



Maine Floating Offshore Research Array

Wildlife Work Session #1

MARCH 5, 2021 1:30 – 4:30 PM



GOVERNOR'S
Energy Office

Webinar will begin in a few moments.

Zoom Meeting Reminders

- Everyone, please MUTE yourself, except when speaking. If you are on the phone, press *6 to mute/unmute.
- Please rename yourself - Breakout (BB or MM), Name, Affiliation, Breakout Group (Birds/Bats OR Marine Mammals/Other)
"BB, Laura Singer, Facilitator"
- Raise your hand, use the blue "Raise Hand" function in the participants tab. If you are on the phone, press *9. Or just raise your hand on the screen.
- Use "Chat" function to ask questions as well and share information.
- Technical assistance: Zoe Miller
zmiller@cbi.org

Navigating Our Discussion

- Be attentive to today's objectives.
- Focus on task at hand (avoid multitasking).
- Both questions and comments welcome
- Listen to learn and speak to share expertise.
- Share the floor: Please be mindful of your time to allow others to speak
- Be direct and respectful: Express your views and let others do the same
- The session will not be recorded

Research Array Process Elements



State of Knowledge Workshop

- Setting stage
- Building common information

Webinars

- Build understanding across sectors

Work Sessions Fisheries Wildlife

- Detailed dialogue on data, siting, and research approach

Dockside and Informal

- Direct engagement with fishermen
- Direct engagement with interested others

Joint workshops

- Coordinating and refining advice from wildlife, fisheries and other

Work Sessions

Provide advice and counsel to the State to help guide its decisions involving

1. the siting of the research project area and its configuration,
2. research themes of interest for the research project to learn from, and
3. other relevant project design elements to be considered for the research lease application.

Wildlife Work Sessions

March 5: Meeting #1

- What data do we have?
- What's missing?
- How and what could we get during this process?
- Initial discussion of high, moderate or low potential for interaction

March 26: Meeting #2

- Review additional data and initial finding from fisheries
- What are better and worse areas? Why?
- Explore layout considerations to minimize interactions
- How might turbines be placed inside the site?
- What is the research approach and key questions?

TBD – Joint meeting with Fisheries

- Hone further siting considerations and pros/cons
- Review and discuss baseline data needs in advance of project design and construction
- Review and discuss possible research focus and questions for the array itself

Objectives for Today

- Set expectations and goals of working sessions
- Understand what data is currently available to determine which species are present in the research area of interest, focusing on those populations most vulnerable
- Generate ideas for additional data sets that may be useful to consider to inform siting

**Wildlife Work
Session #1
Agenda**

- 1:30** **Welcome and Overview**
- 1:45** **About Maine’s Research Array**
- 2:00** **Understanding Data to Inform
Siting Considerations**
- 3:00** **Break**
- 3:15** **Breakout Session**
 - **Birds & Bats**
 - **Marine Mammals**
- 4:00** **Report Back**
- 4:20** **Wrap Up & Next Steps**



