New York Environmental Technical Working Group (E-TWG)
Meeting Summary – 11 September 2023

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Disclaimer: While all efforts were made to accurately represent E-TWG discussions, the views expressed in this summary may not represent the views of all E-TWG members.

Background

As part of New York State's efforts to responsibly develop offshore wind (OSW) energy, the New York State Energy Research and Development Authority (NYSERDA) convened the Environmental Technical Working Group (E-TWG) in 2018 to provide input to the state[1]. The E-TWG held an in-person meeting at the Building Energy Exchange Building at 31 Chambers St, New York City, NY and via video conference on September 11, 2023. All participants who attended in person or virtually are listed in Appendix A.

This summary is intended to capture the key points of discussion and action items identified during the meeting and is loosely organized according to the structure of the meeting agenda (Appendix B). Opinions are not attributed to specific E-TWG members unless there is a clear reason to do so. For topics where there were differences of opinion among E-TWG members, this summary identifies areas of agreement as well as the different perspectives offered during meeting discussions.

Action Items

- E-TWG members were encouraged to provide feedback on the draft Avian Displacement Guidance Document by September 29, 2023.
- Meeting participants were encouraged to complete the Whale Communications survey, as well as sharing the survey within their networks, to provide input on topics to address in the FAQ document.

Welcome and Introductions

Bennett Brooks (Consensus Building Institute, or CBI) provided a brief introduction and invited all meeting participants, both in person and online via zoom, to provide introductions about their respective organizations. The focus of the meeting was to 1) discuss E-TWG activities, including the 2024 State of the Science Workshop and Specialist Committee efforts, and 2) provide input on New York Offshore Wind Masterplan 2.0 draft reports, including key findings and data gaps.

E-TWG Activities Updates

Kate Williams (Biodiversity Research Institute, or BRI) provided an overview of recent work by the E-TWG's four active Specialist Committees (SCs). Specialist Committees are made up of both E-TWG and non-E-TWG members with subject matter expertise. E-TWG support staff develop a work plan for each SC, with input from E-TWG members on the work plan and potential committee membership. The SCs meet separately from the E-TWG and receive technical and facilitation support as needed.

Whale Communications Specialist Committee

Kate Williams (BRI) shared updates on the Whale Communications SC[2], which has been meeting monthly since May 2023. The goal of the committee is to develop communication materials to aid in the dissemination of current, accurate, and readily understandable information around recent whale mortality events and the level of risk to whales from offshore wind energy development. The group is currently developing a Frequently Asked Questions (FAQ) document that includes 1) high-level

[1]For meeting agendas, summaries, and presentations, see: nyetwg.com/e-twg-meeting-archive

[2] For additional information on the Whale Communications Committee, visit: nyetwg.com/communications-resources

responses and 2) detailed responses (with scientific citations) to each question. The SC solicited topics and common questions to cover in the FAQ through an online survey[3].The survey is still open, and they will continue to collect feedback over the next few months.

Discussion

Is there a publication goal or target date the Committee is working toward?

There is not a goal date, but once the committee has developed a number of responses, they could choose to publish a first iteration of the FAQ document and then add to it, as needed.

E-TWG members indicated the importance of publishing Version 1 of the FAQ as soon as possible as misinformation is spreading quickly.

Beyond the development of the FAQ, are there other ways to share information that would be helpful, given that the situation is changing rapidly?

- E-TWG members indicated that industry groups like American Clean Power (ACP) can help in this process.
- Improved messaging in collaboration with Bureau of Ocean Energy Management's (BOEM) Center for Acoustics could be helpful.
- An E-TWG member shared the urgency of the issue given recent heated discussions with community members, calls from senior leadership and board members, and other communications with the general public, especially on Long Island and in New Jersey. They expressed frustration regarding lack of communication on issues as they arise and are feeling like the government and OSW development community are not providing enough support. For example, they were not notified that a dead whale was observed in South Fork Wind Farm the previous week. Several E-TWG members expressed the need for the disclosure of protected species observers (PSO) observations and data in a timely manner (24-48 hours) in order for them to be effective advocates for the offshore wind industry and to aid in research efforts. While the South Fork sighting was reported to NOAA (as required), it was not reported elsewhere. Other E-TWG members expressed some willingness to find ways to improve this type of coordination but indicated that real-time sharing of PSO data is problematic.

Can anything be done to improve the flow of information so that those on the front lines are better informed and can combat misinformation?

- An E-TWG member responded that developers are required to share information with National Marine Fisheries Services (NMFS) and other agencies, but there are concerns with sharing right whale sightings publicly (e.g., with attracting visitors who want to see the whale). Developers are supporting information-sharing tools such as Whale Alert. Several developer members of the E-TWG indicated that they would like to hear NMFS's view on real-time sharing of whale sightings data or other information sharing.
- It was suggested that the Stranding Network is not getting the support they need from agencies, and while this situation has improved over prior years, there is still room for improvement.

[3] Online survey for feedback on topics to cover by the Specialist Committee: https://forms.office.com/r/Ti4UZhFedW

- An E-TWG member indicated that people/organizations that are third party validators may be more effective communicators than offshore wind developers (e.g., more trusted messengers), but if they do not have the necessary information, they lose their credibility. Even simple emails to the E-TWG sharing important updates would be a significant improvement.
- If developers share aggregate data with active researchers regarding wildlife they identified and saw in the vicinity, it could make research efforts more efficient (e.g., whale tagging for WOW).
- An E-TWG member noted that public outreach occurred via Twitter regarding the incident at South Fork, and that this Tweet shared helpful resources and was passed around to other developer communications teams.

If an email was sent out, what information would be important to include?

