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Environmental Technical Working Group (E-TWG)

A Stakeholder Engagement and Advisory Process to Advance the Environmentally Responsible Development of Offshore Wind Energy for New York State

25 June, 2019
New York, NY

E-TWG Lead: NYSERDA - 518-862-1090

- Kate McClellan Press x3110, Kate.McClellanPress@nyserda.ny.gov
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Technical Support: Biodiversity Research Institute (BRI) - 207- 839-7600

- Kate Williams x108, kate.williams@briloon.org
- Julia Gulka x303, Julia.gulka@briloon.org

Facilitation Support: CBI and Cadmus

- Bennett Brooks 212-678-0078, bbrooks@cbi.org
- Farrah Anderson 617-874-1313, Farrah.Andersen@cadmusgroup.com

Meeting Agenda/Objectives

- Share and discuss updates on E-TWG related activities
- Discuss updates on the Regional Research & Funding Entity process
- Discuss progress of and next steps for Specialist Committees for developing BMPs for birds & bats and marine mammals & sea turtles

- Food/Coffee
- Restrooms
- Webinar/call logistics

  Remote attendees
  send questions
  via the zoom chat or
  email to
  Farrah.Andersen@cadmusgroup.com

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Ground Rules

- Contribute – your perspectives are important
- Share time – lots to cover and many people around the table
- Integrate ideas and pose questions
- Stay focused on the agenda
- Use placards if wanting to join the conversation
- Limit side conversations or take them outside
- Cell phones off/silent

Updates

E-TWG and Related Activities

NYSERDA OREC RFP18-1

COMING SOON

NYSERDA OREC RFP18-1

Contract Requirements

- Submit a fisheries and environmental mitigation plan
- Participate in New York's technical working groups (TWGs)
- Consult with relevant State agencies around fishing, wildlife, and the environment
- Make environmental data collected during site assessment publicly available
- Implement lighting controls to minimize nighttime visibility
- Minimize visual impacts

Post-Award Announcement

- Streamlining environmental and fisheries mitigation plans
- Opportunities for stakeholder engagement (general)
- TWG engagement

Climate Leadership and Community Protection Act

Codifies into law: 9,000 MW of offshore wind by 2035,

6,000 MW of solar by 2025, & 3,000 MW of energy storage by 2030

- Commitment to a carbon-neutral economy by 2050
- Requires 100% clean, carbon-free electricity by 2040 and 70% renewable energy by 2035
- Creates a Climate Action Council to study mechanisms to reduce emissions
- Requires that state agencies invest 35% of clean energy efficiency resources to benefit disadvantaged communities and will aim to invest 40%

NEW YORK STATE

NYSERDA Environmental and Fisheries Research for Offshore Wind Energy Development PON

Ecosystem Dynamics: Examine the relationships between environmental processes, primary productivity, and distribution of species at higher trophic levels

Commercial Fishing Access: Understanding offshore wind development constraints to commercial fishing access

Approaches for Offshore Wind Pre- and Post-construction Monitoring

Leveraging Non-traditional Data: Approaches for leveraging non-traditional data for offshore wind environmental decision making

Modeling the Effects of Offshore Wind Developments: Modeling the effects of offshore wind development on the Cold Pool stratification

Next State of the Science Workshop on Wildlife and Offshore Wind

First Planning Committee meeting: July 1st

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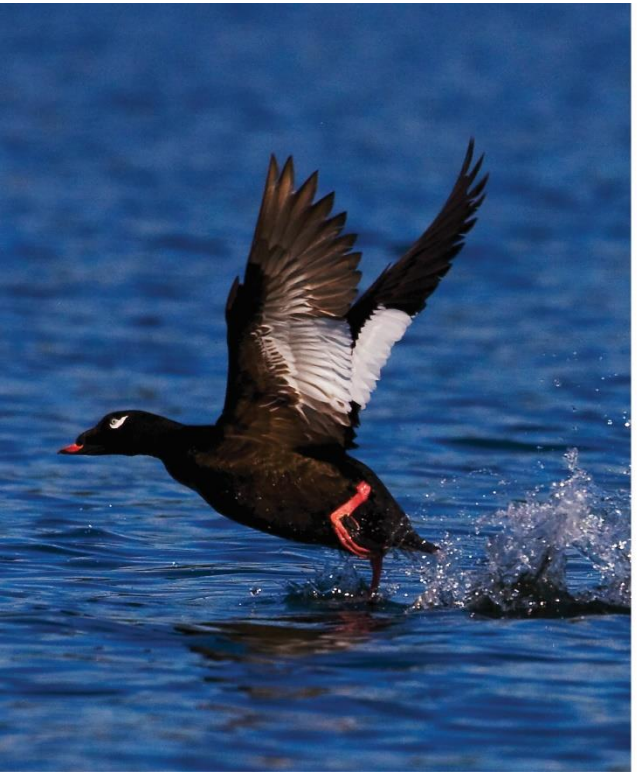
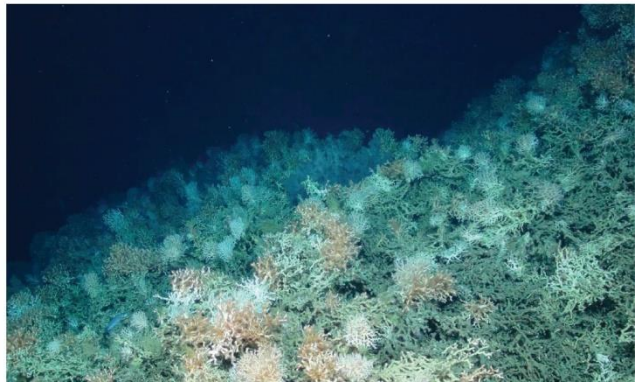
State of the Science Workshop

Proposed structure: Plenary sessions on Day 1, Workshops on Day 2









State of the Science Workshop

Plenary sessions on Day 1 – open to public

Focus: Cumulative impacts

Potential Topics:

- Frameworks for Understanding Cumulative Impacts
- Current Knowledge on Cumulative Impacts
- Tools for Assessing Cumulative Impacts
- Data Gaps and Research Needs

State of the Science Workshop

Workshops on Day 2 – invitation-only?

- Guidance for cumulative impact assessments (NEPA analyses)
- Aspects of BMP development
- Monitoring protocols/guidance
- Other topics

State of the Science Workshop

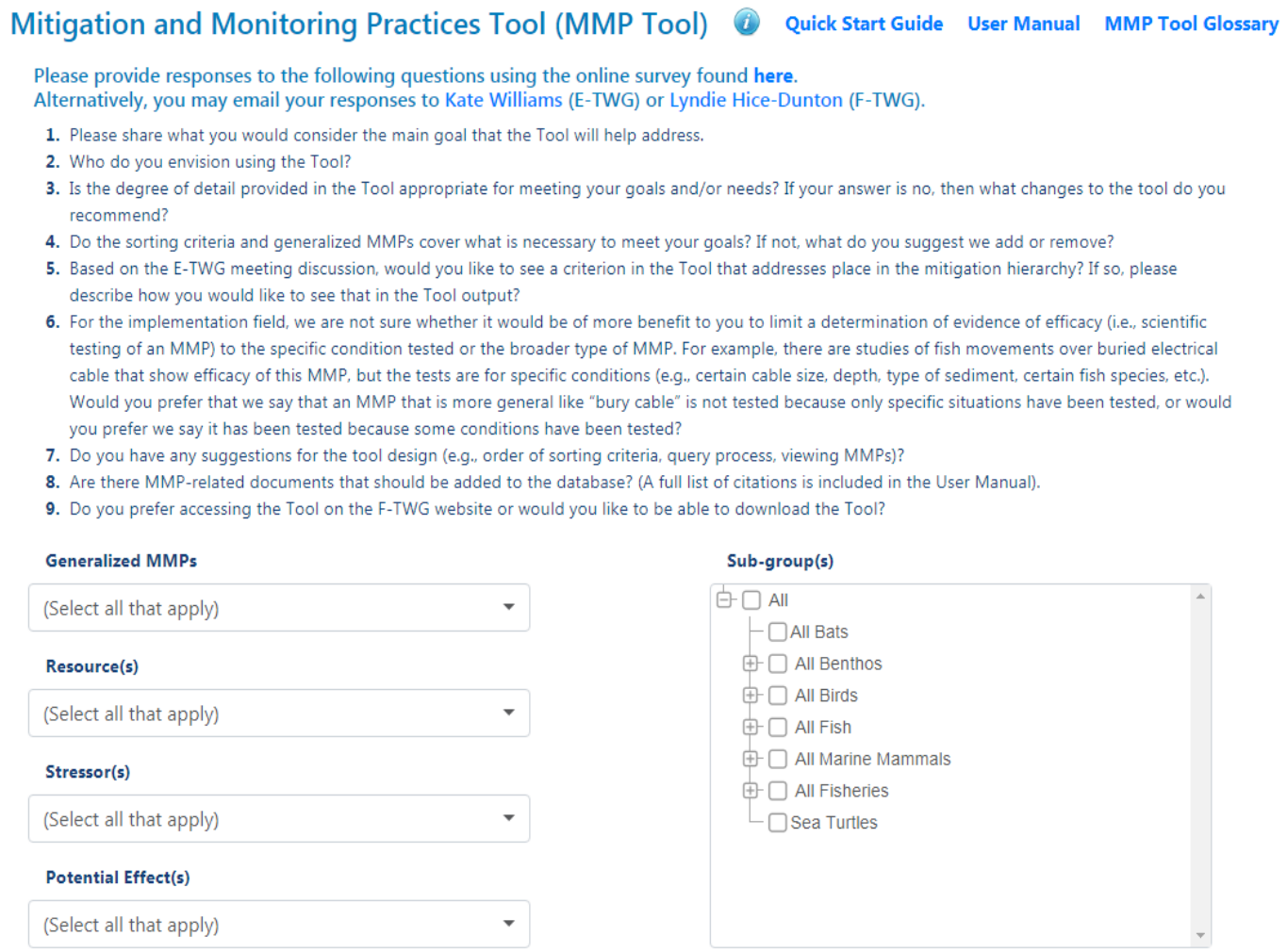
Discussion

- Location and timing
- Overall structure
- Call for abstracts vs. targeting speakers
- Open to public vs. by invitation

MMP Tool Update

Thank you for comments!

- Pending changes to Tool
- Questions for discussion



Mitigation and Monitoring Practices Tool (MMP Tool) Quick Start Guide User Manual MMP Tool Glossary

Please provide responses to the following questions using the online survey found **here**.
Alternatively, you may email your responses to Kate Williams (E-TWG) or Lyndie Hice-Dunton (F-TWG).

1. Please share what you would consider the main goal that the Tool will help address.
2. Who do you envision using the Tool?
3. Is the degree of detail provided in the Tool appropriate for meeting your goals and/or needs? If your answer is no, then what changes to the tool do you recommend?
4. Do the sorting criteria and generalized MMPs cover what is necessary to meet your goals? If not, what do you suggest we add or remove?
5. Based on the E-TWG meeting discussion, would you like to see a criterion in the Tool that addresses place in the mitigation hierarchy? If so, please describe how you would like to see that in the Tool output?
6. For the implementation field, we are not sure whether it would be of more benefit to you to limit a determination of evidence of efficacy (i.e., scientific testing of an MMP) to the specific condition tested or the broader type of MMP. For example, there are studies of fish movements over buried electrical cable that show efficacy of this MMP, but the tests are for specific conditions (e.g., certain cable size, depth, type of sediment, certain fish species, etc.). Would you prefer that we say that an MMP that is more general like "bury cable" is not tested because only specific situations have been tested, or would you prefer we say it has been tested because some conditions have been tested?
7. Do you have any suggestions for the tool design (e.g., order of sorting criteria, query process, viewing MMPs)?
8. Are there MMP-related documents that should be added to the database? (A full list of citations is included in the User Manual).
9. Do you prefer accessing the Tool on the F-TWG website or would you like to be able to download the Tool?

Generalized MMPs

(Select all that apply)

Resource(s)

(Select all that apply)

Stressor(s)

(Select all that apply)

Potential Effect(s)

(Select all that apply)

Sub-group(s)

- All
  - All Bats
  - All Benthos
  - All Birds
  - All Fish
  - All Marine Mammals
  - All Fisheries
  - Sea Turtles

https://nyfisheriestwg.ene.com/Resources/MMPTool

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MMP Tool Update: Pending changes

- Fixed bug in sorting tool
- Ability to click on full citation
- Consolidation of similar MMPs
- Expand the query results table to eliminate scrolling/ results pop up in a separate box
- Add detail on relevant species and MMP implementation
- Accessible glossary
- Add date of last Tool update to website; add header to exported results table with download date

MMP Tool Update

Discussion Topics

- MMPs in relation to regulations/statutes
- Address place in the mitigation hierarchy?

R&D Consortium Letter

Brought to the R&D Committee meeting on April 11

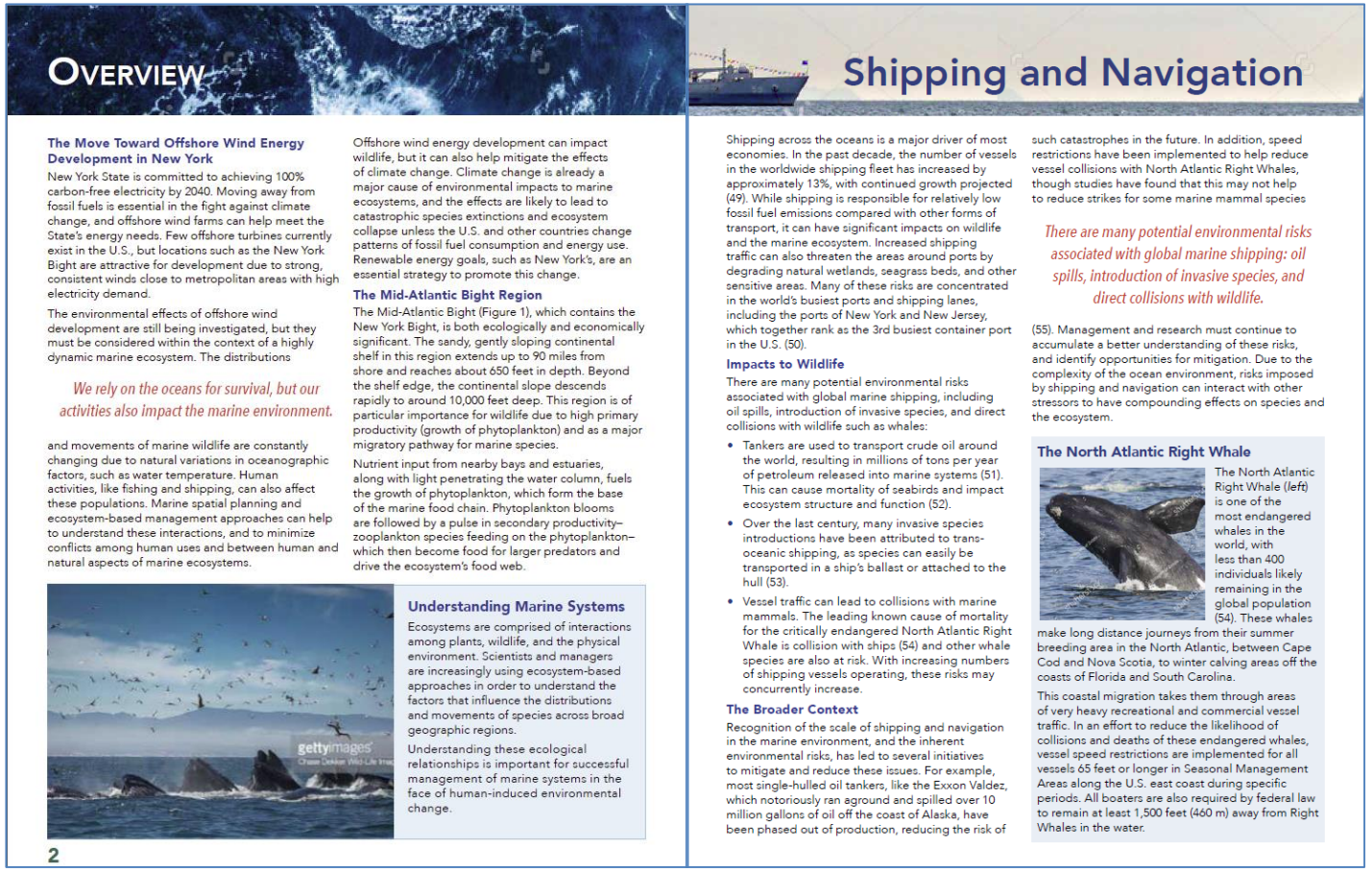
Pillar 1: Array performance and control optimization, cost reducing turbine support structures for the US market, floating structure mooring concepts for shallow and deep waters, and power system design and innovation

Pillar 2: Comprehensive wind resource assessment, development of a metocean reference site

Pillar 3: Heavy lift vessel alternatives, offshore wind digitization through advanced analytics, and technology solutions to accelerate US supply chain

Dynamic Oceans Report Update

Thank you to all who provided feedback on the report!



Overview

The Move Toward Offshore Wind Energy Development in New York

New York State is committed to achieving 100% carbon-free electricity by 2040. Moving away from fossil fuels is essential in the fight against climate change, and offshore wind farms can help meet the State's energy needs. Few offshore turbines currently exist in the U.S., but locations such as the New York Bight are attractive for development due to strong, consistent winds close to metropolitan areas with high electricity demand.

The environmental effects of offshore wind development are still being investigated, but they must be considered within the context of a highly dynamic marine ecosystem. The distributions

We rely on the oceans for survival, but our activities also impact the marine environment.

and movements of marine wildlife are constantly changing due to natural variations in oceanographic factors, such as water temperature. Human activities, like fishing and shipping, can also affect these populations. Marine spatial planning and ecosystem-based management approaches can help to understand these interactions, and to minimize conflicts among human uses and between human and natural aspects of marine ecosystems.

Offshore wind energy development can impact wildlife, but it can also help mitigate the effects of climate change. Climate change is already a major cause of environmental impacts to marine ecosystems, and the effects are likely to lead to catastrophic species extinctions and ecosystem collapse unless the U.S. and other countries change patterns of fossil fuel consumption and energy use. Renewable energy goals, such as New York's, are an essential strategy to promote this change.

The Mid-Atlantic Bight Region

The Mid-Atlantic Bight (Figure 1), which contains the New York Bight, is both ecologically and economically significant. The sandy, gently sloping continental shelf in this region extends up to 90 miles from shore and reaches about 650 feet in depth. Beyond the shelf edge, the continental slope descends rapidly to around 10,000 feet deep. This region is of particular importance for wildlife due to high primary productivity (growth of phytoplankton) and as a major migratory pathway for marine species.

Nutrient input from nearby bays and estuaries, along with light penetrating the water column, fuels the growth of phytoplankton, which form the base of the marine food chain. Phytoplankton blooms are followed by a pulse in secondary productivity–zooplankton species feeding on the phytoplankton–which then become food for larger predators and drive the ecosystem's food web.

Understanding Marine Systems

Ecosystems are comprised of interactions among plants, wildlife, and the physical environment. Scientists and managers are increasingly using ecosystem-based approaches in order to understand the factors that influence the distributions and movements of species across broad geographic regions.

Understanding these ecological relationships is important for successful management of marine systems in the face of human-induced environmental change.

2

Shipping and Navigation

Shipping across the oceans is a major driver of most economies. In the past decade, the number of vessels in the worldwide shipping fleet has increased by approximately 13%, with continued growth projected (49). While shipping is responsible for relatively low fossil fuel emissions compared with other forms of transport, it can have significant impacts on wildlife and the marine ecosystem. Increased shipping traffic can also threaten the areas around ports by degrading natural wetlands, seagrass beds, and other sensitive areas. Many of these risks are concentrated in the world's busiest ports and shipping lanes, including the ports of New York and New Jersey, which together rank as the 3rd busiest container port in the U.S. (50).

Impacts to Wildlife

There are many potential environmental risks associated with global marine shipping, including oil spills, introduction of invasive species, and direct collisions with wildlife such as whales:

- Tankers are used to transport crude oil around the world, resulting in millions of tons per year of petroleum released into marine systems (51). This can cause mortality of seabirds and impact ecosystem structure and function (52).
- Over the last century, many invasive species introductions have been attributed to trans-oceanic shipping, as species can easily be transported in a ship's ballast or attached to the hull (53).
- Vessel traffic can lead to collisions with marine mammals. The leading known cause of mortality for the critically endangered North Atlantic Right Whale is collision with ships (54) and other whale species are also at risk. With increasing numbers of shipping vessels operating, these risks may concurrently increase.

The Broader Context

Recognition of the scale of shipping and navigation in the marine environment, and the inherent environmental risks, has led to several initiatives to mitigate and reduce these issues. For example, most single-hulled oil tankers, like the Exxon Valdez, which notoriously ran aground and spilled over 10 million gallons of oil off the coast of Alaska, have been phased out of production, reducing the risk of such catastrophes in the future. In addition, speed restrictions have been implemented to help reduce vessel collisions with North Atlantic Right Whales, though studies have found that this may not help to reduce strikes for some marine mammal species

There are many potential environmental risks associated with global marine shipping: oil spills, introduction of invasive species, and direct collisions with wildlife.

(55). Management and research must continue to accumulate a better understanding of these risks, and identify opportunities for mitigation. Due to the complexity of the ocean environment, risks imposed by shipping and navigation can interact with other stressors to have compounding effects on species and the ecosystem.

The North Atlantic Right Whale

The North Atlantic Right Whale (*left*) is one of the most endangered whales in the world, with less than 400 individuals likely remaining in the global population (54). These whales make long distance journeys from their summer breeding area in the North Atlantic, between Cape Cod and Nova Scotia, to winter calving areas off the coasts of Florida and South Carolina.

This coastal migration takes them through areas of very heavy recreational and commercial vessel traffic. In an effort to reduce the likelihood of collisions and deaths of these endangered whales, vessel speed restrictions are implemented for all vessels 65 feet or longer in Seasonal Management Areas along the U.S. east coast during specific periods. All boaters are also required by federal law to remain at least 1,500 feet (460 m) away from Right Whales in the water.

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Dynamic Oceans Report Update

Updates

- Content restructuring
- Reduction of impact sections
- Increased focus on solutions for conflict, including NY state efforts

Next Steps

- Final editing
- Layout and production

OVERVIEW

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2

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E-TWG Communications and Outreach Plan

Audiences

- **Informed stakeholders -** includes offshore wind energy developers, eNGOs, environmental consultants, state and federal agencies, academics, other subject matter experts, emerging regional science funding bodies
- **The general public-** interested parties who do not have technical expertise
- **Other Technical Working Groups**- particularly the F-TWG

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E-TWG Communications and Outreach Plan

Topics

- E-TWG activities, meeting summaries, and other products
- Specialist committee reports and guidance documents
- State of the Science Workshops

E-TWG Communications and Outreach Plan

Channels of Communication

- Public events
- Invitation-only meetings
- Reports and proceedings
- Email list serv
- Project webpage
- NYSERDA webinars
- Communications documents
- Presentations at relevant meetings and conferences
- Coordination of TWGs and other regional meetings and activities
- Calls for input

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E-TWG Communications and Outreach Plan

Ongoing Progress

- Website redesign
- NYSERDA Webinars
- Presentations at meetings and conferences

E-TWG Communications and Outreach Plan

Audiences

- **Informed stakeholders**
- The general public
- Other Technical Working Groups

Topics

- State of the Science Workshops
- E-TWG activities, meeting summaries, and other products
- SC reports and guidance documents

Channels of Communication

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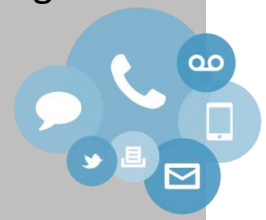

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Other Updates?

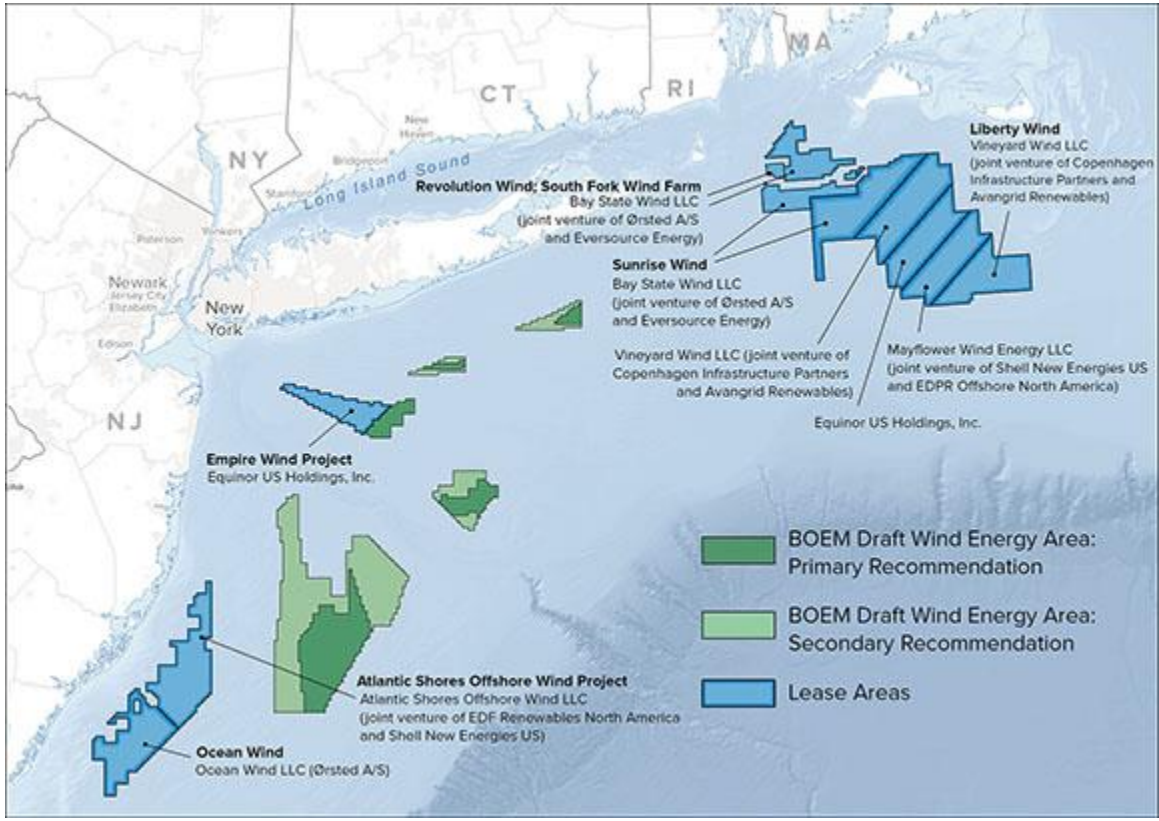
- NYSERDA webinar plans
- BOEM updates
- NJ announcement

BOEM Updates

- Proposed NY/NJ Wind Energy Transmission Line
  - Comments due to BOEM July 19th
- Regional approach for future leasing
  - Gulf of Maine - Initiate a regional task force (ME, NH, MA)
  - Southern New England – stick with current leases. BOEM/MA to conduct regional fisheries studies
  - New York Bight – will establish additional WEAs later this year
  - Mid-Atlantic Seaboard – DE/MD have expressed interest in identifying additional WEAs
  - VA/NC - have expressed interest in identifying additional WEAs
  - NC/SC (Carolina Long Bay) - Call Areas already identified, will establish WEAs later this year

NJ Solicitation Announcement

- Ørsted won New Jersey's first offshore wind solicitation with 1,100 MW Ocean Wind project
- Ocean Wind is 15 miles from Atlantic City coast
- NJ target is 3,500 MW by 2035 and is expected to have two additional solicitations for 1,200 MW each in 2020 and 2022



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Lunch

Reconvene at 1:00 pm

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REGIONAL FUNDING/SCIENCE ENTITY

Update Since Last E-TWG Meeting

Overview

- At last meeting, **E-TWG expressed support** to Cadmus and CBI ("C&C") exploring stakeholder interest in **a Regional Science Entity**
- Since February
  - ***C&C conducted 7 case studies, 25 stakeholder interviews, and facilitated a workshop on May 15th***
  - *C&C supported University of Delaware's* ***Special Initiative on Offshore Wind workshop*** *on May 29-30th*
- Discussions to-date suggest
  - ***Broad stakeholder interest*** *in establishing a regional science effort*
  - *Emerging areas of* ***agreement around possible path*** *forward*
  - ***Commitment to aggressively push at this issue*** *over the next 6 to 9 months with specific actions.*
- This presentation covers a summary of the workshops and associated stakeholder input, and current next steps.

C&C Stakeholder Interviews

- Conducted 25 interviews in April and May
- Interview participants included a range of stakeholders (developers, NGOs, states, federal agencies)
- General convergence on general purpose, key activities, who should be involved, and geographic scope
- Range of views on the specific structure and mechanics of the entity

May 15th Workshop

- In advance: Worked with Specialist Committee to get feedback on approach
- Approximately 30 attendees representing a variety of environmental OSW stakeholders including developers, NGOs, states, and federal agencies.
- Covered the following agenda:
  - *Value-Add of Regional Entity*
  - *What Science Might the Regional Entity Undertake?*
  - *Lessons from Other Efforts (panel with AWWI, ROSA, and ORJIP)*
  - *Design Charrette Describing Roles, Funding, and Structure; Pros/ Cons*
  - *Next Steps*
- Concluded with:
  - ***Reasonable alignment on value add, geographic scope, science to be covered***
  - *Reviewed 3 "models" - light, distributed model to highly-developed model with staff*
  - *General agreement**:*** ***Long-term vision would ideally constitute a fairly developed entity with staff.*** *However, general sentiment not to let the grander long-term vision slow progress on* ***less ambitious but near-term progress***

Special Initiative on Offshore Wind Workshop at the Pocantico Center May 29-30th

- Approximately 30 attendees representing a variety of environmental OSW stakeholders including developers, NGOs, states, and federal agencies.
- 1.5 day agenda covered
  - *Opening perspectives (BOEM, NYSERDA, NWF, Orsted)*
  - *Connection to federal process BOEM*
  - *Case Studies (Full presentations on Surveying Marine Mammals in New England – Mass CEC, and ORJIP by Emilie Reeve; C&C brief case studies summary on 7 other organizations)*
  - *Findings to Date (C&C)*
  - ***Working sessions on second day regarding structure, funding, timing, and next steps** (summary of sessions on following slides)*
  - *Tentative Entity: synopsis from C&C*

Draft Mission

- Our mission is to successfully advance environmentally responsible offshore wind power. We collaborate to produce the relevant, credible, and mutually beneficial regional monitoring and research of wildlife and marine ecosystems needed to support offshore wind development activities in the US.

Draft Geographic Scope

- The geographic scope will initially include waters along the Eastern seaboard in the regions where offshore wind development is being developed or is proposed

- Scope could expand (e.g. West Coast, Great Lakes).

Draft Values

- Collaboration
- Communication
- Transparency
- Accessibility
- Quality
- Efficiency
- Relevance
- Credibility

Draft Key Objectives

- Support consistent **principles, methods or standards** for sampling, data collection, and data management, across projects to ensure comparability and efficiencies in collection and approach.
- Ensure data and modeling results are **shared among stakeholders and useful** in advancing off-shore wind and sustainable marine ecosystems.
- Ensure that there is consistent, useful, and sufficient regional **monitoring, predictive modeling and data synthesis** to identify and fill key knowledge gaps and supplement baseline information to better understand trends, changes and regional and/or cumulative effects.
- Identify and leverage **efficiencies** to avoid redundancy and create joint value, including cost efficient data collection and retiring risk, when appropriate.

Draft Key Objectives Continued

- Identify, prioritize, and support **hypothesis-based science** on key research needs (species and habitat) including, but not limited to behavior, disturbance, avoidance, displacement, injury, or mortality and population-scale effects.
- Support research to identify and evaluate **avoidance, mitigation and minimization** technologies and practices.
- **Collaborate and connect stakeholders** across the region and sectors and science, including coordinating with the many **existing organizations and networks** already undertaking ocean and related monitoring and research (e.g. NERACOOS, MARACOOS, aquariums, universities, etc.)
- Ensure **transparency and accessibility** of process, information and data.

Possible Work Focus for First 1-2 Years

- **Initial focus**
  - *Coordination & clearinghouse*
  - *Quick progress on existing efforts*
- **Longer-term focus**
  - *Regional framework and priorities*
  - *Manage specific research projects*
  - *Tools and standards*
  - *Data management*
  - *Communication*

Overview of Next Steps

- The efforts to-date have successfully generated momentum and early alignment.
- Out of the case studies, interviews, workshops, and Special Initiative Pocantico workshop, there have been a few asks:

Ask	Next Step
Small group to continue momentum and progress	**Coordinating Group** formed to continue pushing nuts and bolts
Continue to **consult with E-TWG and key stakeholders**	Hold **regular briefings and discussions** with ETWG and stakeholders
Track progress and support communication on **existing efforts**	Identified leads to continue **progress on existing efforts and communication** to Coordinating Group and other stakeholders
Provide **forum to collectively flesh out further details** of potential entity	Host **workshop in Fall to bring forward more detailed ideas** for broader discussion

Coordinating Group

- Sector caucuses each nominated **1-2 individuals from the developer, states, NGO, and federal perspectives** to represent each sector in a small Coordinating Group that can serve as an interim guiding body.
- The role of the Coordinating Group will be to **vet ideas, caucus among sectors to pull in additional perspectives, and generate initial consensus**. In short**, the CG will lead "progress strategy".**
- **C&C to support** Coordinating Group and all Regional Science Entity stakeholders with continued interim facilitation support.