Maine's Offshore Wind Initiative

**Celina Cunningham, Deputy Director
Governor's Energy Office**

CLIMATE COUNCIL GOALS



12.01.20
Climate Action Plan
Delivered



ACHIEVE STATE
CARBON NEUTRALITY BY
2045

REDUCE MAINE'S GREENHOUSE GAS EMISSIONS
BY TARGETS OUTLINED IN STATE LAW

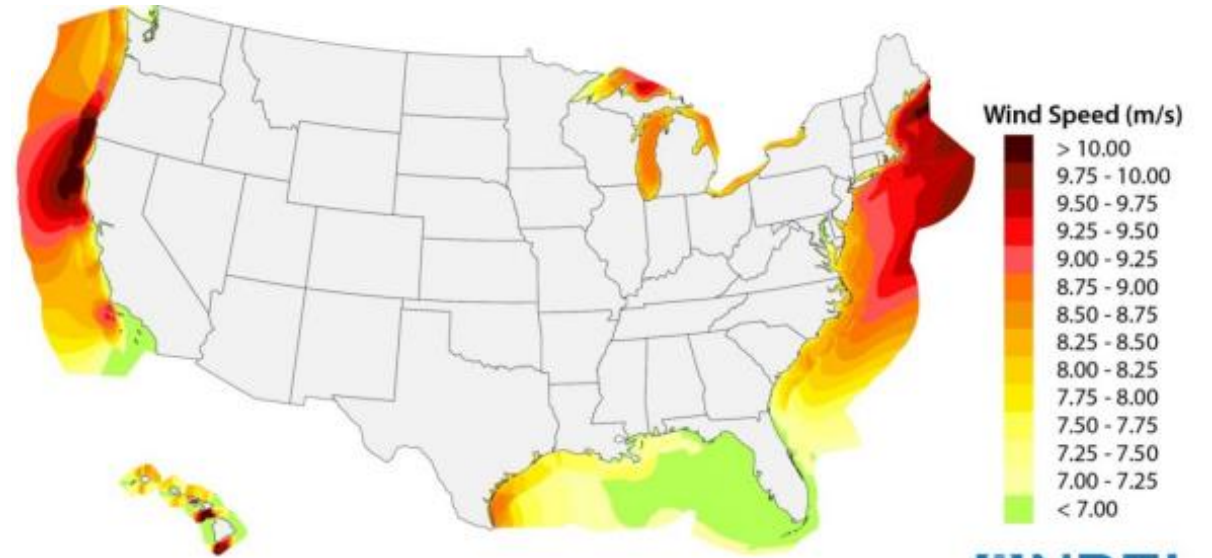
45%
BELOW 1990 LEVELS
BY 2030

80%
BELOW 1990 LEVELS
BY 2050

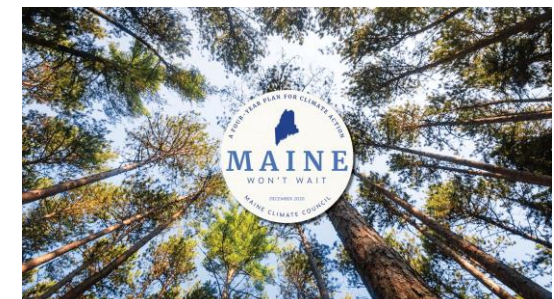


ENSURE MAINE PEOPLE, INDUSTRIES, AND COMMUNITIES
ARE RESILIENT TO THE IMPACTS OF CLIMATE CHANGE.

Offshore Wind in Maine



Data Source: AWS Truepower 0-50nm; NREL WIND Toolkit beyond 50nm.



Maine Offshore Wind Initiative

- Pursues strategic opportunities for additive economic activity and innovation across various sectors and regions of Maine
- Maximize compatibility with existing marine uses and fisheries and take a data-driven, inclusive, transparent approach
 - Maine fisheries: \$674M in Maine's commercial fishing landings in 2019 (\$485M in lobster landings alone, most valuable single species fishery in US); 2X commercial fishing trips out of Maine than any other state on the east coast
- Support Maine engagement in BOEM Task Force and regional coordination

Maine's Floating Offshore Wind Roadmap

October 2020

US EDA Grant: \$2.167 million for a strategic roadmap to develop offshore wind industry in Maine, focusing on:

- Ports and infrastructure
- Manufacturing, supply chain, workforce
- Innovation
- Research array and research priorities
- Ocean and environmental data
- Stakeholder engagement



Maine Offshore Wind Projects

2013

1/8 Scale Pilot Project - 1 turbine (Castine - UMaine, Cianbro, MMA)



2023

10 MW Demonstration Project - 1 turbine (Monhegan - NEAV LLC, UMaine)



2025+

Research Array - 12 turbines or less (State, UMaine, NEAV LLC)



TBD*

Commercial Development - BOEM Leasing and Permitting

University of Maine Technology

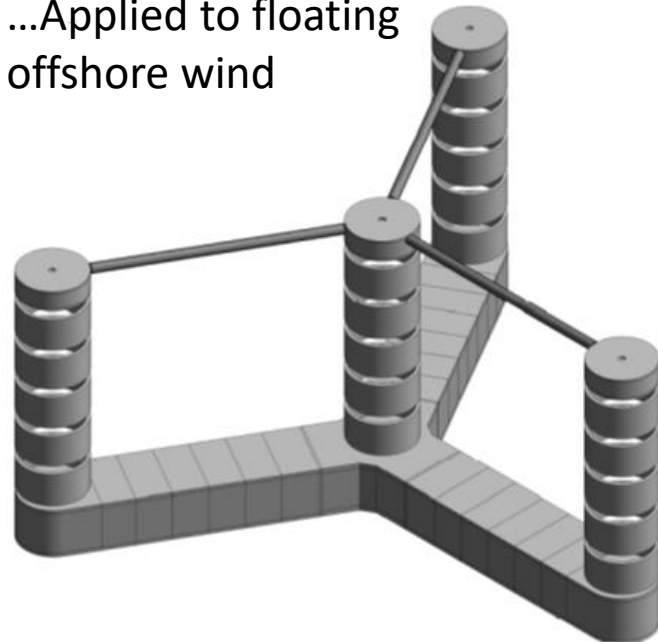
Optimized for Maine

- Can be built in Maine
 - Concrete / not steel
 - Modular construction
 - Creates jobs in Maine
- Fits Maine's waters
 - Suited for mid-depth waters
 - Very stable & shallow draft

Common modular construction



...Applied to floating offshore wind



Research Array By the Numbers



12 floating turbines or fewer

16 square miles or smaller

State of Maine

- Governor's Energy Office (lead)
- Department of Marine Resources
- Governor's Office of Policy Innovation and the Future
- Department of Inland Fish and Wildlife
- Department of Environmental Protection
- Department of Economic and Community Development
- Consensus Building Institute (Consultant - Facilitator)

New England Aqua Ventus

- Diamond Offshore
Wind/RWE Renewables

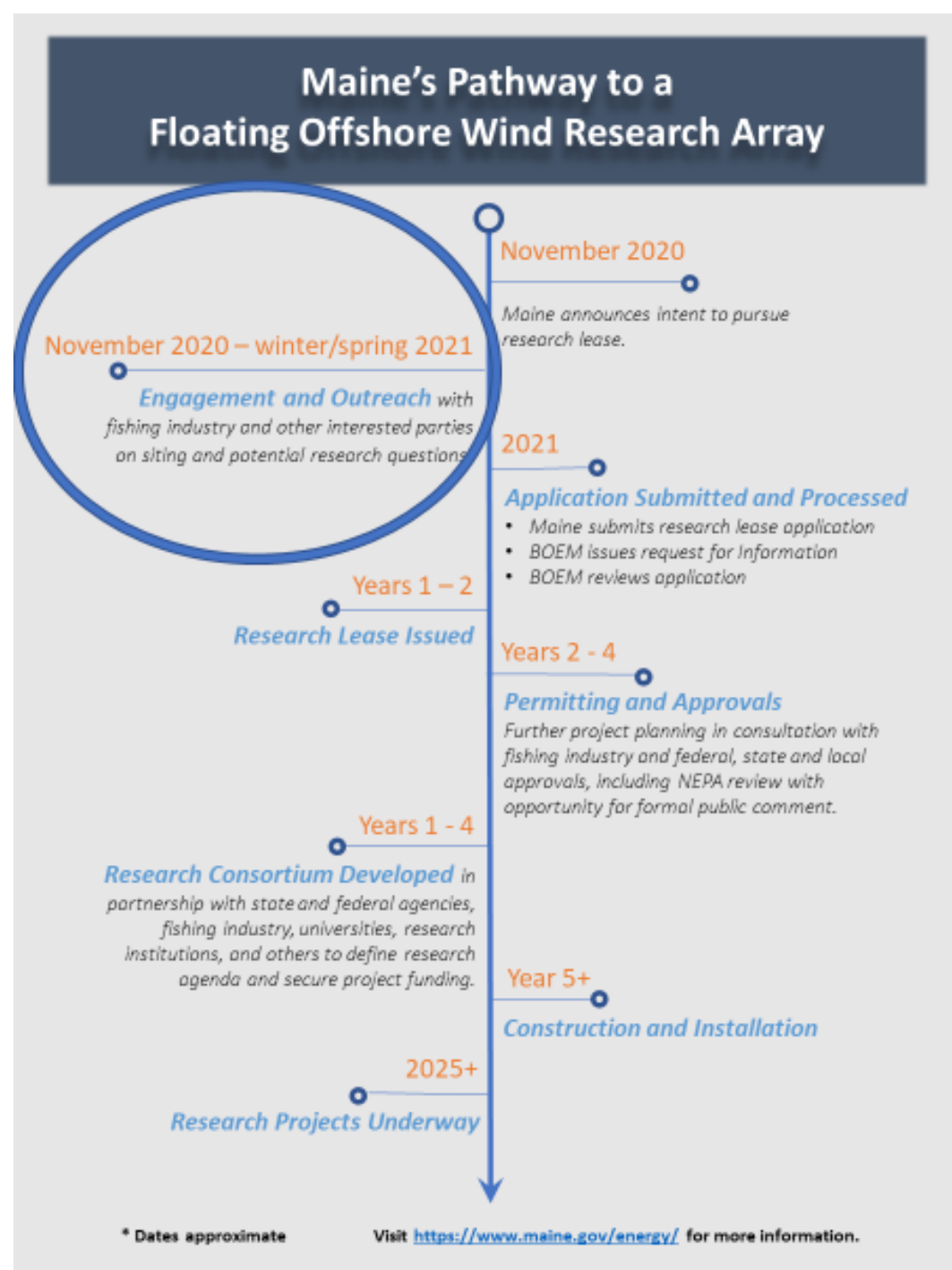
University of Maine

- Technology

Federal Agency and MA/NH State Agency Coordination

Who is Involved?

Preliminary Project Timeline



Listening and Adapting



In response to fishing industry concerns, Gov. Mills announced the following:

- Support for 10-year moratorium on new offshore wind in **state waters**
- Additional time for planning and discussion, prior to lease application
- A review of applicable state laws



Siting Criteria

Initial Siting Criteria

20-40 statute miles offshore

150 feet of water or deeper

Southern half of ME interconnect

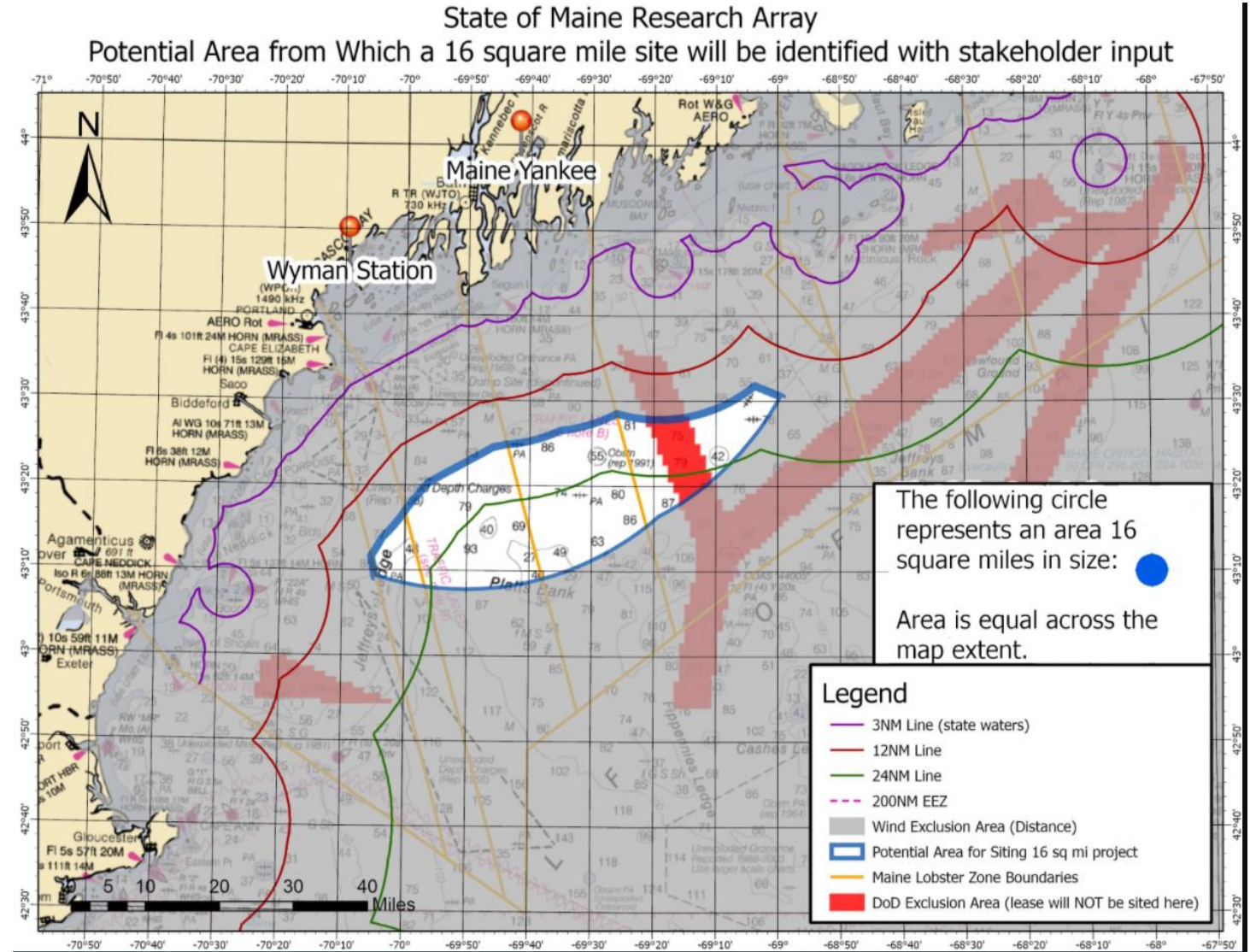
Bottom type gravel and/or mud

Minimal conflicts with known fishing grounds

Avoid highly trafficked areas

Limit visibility from shore

Research Array General Area of Interest



Site Selection Process

Site Selection

State and federal agency consultation

Fishing Industry Engagement
(Information on intensity of use, value, seasonality, diversity of fisheries for site selection and input to research framework)

Wildlife Engagement
(Information on species, risks, potential impacts for site selection and input to research framework)

Other interested parties: Tribes, USCG, maritime industries, academia, etc.

Initial GIS Data Collection and Analysis
(publicly available data on fisheries, habitat, transportation, bathymetry, geology, military, shipwrecks, etc.)

Baseline Criteria
(distance to shore/grid connection/water depth/wind speed/exclusion areas)

2. Eliminate and refine areas
based on multiple inputs
~16 sq miles

1. Identify general area



Research Approach

Research Approach

- Research is the key driver for the array.
- Research objectives will inform:
 - Siting process and decision
 - Project design, layout and operations

Overall research process:

- Key themes in initial application
- Further develop research approach through roadmap effort
- Stand up formal consortium, with diverse interests at the table
- Seek broad funding opportunities
- Open source data

Research Approach



- Environment and ecological interactions
- Interactions with fishing activity
- Navigation
- Technology research and demonstration, including mooring systems
- Workforce education and training
- Others?

Breakout Groups

Key Questions:

1. Determine if there available, relevant, additional data that can be used to inform siting considerations for wildlife. Both presence/absence and habitat features of interest.
2. What does initial data tells us about areas of high, medium or low potential for interaction?
3. Beyond threatened and endangered species, are there species that may be particularly vulnerable to potential hazards that should be considered?
4. What do we need to do before next session to advance this siting effort for wildlife considerations?