- An E-TWG member indicated that a simple notification about the dead whale sighting would have gone a long way, so that they could have had more informed responses for members of the public who asked about it. Another E-TWG member agreed that an early heads-up would be helpful - non-government organizations (NGO) receive calls when things hit the news, and they need to know basic information to respond with facts when reporters call. NGOs having to reach out to industry for more information after getting calls from media is significantly less effective.
- The information to be shared should include as much detail as possible about the OSW activity occurring at the time, the state of the whale, the heading it was coming from, and any other basic facts.
- A developer member indicated that the industry has a number of ways they submit reports, including to Whale Alert and/or the Stranding Network which goes to the Bureau of Safety and Environmental Enforcement (BSEE), BOEM, and NMFS. They also share where vessels will be and their activities. But it was noted that there is a lag time with the Stranding Network database for verification and QA/QC procedures. Likewise, developers have their own processes and protocols to follow, so they are still investigating the information after they receive real-time information from PSOs and may not be able to pass on information until these internal processes are complete.

Are there any immediate actions to help share information more effectively and efficiently?

- An E-TWG member responded that they need to try to develop a feasible process that helps provide information without risking projects. E-TWG members indicated openness to creating ways to improve information sharing; a discussion with developers and NOAA to brainstorm ideas could be fruitful.
- Another member suggested that if it was possible to share pre-construction plans (i.e., strike plans) where all other information is made available about the project, this would be helpful. For example, South Fork and Vineyard Wind had to share plans 90 days before construction with agencies. The E-TWG member suggested that this information should be made available not only to NGO scientists but to the public as well, and that releasing this type of information transparently will help build trust (and developers can redact any information that could be more sensitive). However, another E-TWG member responded that sharing this information is challenging, as a pile driving mitigation plan, for example, has competitive confidential business information and would need to be so heavily redacted to be shared with the public that it would not be useful.

- One member stressed caution in putting too much pressure on protected species observers as they are required to collect a large amount of data while continuing to observe, so the speed of reporting can be overwhelming. They also expressed frustration that other industries (e.g., shipping) are not under the same scrutiny and requirements for vessels and observers, and as a result the OSW industry is taking the heat for problems caused by other industries. It was indicated that this issue is bigger than OSW, and that there is a need to highlight the main sources of mortality.
- The group expressed that there needs to be a better understanding of existing avenues of information in order to determine how to accelerate information sharing.

Following this discussion, there was recognition that it would be helpful to map out what each developer is doing to share information in near-real time, understand the different processes and applications in current use, and determine whether it would be possible to create a more standard approach or synthesize information across sources. This includes both information like dead whale sightings, which are required by regulation and time sensitive, as well as information that would be purely voluntary to share.

Regional Synthesis Workgroup

Kate Williams (BRI) provided updates on the now-completed Regional Synthesis Workgroup[4]. Meetings for this workgroup were held from December 2021 through August 2023. The goals of this workgroup included informing immediate decision-making by states, OSW developers, and others about regional research activities to fund and to help feed into Regional Wildlife Science Collaborative (RWSC) efforts. Two primary products were developed: 1) a database of research needs and data gaps compiled and synthesized from existing sources; and 2) a guidance document for regional-scale research to complement the database.

The database[5] was published in January on the Tethys website and synthesizes information from a variety of existing sources. It was used by several RWSC subcommittees in identifying research needs that should be included in the RWSC Science Plan. The 40-page guidance document[6] explains how to design, implement, and coordinate regional research studies. The document also includes relevant information for site-specific studies and how they can be integrated with the larger scale regional studies. A two-page summary of the recommendations[7] was also developed and is available, along with the full guidance, on the E-TWG website.

Since these documents have been published, there has been a large increase in web traffic to this page on the E-TWG website, so it seems it has been getting viewed and shared. Kate Williams expressed gratitude to everyone who participated in this workgroup (20 organizations), including universities, NGOs, OSW developers, state and federal agencies, national labs, regional science entities, and

[4] For additional information on the Regional Synthesis Workgroup, visit: nyetwg.com/regional-synthesis-workgroup

[5] U.S. Atlantic Offshore Wind Environmental Research Recommendations Database: https://tethys.pnnl.gov/atlantic-offshore-wind-environmental-research-recommendations

[6] "Responsible Practices for Regional Wildlife Monitoring and Research in Relation to Offshore Wind Energy Development" document: nyetwg.com/_files/ugd/78f0c4_32faf704418048239eb2b8c3259711db.pdf

[7] Summary of guidance document: nyetwg.com/_files/ugd/78f0c4_5e937dabbf81499a945246aa41dfbf45.pdf

international research organizations in Europe, as well as all of the stakeholders involved in the public comment process.

Avian Displacement Guidance Committee

Kate Williams (BRI) shared updates on the Avian Displacement Guidance Committee[8]. This group is co-chaired by BOEM and U.S. Fish and Wildlife Service (USFWS), has been meeting monthly since May 2022, and are hoping to wrap up this effort by the end of this year. The primary goal of this committee is to inform pre- and post-construction monitoring and research approaches for detecting and characterizing displacement, attraction, and macro-to meso-avoidance of marine birds at OSW facilities in U.S. waters. A guidance document is being developed that identifies displacement and attraction-related questions and the appropriate methodologies to address those questions, provides decision support tools and study design guidance, and provides detailed recommendations for conducting observational surveys to detect avoidance- and attraction-related effects to marine birds from OSW facilities. In addition, a second document is in development which includes interim recommendations for using existing avian baseline data for OSW site characterization. The group recognized that existing BOEM avian surveys guidelines could use some clarifications about when new site characterization surveys should be conducted vs. when existing survey data for a lease area could be used for this purpose.

E-TWG members have until September 29 to review the Draft Avian Displacement Guidance document. