



NYSERDA

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**

17 July 2018

New York, NY

Welcome and Introductions

E-TWG Lead: NYSERDA

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Technical Support: Biodiversity Research Institute (BRI)

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Facilitation Support: Kearns & West

- Jason Gershowitz



Meeting Agenda/Objectives

- Review status of PSC comments
- Discuss and advance draft E-TWG charter
- Identify priorities for Specialist Committees
- Discuss objectives for E-TWG outreach and communications
- Discuss State of the Science workshop

Time	Agenda Item
9:30 – 10:00 AM	Coffee and Networking
10:00 – 10:20 AM	Welcome <ul style="list-style-type: none"> • Opening remarks & brief introductions
10:20 – 10:30 AM	Agenda & Meeting Objectives <ul style="list-style-type: none"> • Ground rules
10:30 – 11:30 AM	Updates: E-TWG and Related Activities <i>Presentation & Discussion</i> <ul style="list-style-type: none"> • Recap of E-TWG Meeting 1 • R&D Consortium • Other timely updates <ul style="list-style-type: none"> ○ <i>Facilitated discussion</i>
11:30 – 12:00 PM	Order Establishing an Offshore Wind Standard and Framework for Phase 1 Procurement <i>Presentation & Discussion</i> <ul style="list-style-type: none"> • Status update • Next steps
12:00 – 12:30 PM	E-TWG Charter <i>Presentation & Discussion</i>

12:30 – 1:30 PM	<i>Lunch (Provided on site)</i>
1:30 – 2:45 PM	<p>Specialist Committee Planning <i>Presentation & Discussion</i></p> <ul style="list-style-type: none"> • Upcoming NYSERDA solicitation • Priority topics identified by the E-TWG • Facilitated discussion to further prioritize and scope topics
2:45 – 3:00 PM	<i>Break</i>
3:00 – 3:45 PM	<p>Specialist Committee Planning, continued <i>Discussion</i></p> <ul style="list-style-type: none"> • Facilitated discussion to prioritize and scope topics
3:45 – 4:15 PM	<p>Communications and Outreach Plan <i>Presentation & Discussion</i></p> <ul style="list-style-type: none"> • E-TWG input on key topics for plan development
4:15 – 5:15 PM	<p>State of the Science Workshop Planning <i>Presentation & Discussion</i></p> <ul style="list-style-type: none"> • Agenda and logistics updates • Planning discussion
5:15 – 5:30 PM	<p>Wrap Up & Next Steps</p> <ul style="list-style-type: none"> • Review action items from the day's discussions

Ground rules

- “Honor” the Agenda
- Participate actively and respectfully
- Focus comments and speak concisely
- Speak in order; facilitator will mind the queue
- Speak clearly into the microphone
- Limit side conversations or take them outside
- Cell phones off/silent

Round Robin Updates

Recap: First E-TWG Meeting (3 May 2018)

- Reviewed NYS activities
- Defined E-TWG geographic and topical scope
- Reviewed E-TWG framework
- Decided to develop a group charter and a communications plan
- Suggested criteria for choosing priority topics for Specialist Committees
- Brainstormed topic ideas

Fisheries Technical Working Group

- Lead: NYSDEC
- Commercial and Recreational Fishing
 - Development of Fisheries Best Management Practices
 - Identification of research needs and coordination
 - Development of a framework for understanding commercial fishing impacts
 - Improved Communications



National Offshore Wind Research and Development Consortium

July 2018



Order Establishing a New York Offshore Wind Standard and Framework for Phase 1 Procurement



New York State - Public Input Opportunities

New York State



Examples of opportunities for public input as part of the state permitting process:



NYSERDA

- Master Planning Process
- Open Houses
- Quarterly Webinars
- Technical Working Groups
- Workshops



Department of Public Service

- Certificate of Environmental Compatibility and Public Need under Article VII for transmission facilities
- OSW Policy Options Paper Notice
- GEIS for Procurement



Department of State

- Federal Consistency Certification under the Coastal Zone Management Program

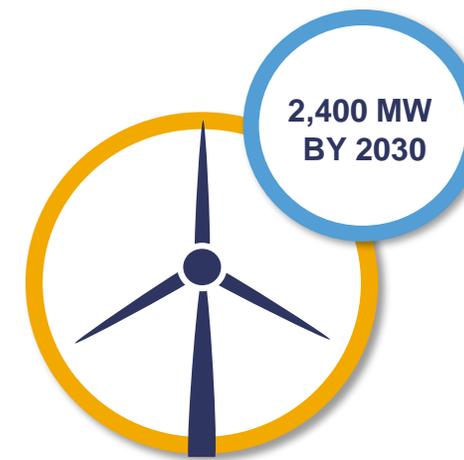


Office of General Services

- State Submerged Lands Easement under the NY Public Lands Law



Other potential engagement opportunities may be available for specific offshore wind projects



Public Construction and Development

Public Service Commission Proceeding

The proceeding culminated in an Order defining the logistics of New York's offshore wind program.

The Order at a high level:

- Authorized NYSERDA to procure ORECs associated with ~800 MW of offshore wind through a solicitation(s) issued by NYSERDA in 2018 and 2019, in consultation and coordination with the New York Power Authority and the Long Island Power Authority
- Requires every LSE in NYS to invest in new offshore renewable generation resources to serve their customers
- Sets forth the manner that NYSERDA recoups costs associated with the Order
- Provides other details, legal considerations and obligations

Key E-TWG related statements in the Order

The Order:

- Reinforces the value and use of the TWGs and encourages their use for sharing information and informing decision making
- Requires developer consultations with the State in developing its approach to satisfy federal requirements relating to fishing, wildlife and other environmental interests
- Requires environmental data transparency
- Encourages NYSERDA to file a proposed revision to its CEF plan to enhance support of offshore wind environmental research
- Requires lighting controls to minimize nighttime visibility
- Provides the option of incorporating environmental impact criteria into the bid scoring calculations in Phase 2 and BMPs

Key fishing/fisheries related statements in the Order

All the “E-TWG statements” on the previous slide plus:

- Requests the F-TWG develop BMPs to prevent or reduce potential impacts associated with offshore wind energy development
- Requires successful bidders to participate in the F-TWG
- Requires bidders to submit a “Fisheries Mitigation Plan” which may also include any BMPs established by the TWGs
- Requires NYSERDA to consider any compensation programs included in “Fisheries Mitigation Plans” in the bid evaluation process

Next Steps

NYSERDA is seeking more feedback:

- Request for Information (RFI) will be released on Friday, July 20
- Meeting with stakeholders at a Technical Conference on Monday, July 23 from 1:00 to 4:00 p.m. in NYC
- Public “Open Houses” being scheduled for early September
- Other meetings with stakeholders
- Solicitation Q4 2018

E-TWG Charter

Environmental Technical Working Group (E-TWG)

A team of offshore wind energy developers, technical eNGOs, government agencies, and other subject matter experts who advise the State of New York regarding the environmentally responsible development of the State's offshore wind energy resources.



Overarching objectives include:

- Improving our understanding of, and ability to manage for, potential effects of offshore wind energy development on wildlife;
- Developing transparent, collaborative processes for identifying and addressing priority issues relating to wildlife monitoring and mitigation; and,
- Reducing permitting risk and uncertainty for developers by improving clarity in expectations and processes for wildlife monitoring and mitigation.

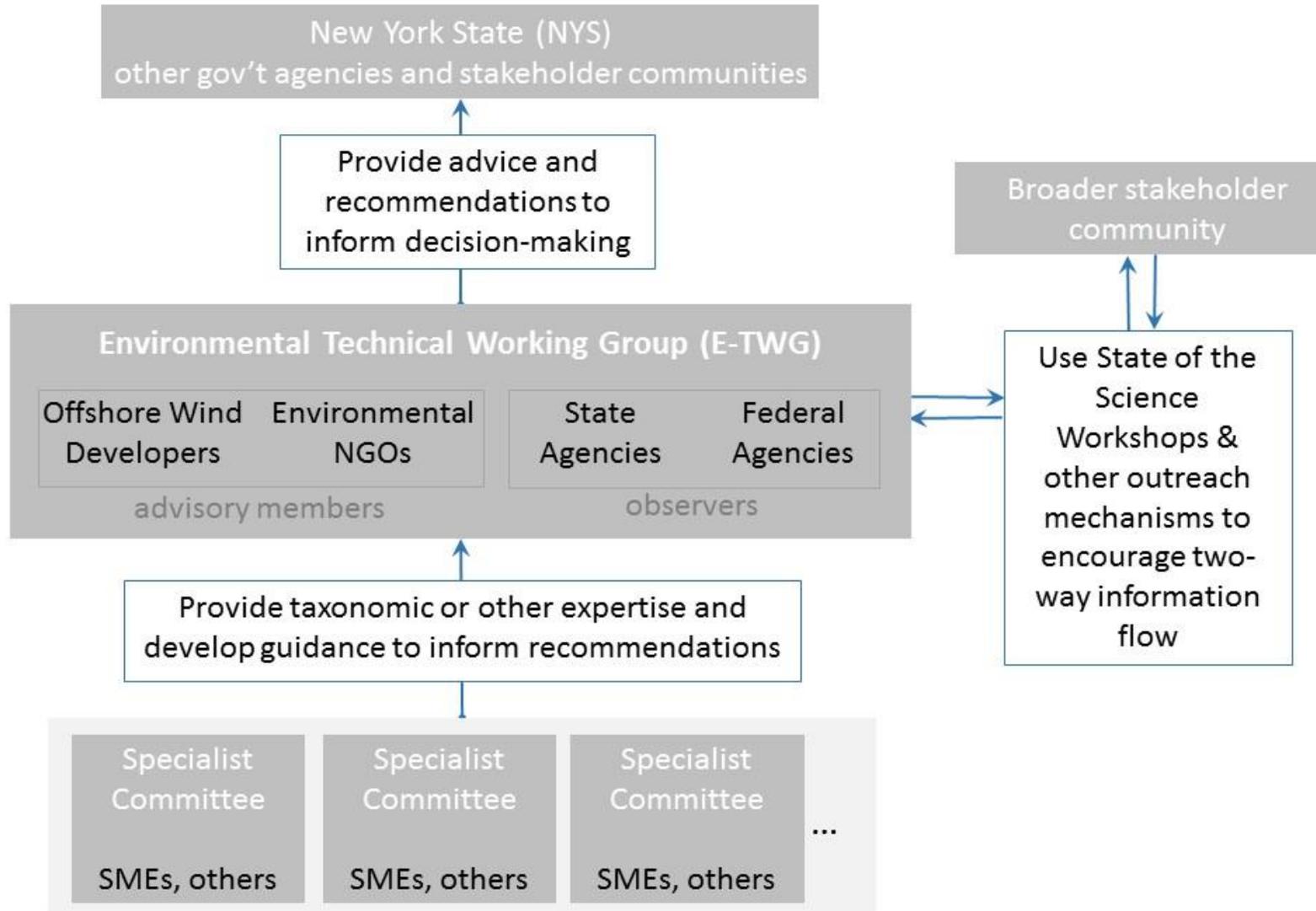
Mission Statements

- The E-TWVG serves as a long-term advisory body to the State of New York, providing advice and guidance to help steer the State's efforts to advance offshore wind development in environmentally responsible ways.
- Under the direction of New York State and the E-TWVG, topically-focused Specialist Committees bring together science-based subject matter expertise to develop collaborative guidelines or other products that inform or advance the environmentally responsible development of offshore wind.

Geographic & Topical Scope

- Geographic scope: MA to NC
- Topical scope
 - Biological and physical environment
 - Includes land-based issues around cable landfall
 - Potential positive as well as negative impacts
 - Overlap with fisheries TWG: fish populations/biology
 - Does not include viewshed, archaeological issues, fisheries issues
- Topic areas outlined in the Offshore Wind Master Plan:
 - Development of Wildlife Best Management Practices (BMPs)
 - Coordination regionally for adaptive management
 - Identification of research needs and regional coordination
 - Creation of an “Environmental Conservation Fund”

Organizational Framework



State Agencies:

State agencies from New York and other regional states (NYSERDA, NYSDEC, NYSDOS, RI CRMC, MA CZM, NJ DEP, etc.)

Federal Regulators:

BOEM, USFWS, NOAA

Developers:

Knowledgeable representatives from companies with offshore wind leases in the region

Environmental NGOs:

Knowledgeable representatives from science-based environmental NGOs with an interest in offshore wind development in the region

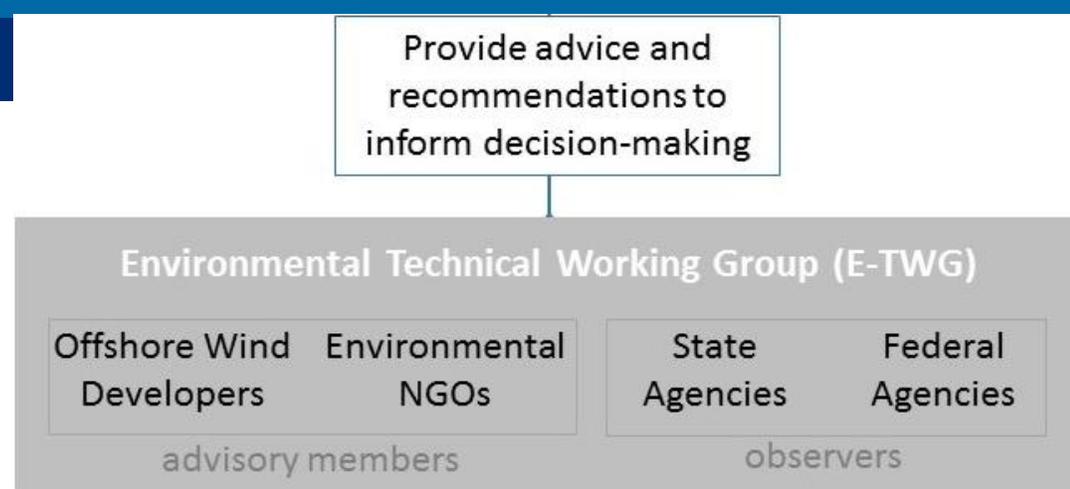
Subject Matter Experts (SMEs):

Individuals with relevant experience drawn from any of these groups as well as from academia or other institutions

Support staff:

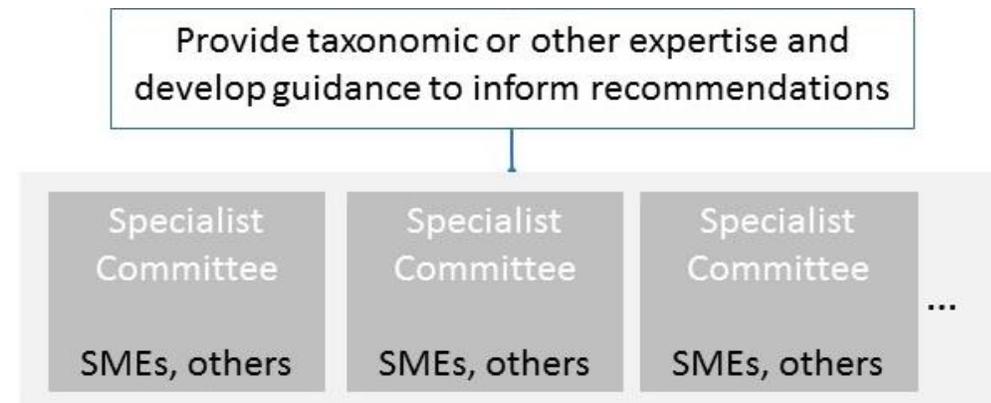
Knowledgeable support team of biologists, outreach specialists, professional facilitators, etc.

E-TWG



Role in E-TWG	Stakeholder Type	# of seats	Specifics
Advisory member	Developer	5	Representatives from companies with geographically relevant lease holdings for the State of New York
Advisory member	eNGO	5	Representatives from organizations with a strong scientific grounding and involvement in a range of wildlife and offshore wind issues
Advisory member	Nonpartisan NGO	1	Representative from a NGO that includes both developers and eNGOs as members
Observer	State agencies	5 or more	Representatives from NYSERDA, NYSDEC, NYSDOS, and agencies in other regional states
Observer	Federal agencies	3 or more	Representatives from BOEM, U.S. Fish and Wildlife Service (USFWS), and National Oceanic and Atmospheric Administration (NOAA)

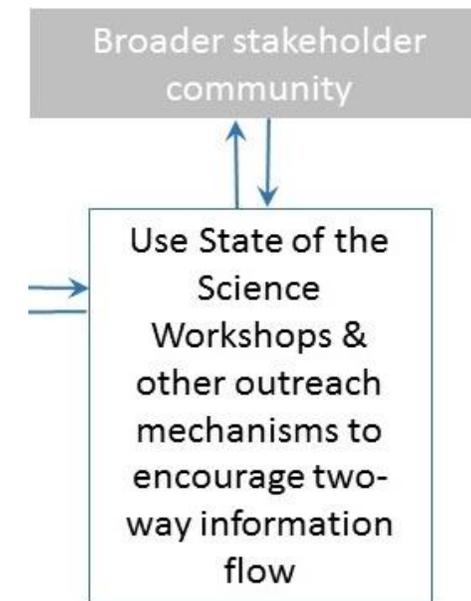
Specialist Committees



- Directed by E-TWG and state
- Science-based SME from range of backgrounds
- Each committee will have a specific charge to complete