Zoom Navigation:

- BEFORE BREAK: Self-select either Birds/Bats or Marine Mammals/Other Breakout groups and GO to Group before they grab coffee, etc.
- If you can't self-select, Zoe will work with you in the main Zoom room (plenary) to select for you
- Chat with Zoe on selection or other technical issues



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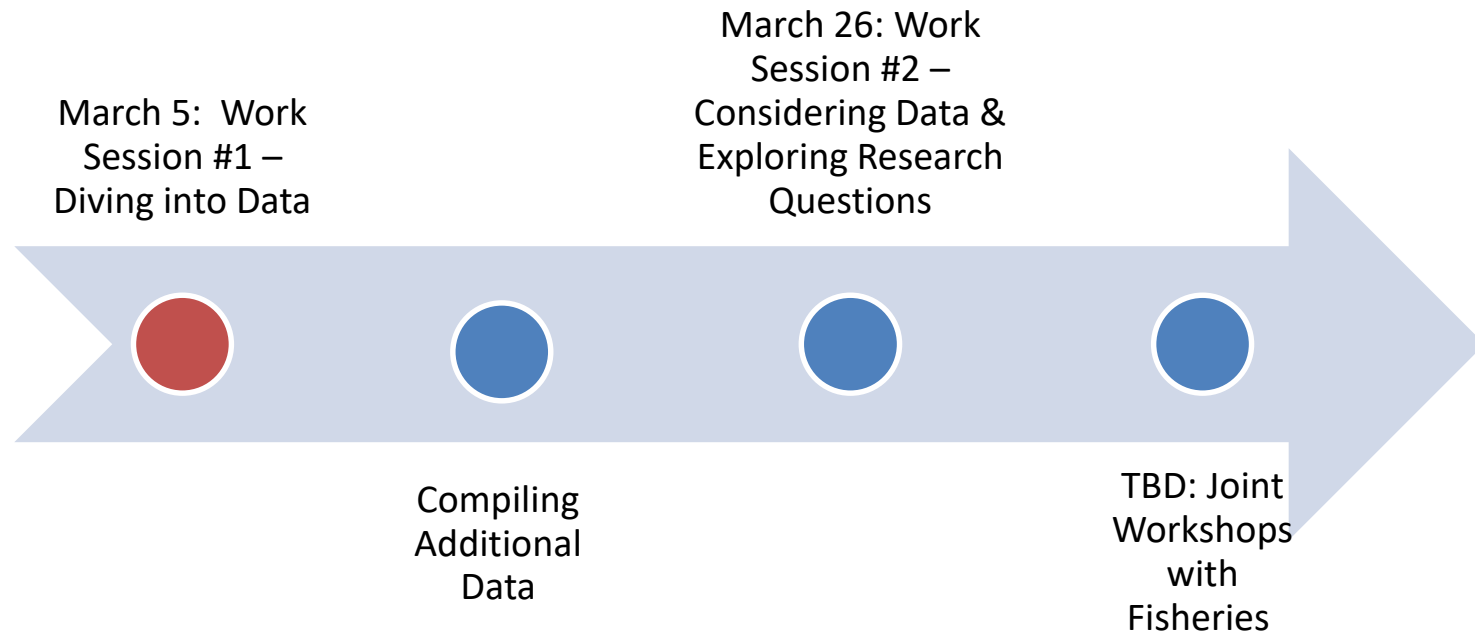
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Energy Office

BREAK: Webinar will resume in breakout session at begin in .

Wildlife Work Sessions Timeline



For information:

www.maine.gov/energy/initiatives/offshorewind

Questions?

offshorewind@maine.gov

Additional Input on Wildlife?

Amanda Cross

**Wildlife Resource Supervisor, Department of Inland Fisheries &
Wildlife**

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**How Do I Stay
Informed and
Provide Additional
Input?**