Coordinating Group Organizations
BOEM
MassCEC
Shell
NWF
NYSERDA
Equinor
NRDC

Moving Forward From Here: How Do All These Pieces Come Together?

- **Coordinating Group** pushing at nuts and bolts of getting Regional Entity up and running
- **Periodic briefings** to and discussions with ETWG; integrate views with Coordinating Group
- **Workshop in fall** to bring forward ideas for broad discussion; seeking broad consensus
- **Targeted ongoing outreach** to ensure approach informed by wide range of perspectives

C&C to support cross-cutting efforts; foster broad stakeholder awareness, input and buy-in

Discussion Questions

- Any **clarifying questions** about what has been conducted to-date?
- **General reactions** to the next steps?
  - *What resonates and seems on point?*
  - *Any concerns or feedback?*
- Does the **E-TWG's role** seem appropriate to you?
  - *What works?*
  - *What else would you want to see to ensure smooth and holistic involvement of E-TWG members and other relevant stakeholders?*

Framework for Studying the Effects of OSW on Birds and Bats

- Model after the MassCEC workshop on marine mammals and sea turtles
- NYSERDA will organize with partners (federal, state, NGO)
- Data must be collected in ways that can inform regulatory and management decisions on individual project review and long-term cumulative impacts
- Framework should be adaptable to new lease areas and changes in stressors

BMPs to Mitigate Impacts from Offshore Wind Energy Development Part 1

Public Service Commission Procurements

- Public Service Commission (PSC) issues an Order directing NYSERDA to procure offshore wind
- Authorized NYSERDA to include provisions in its Request for Proposals (RFP)
- PSC will consider the inclusion of BMPs in Phase II solicitation requirements, “taking into account the Technical Working Group product”

Public Service Commission Procurements

Input:

- Verbal to NYSERDA/DPS/PSC during calls, meetings, workshops

Public Service Commission Procurements

Input:

- Verbal to NYSERDA/DPS/PSC during calls, meetings, workshops
- Written reflection of committee discussions
  - Produced by support staff based on meeting notes and group feedback
  - Will include major topics of discussion (prioritization, suggested BMPs)
  - May include suggested legal language for BMP
  - Will be publicly available
  - Can be referenced by committee members or others in their public comments to DPS

Public Service Commission Procurements

Input:

- Verbal to NYSERDA/DPS/PSC during calls, meetings, workshops
- Written reflection of committee discussions
- Letter to PSC from the committee
  - Based on summary document
  - Identifies areas of *consensus*, if any
  - Produced by committee members

BMP committees

- **Immediate Goal:** Inform NY PSC decision about wildlife best management practices to include in Phase 2 Procurement
  - Timeline: Phase 2 Procurement unknown. ~60-day PSC public comment period to finalize committee products
- **Longer-term Goal:** Develop BMPs that can be used in a variety of contexts (future NY procurements, other state procurements, guidelines and guidance documents, developer COPs and mitigation plans, etc…)

BMP Process

1. Review existing efforts aimed at developing BMPs, including from other industries as appropriate
2. Identify the scope of BMPs to be developed, the development phases for which mitigation measures will be designed, the taxa and types of impacts for which measures will be applicable
3. Develop product that could be used for potential inclusion in the New York State Phase 2 procurement
4. Identify longer-term focus, goals, and expected end product(s)

Expected Personnel: Members should have expertise and working knowledge of existing mitigation approaches; scientific expertise can advise the group as needed

BMP Definition

For the purposes of this committee, BMPs are good management practices for minimizing and mitigating wildlife impacts at offshore wind facilities that:

- Are generalized, but can be tailed based on site-dependent characteristics as needed,
- Can include variable levels of detail, and
- Go beyond what is mandated in current regulations

*Example from NY Phase 1 Procurement: "*employ aircraft detection lighting systems ("ADLS") in order to meet Federal Aviation Administration obstruction lighting requirements while minimizing lighting-related visual impact and impacts on avian species. In the event that ADLS do not meet Federal Aviation Administration Requirements or another technology produces a better outcome, the best available approved technology may be used upon consultation and approval of NYSERDA."

BMP Summary Product
(reflection of committee discussions)

- Introduction and background (the need for BMPs, purpose and background of specialist committees, BMP discussion process)
- Suggested BMP
  - Discussion of Considerations
    - How effective is this BMP at achieving conservation objectives?
      - Has the BMP been implemented? Is there evidence of efficacy?
    - Cost
    - Proportionality of cost and effectiveness
    - Human safety and existing regulatory standards
    - Logistical and engineering feasibility

BMPs for Birds and Bats

Step 1: Identified initial topics considered as "low-hanging fruit"

- Lighting
- Perching deterrents
- Monitoring

Step 2: Developing draft language about each topic and discussing considerations for implementation

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BMPs for Birds and Bats

Lighting BMP Draft Language

To reduce impacts to birds and bats, lighting on offshore wind projects (including turbines, substations, vessels, and other equipment) and during all phases (e.g. pre-construction, construction, operations and maintenance, and decommissioning) should be reduced to the extent possible while maintaining safety and compliance with FAA, USCG, and BOEM regulations. This includes the following considerations: the use of flashing lights, reductions in the number and intensity of lights, shielding and directionality of lighting, use of sensor-activated lights, and avoidance of the use of white light where possible.