State of the Science Workshops

- 1. Regional coordination** of research studies, guidelines development, and other efforts
- 2. Promote collaboration**
- 3. Expert information exchange and discussion**
 - Build an understanding of the state of the science
 - Inform E-TWG and Specialist Committee activities
- 4. Public engagement and education**



E-TWG Operations

- E-TWG Activities:
 - Review agendas, meeting summaries, and other documents for the E-TWG
 - Advise NYS on priority topics and information needs
 - Identify candidates with technical expertise to serve on Specialist Committees
 - Help direct SC efforts
 - Review the products developed by the SCs, and provide the State with recommendations and feedback
 - Disseminate information about the effort to other stakeholders

E-TWG Operations

- Prior to NYS convening an SC, the E-TWG:
 - Prioritizes topic
 - Defines the committee's charge
 - Works to avoid duplication
 - Coordinates with other TWGs
 - Identifies potential SMEs

Technical Working Groups

Environmental	Commercial and Recreational Fishing	Maritime	Jobs and Supply Chain
 <ul style="list-style-type: none"> Development of Wildlife Best Management Practices. Coordination for adaptive management. Identification of research needs and coordination. 	 <ul style="list-style-type: none"> Development of Fisheries Best Management Practices. Identification of research needs and coordination. Development of a framework for understanding commercial fishing impacts. 	 <ul style="list-style-type: none"> Development of Maritime Best Management Practices. Define strategies that could help members engage effectively with OSW development. 	 <ul style="list-style-type: none"> Facilitate the connection of local manufacturers with global OSW developers and equipment manufacturers. Ensure certification and training requirements are clear and readily available.


NEW YORK
STATE OF
OPPORTUNITY


NYSERDA

E-TWG Operations

- In response to E-TWG recommendation to create an SC, the state:
 - Assesses budgetary constraints and topic fit with selection criteria
 - Makes convening decision
 - Communicates results back to E-TWG

New York State

E-TWG

SCs

Broader Community

State identifies mission area for E-TWG in OWMP

E-TWG identifies a priority issue within the state-identified mission area

State and E-TWG obtain input about priorities from stakeholder community (via workshop or other means)

State reviews and approves E-TWG suggestions, and reports decision back to the E-TWG

E-TWG suggests a product or goal for a new SC and SMEs to participate

State invites SMEs to participate in new SC

SC engages in dialogue with E-TWG to inform product development

SC works to achieve their products or goals

SC engages in dialogue with stakeholder community to inform product development

SC presents draft product for E-TWG comment

E-TWG reviews draft product and provides input

SC reviews E-TWG input and presents final product to the E-TWG and the state

State reviews product and E-TWG input, and decides how to move forward w/ product/topic

E-TWG reviews product and provides input or recommendations to the state

State communicates with E-TWG and SC about decision making process and outcomes

E-TWG Operations

- E-TWG review of SC products:
 - Review documents and discuss (online and in person)
 - Aim for consensus
 - Capture E-TWG input on product
- Possible formats for E-TWG review/response:
 - NYSERDA, NYSDEC, and NYSDOS listen to E-TWG conversations
 - Level of consensus on recommendations/input is recorded during meetings
 - Meeting summaries that describe areas of agreement and range of perspectives/comments
 - E-TWG provides written commentary/editorial to accompany SC reports

E-TWG Operations

- NYS provides oversight/direction to E-TWG
- NYS uses E-TWG input in decision making
- NYSERDA reports back to E-TWG



E-TWG Operations

- Communications and Outreach
 - Coordination with other TWGs
 - Internal communications
 - External communications and handling of E-TWG materials



E-TWG Operations

- NYSERDA support of E-TWG operations:
 - Financial support for staff, meeting costs, and subcontracts for SC activities
 - Technical support: hired support staff provide expertise and carry out activities
 - Logistics support
 - Support for communications and outreach activities

Ground Rules for E-TWG Meetings

- Honor the agenda
- Participants should be willing to interact openly, honestly, and respectfully with all other members
- Focus comments and speak concisely
- Speak in order; facilitator will mind the queue
- Limit side conversations or take them outside
- Cell phones off/silent
- No attribution – meeting summaries will not identify the affiliation of a speaker unless required for context, and with approval from the speaker

Guiding Principles:

The work of the E-TWG shall be...

- Predicated on New York's commitment to pursuing offshore renewable energy development
- Focused on environmental priorities identified in the Offshore Wind Master Plan and defined in collaboration with the State of New York
- Collaborative and coordinated with other efforts related to the environmental effects of offshore wind energy development
- Flexible and responsive to change
- Applied only to projects on a relevant timeline
- Inclusive of diverse scientific and technical expertise
- Transparent
- Aimed at a broad audience
- Focused on a range of geographic and temporal scales, as appropriate

Next steps for the E-TWG charter

- Additional two week review period?
- Revision with summary of changes
- Finalize by mid-August and post on project website

- *Questions?*

Lunch!



Specialist Committee Planning

Specialist Committee Planning: agenda for the afternoon

- Presentation/discussion
 - Review of SC priority criteria
 - NYSERDA upcoming needs
 - Priority topics identified by the E-TWG
- Facilitated discussion to further prioritize and scope topics

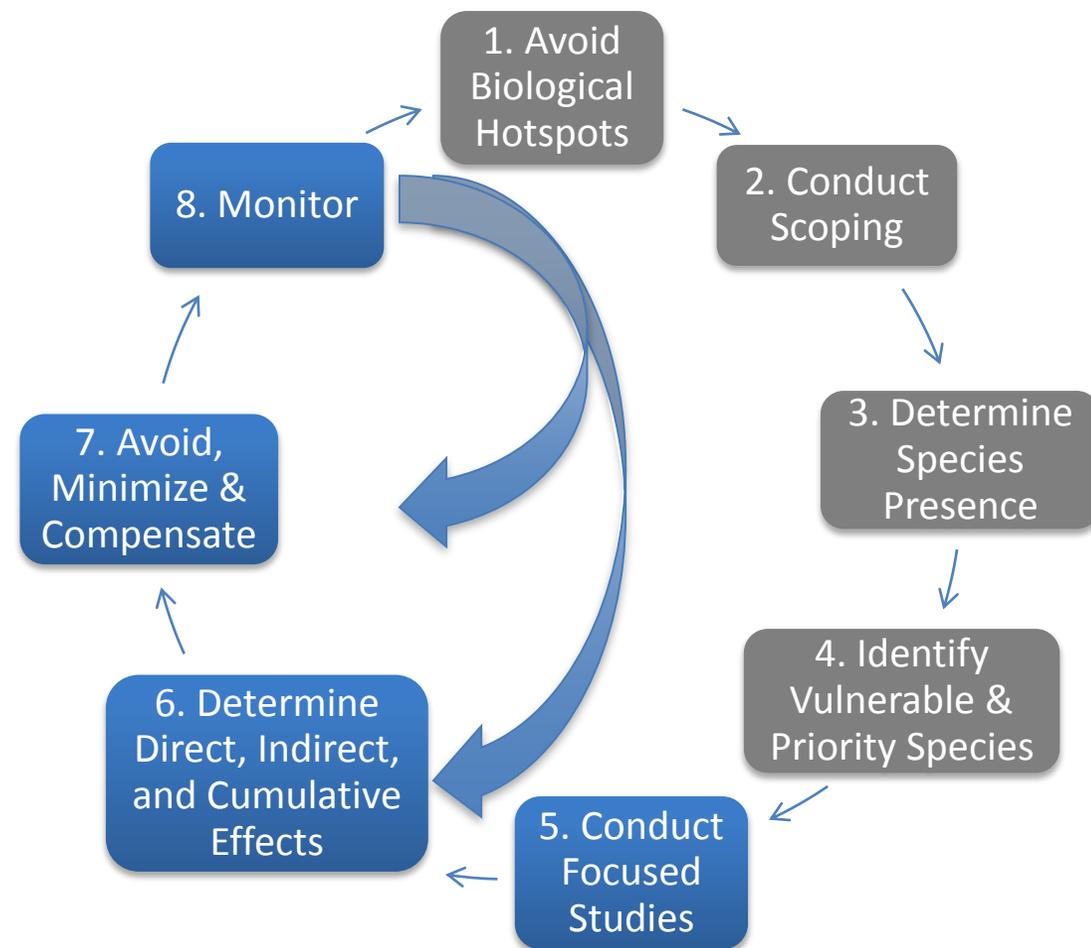
Possible topics

- Offshore Wind Master Plan
 - Wildlife BMPs
 - Regional coordination for adaptive management
 - Identification of research needs
 - Framework for a conservation fund



Types of Priorities

- Information sharing vs. concrete impacts and outcomes
- Improving our understanding of a problem vs. acting to improve outcomes
- Short, medium, and long-term priorities
- Regional vs. site specific scales
- Focus on avoidance vs. minimization/mitigation



Criteria for priority topics

- **Sound science**
 - Based in sound science
 - Explicit scale of study
 - Likelihood of publication
- **Need**
 - Ability to inform future development and address stakeholder concerns
 - Importance for species conservation
 - Urgency of need
- **Opportunity for impact**
 - Ability of E-TWG to support advancing the issue
 - Ability to define concrete impacts and outcomes
 - Lack of relevant information from other locations or industries
 - Includes collaboration and stakeholder engagement
 - A “win-win”: clear conservation focus *and* opportunity to streamline development

Role of SCs in forwarding priority topics

- Near-term needs can be met through SCs, solicitations to hire contractors, or a combination of both
- Role is flexible: depends on what needs to be done, how fast, and who should do it
 - Gap assessments and informational documents
 - BMPs or other guidance
 - Primary research

NYSERDA Upcoming Needs

1. Input on procurement practices
2. Input on NYSERDA research solicitation (RFP), to be released fall 2018 (~\$2 million)
3. Update/define a NYSERDA research plan for longer term or bigger needs

Input on Procurement Practices

- Work on BMPs could be through the E-TWG and/or SCs
- **NYSERDA need: Define what you would want the state to discuss with developers re: best practices for wildlife**
 - Can't usurp federal regulatory processes

Input on NYSERDA Research Solicitation

- Research solicitation will be put out this fall - \$2 million. If NYSERDA receives additional funding, put out another solicitation in 2019?
- **NYSERDA need: Suggest topics/themes to include in the 2018 solicitation**
 - Keep it fairly broad for the first solicitation, identify general themes, and let people pitch their ideas? Later solicitations could be more focused based on an updated research plan
- **NYSERDA need: Identify E-TWG members who want to be involved in writing/assessing solicitation, or identify academics or others for NYSERDA to engage**
 - Can't have conflicts of interest

Develop NYSERDA Research Plan

- **NYSERDA Need: Update NYSERDA research plan to use as basis for future solicitations** (assuming funding becomes available)
- E-TWG or SC
 - Review 2014 NYSERDA research plan and identify what has changed
 - Workshop to suggest updates?

E-TWG Priority Topics

- E-TWG members submitted 22 topics as priorities for discussion

General Topic Area	#
Whale monitoring methods	6
Habitat/food webs/fish populations	5
BMPs	4
Other assessments to inform BMPs	2
Regional coordination	2
Tech development (non-whale)	2
Sea turtle behavior	1
Total	22

Real-Time Whale Monitoring

- Develop real-time localization and tracking methods at project sites (construction periods)
 1. Software for real-time whale tracking/info sharing
 2. Glider/buoy tech development
 3. Acoustic buoy and real-time ID software
 4. Develop ≥ 1 accepted approaches for real-time obs. and mitigation (acoustic detection arrays, infrared and thermal imaging cameras, drones)
 5. Independent verification of approaches for monitoring whales in poor visibility
 6. Independent verification of a real-time detection and mitigation protocol for NARW

Habitat and Food Webs

7. Assessment of indirect effects to wildlife from offshore wind development: state of knowledge and identification of data gaps
8. Baseline study on ecology (density and abundance) of plankton/primary producers

Habitat and Food Webs

9. c

- Habitat use and ecology of juvenal fishes in proposed development areas (e.g., larval settlement, feeding, primary productivity)
- Oceanographic modeling to predict changes in localized currents, habitat availability
- Prediction of effects of development on juvenal fishes

Habitat and Food Webs

10. Monitoring plan to assess changes to fish populations and biological communities in relation to offshore wind energy development
 - Comparison and pre- and post-construction communities
 - Assess effects of structural habitat changes, changes in fishing patterns and possibly gear types, changes in community structure

Habitat and Food Webs

11. Expert assessment of potential impacts to living resources that support fisheries, and development of a research and monitoring plan (in cooperation with fishing community) that allows for assessment of impacts to inform future development
 - Coordinate/collaborate with F-TWG

Habitat and Food Webs

7. Assessment of indirect effects to wildlife: state of knowledge and identification of data gaps
8. Baseline study on ecology (density and abundance) of plankton/primary producers
9. Modeling potential changes in localized currents and larval habitat use
10. Monitoring plan to assess changes to fish populations and biological communities
11. Expert assessment of potential impacts to living resources that support fisheries, and research and monitoring plan to assess impacts

Best Practices Guidance

12. Guidance for designing studies to differentiate offshore wind impacts from other environmental changes

Best Practices Guidance

13. Establishing BMPs for the NY procurement process

- Baseline surveys of benthic and pelagic organisms
- Identification and avoidance of important ecological areas
- Techniques to minimize construction impacts
- Monitoring and assessing construction impacts
- Post-construction monitoring

Need to coordinate with BOEM, other states

Best Practices Guidance

14. Guidance and/or advisory panel for volant wildlife

- Compile existing disparate information (e.g., surveys, tracking data)
- Develop a structured framework for using existing datasets to:
 - Assess risk
 - Meet regulatory responsibilities and permitting requirements
 - Identify ways to minimize impacts
- Identify additional priority information needed to predict/avoid impacts

Best Practices Guidance

15. Process-specific wildlife risk assessments and possible BMPs (or steps to develop applications for the data)
 - Individual and cumulative
 - Multiple wildlife taxa

Best Practices Guidance

12. Guidance for designing studies to differentiate offshore wind impacts from other environmental changes
13. Establishing BMPs for the NY procurement process
14. Guidance and/or advisory panel for volant wildlife to use disparate datasets in decision making
15. Process-specific wildlife risk assessments and possible BMPs

Other Guidance and Assessments

16. Informational document assessing availability & effectiveness of existing mitigation measures to inform BMPs
 - Specifically for east coast US; all taxa
 - Include both development and operations
 - Include methodologies, findings, and recommendations
 - Gap analysis of research and technology needs

17. Assess potential for cumulative impacts to migratory species along the east coast
 - Migratory birds, fish, mammals
 - Include recommendations for research/monitoring approaches to assess actual impacts

Regional Coordination

18. Committee to implement regular wind-wildlife workshops
 - Share science to inform decision making and planning
 - Build off of 2018 State of the Science Workshop
 - Develop partnership of stakeholders to coordinate efforts and plan for workshops in different regions of the US

19. Develop regional strategy for coordination, integration, and communication/distribution of data from states, fed sources, developers, etc.
 - Identify/propose a collaborative platform to support this strategy
 - Identified as a need at recent marine mammal meetings

Technology Development (non-whale)

20. Advisory committee to identify and test emerging technologies to meet wind-wildlife challenges
 - Tech for both monitoring tech and impact reduction (including turbine design and operational choices)

21. Feasibility assessment of non-pile driven foundation types for OW in the United States
 - Examine characteristics for foundation options that generate less noise (oceanographic, environmental economic, supply chain, etc.)

Sea Turtle Behavior

22. Research study to better understand sea turtle diving behavior and inform sea-turtle specific mitigation measures for high resolution geophysical surveys

Priority Topics 1-11

Develop real-time whale localization and tracking methods at project sites

1. Software for real-time whale tracking/info sharing
2. Glider/buoy tech development
3. Acoustic buoy and real-time ID software
4. Develop ≥ 1 accepted approaches for real-time obs. and mitigation (acoustic detection arrays, infrared and thermal imaging cameras, drones)
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Habitat and food webs

7. Assessment of indirect effects to wildlife: state of knowledge and identification of data gaps
8. Baseline study on ecology (density and abundance) of plankton/primary producers
9. Modeling potential changes in localized currents and larval habitat use
10. Monitoring plan to assess changes to fish populations and biological communities
11. Expert assessment of potential impacts to living resources that support fisheries, and research and monitoring plan to assess impacts

Priority Topics 12-22

Best Practices Guidance

12. Guidance for designing studies to differentiate offshore wind impacts from other environmental changes
13. Establishing BMPs for the NY procurement process
14. Guidance and/or advisory panel for volant wildlife to use disparate datasets in decision making
15. Process-specific wildlife risk assessments and possible BMPs

Other guidance/assessments

16. Informational document assessing availability & effectiveness of existing mitigation measures to inform BMPs
17. Assess potential for cumulative impacts to migratory species along the east coast

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Sea Turtle Behavior

22. Research study to better understand sea turtle diving behavior and inform sea-turtle specific mitigation measures for high resolution geophysical surveys

Facilitated Discussion

- Further prioritize topics
 - Consider possible overlap and challenges / opportunities for key topic areas
 - Review evolved topics list and identify top priorities
- Scope the top priority topics
 - Identify goals and intended products
 - Determine a path forward based on urgency of need and where topic fits in to NYSERDA planning process

Break



Facilitated Discussion

- Further prioritize topics
 - Consider possible overlap and challenges / opportunities for key topic areas
 - Review evolved topics list and identify top priorities
- Scope the top priority topics
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Wrap Up and Next Steps

Thank you!

Contacts:

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