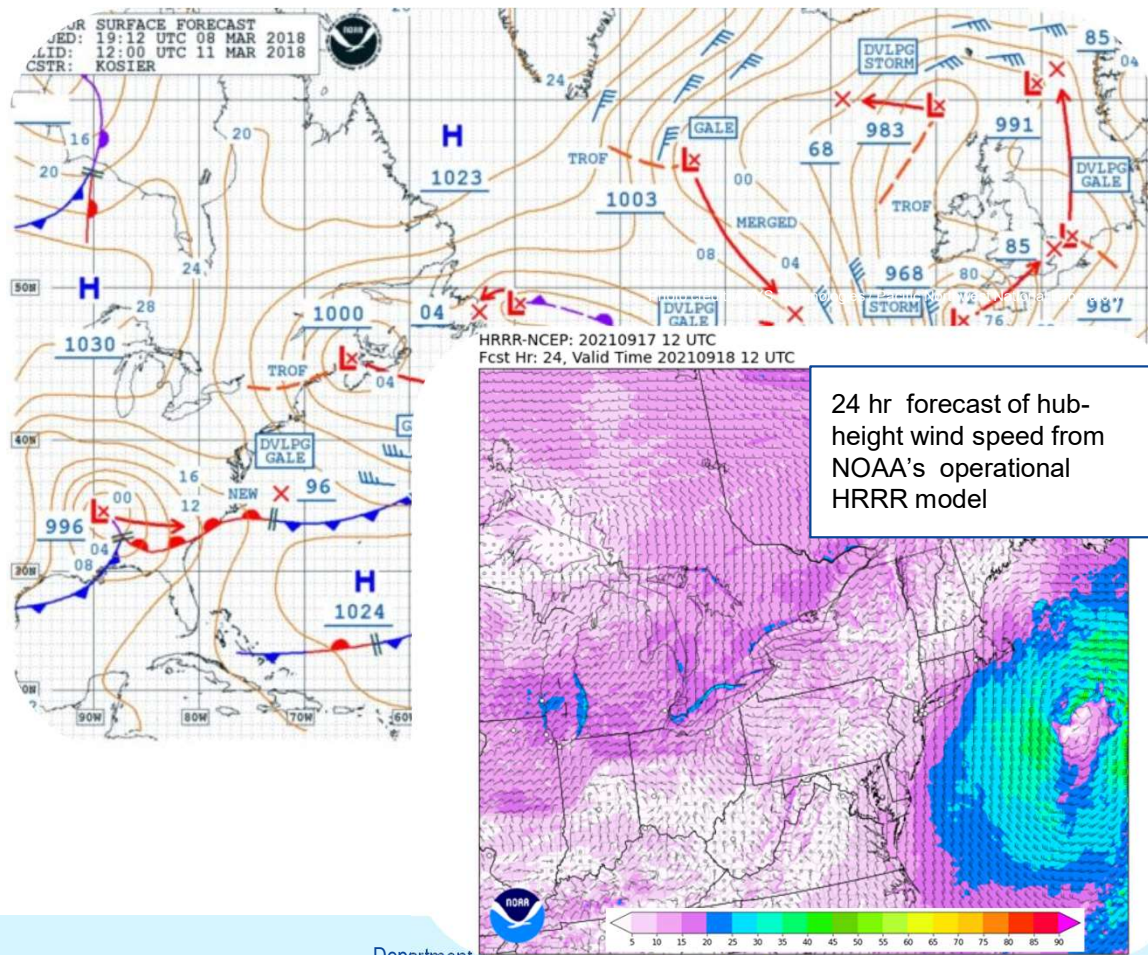
Deployed Marine Autonomous Recording Unit, Caribbean, 2017



# Observations & Weather Forecasts

Experimental Wind Profiling Buoy Facility

As the nation's wind and solar industries grow, NOAA faces increased demands for improved meteorological observations and more accurate wind and cloud forecasts over a range of timescales.



24 hr forecast of hub-height wind speed from NOAA's operational HRRR model

# Ocean Planning to Inform Siting of Offshore Wind

NOAA uses **data, spatial modeling, resource and social science surveys** to identify **suitability of locations** for wind development to minimize impacts on living resources, habitats, and operations to minimize resource user conflicts and understand community perceptions & concerns.

Ultimately, integrated **spatial models** are provided to BOEM to aid in defining potential Call Areas, WEA and specific Lease blocks.