Outlines considerations specific to:

1. Obstruction/navigation lighting
2. Work lighting

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BMPs for Birds and Bats

Perching deterrent BMP Draft Language

Monitoring should be used to determine if there is a need for perching-related deterrents based on the bird species present and wind farm design, and if deemed necessary, physical deterrents to perching such as spikes and netting, and design modification to minimize potential perching or loafing opportunities on turbines or other non-physical deterrents, should be implemented to the extent that they do not represent human safety hazards. Monitoring and adaptive management should be used to determine effectiveness of implemented deterrent strategies and modify as necessary.

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BMPs for Birds and Bats

Additional Topics for Discussion:

- Monitoring

Next Steps:

How do we prioritize additional topics moving forward?

BMPs for Marine Mammals and Sea Turtles

Step 1: Prioritization exercise

- Identified high priority topics
- Identified short-term feasible topics

Step 2: Initial topics identified for discussion

- Vessel speed restrictions
- Foundation installation
- Monitoring

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BMPs for Marine Mammals and Sea Turtles

Step 3: Restructured discussion; focused first on Protected Species Observers (PSOs)

Step 4: Continue PSO discussion; restart discussion of aspects of Step 2 topics

BMPs for Marine Mammals and Sea Turtles

Protected Species Observers Topics:

- Amount of time PSO monitors clearance zone prior to and after pile-driving
- Number of PSOs and field of view of each observer while monitoring clearance zone before and during pile driving
- Use of PSOs and other observers on vessels, and accessibility of training and reference materials
- Timing of reporting protected species and dead or entangled individuals
- Standardization for data collection and reporting by PSOs

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BMPs for Marine Mammals and Sea Turtles

Next Topics for Discussion:

- Pile-driving during low visibility
- Vessel speed restrictions

Next Steps:

How do we move forward with more complex issues?

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Feedback on BMPs

- Lighting Reduction
- Perching Deterrents

- PSOs

Discussion

Break up into small groups (3-4 ppl), and think about the presentation and think about the following questions:

- Do these BMPs seem largely on track?
- Are there any additional perspectives or concerns related to these initial draft BMPs you would like the Specialist Committees to consider?

Be prepared to share with the larger group

Break

Group Discussion

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BMPs to Mitigate Impacts from Offshore Wind Energy Development Part 2

Specialist Committee Process Discussion

Lessons learned

- What worked (and didn't) over the past few months

Specialist Committee Process Discussion

Lessons learned

- Confusion over BMP goals
- Divergent views on range and specificity of BMPs
- Need outside expertise
- Webinar format is challenging
- No clear endpoint (timeline, products)

→ High value in finding areas of common ground

Specialist Committee Process Recommendations

- Clear articulation on desired end product and timeline
- Reframe discussion objective
  - Consensus is best, but framing of perspectives is very useful

Specialist Committee Process Recommendations

- Revise discussion format
  - SC will frame high priority BMPs for discussion
  - Small, in-person workshops + facilitation, outside experts
  - Reconvene SC to frame recommendations
  - BRI to draft evolving BMPs

Specialist Committee Process Discussion

- What has worked well to date? What are the challenges?

- Thoughts on recommended approach? Any additions or alternatives?

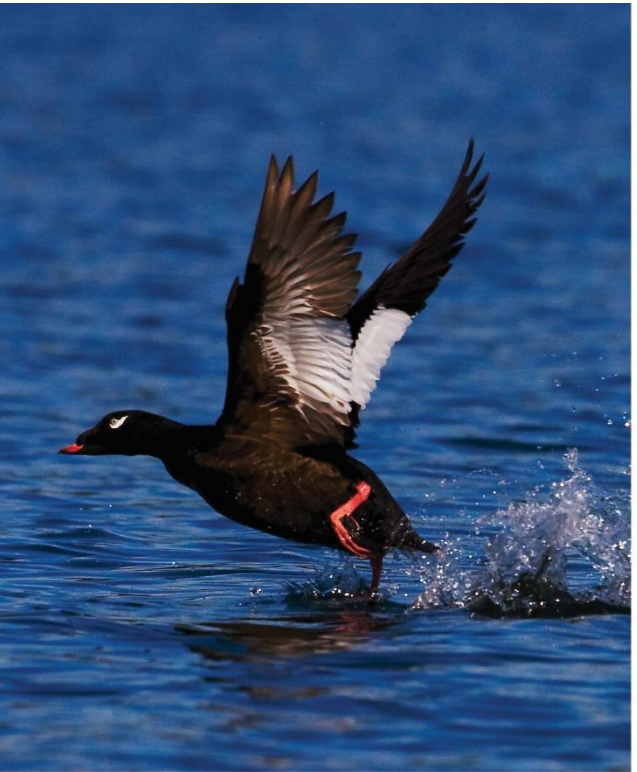
Wrap Up and Next Steps

Future meetings

Activity	Timeline
Regional funding entity - Workshop 2	Fall 2019
BMP SCs: in-person meetings/workshops?	
Bird and bat monitoring framework - workshop	
Partial E-TWG meeting with developer for first NY procurement (discussion of environmental mitigation plan)	2019
State of the Science Workshop	Spring 2020

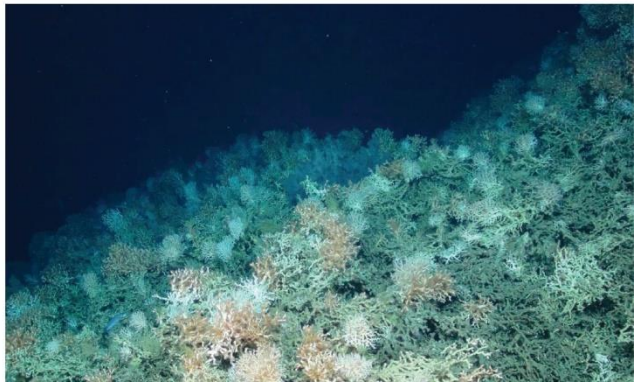
- Next full E-TWG meeting?

- Questions?
- Parting comments?









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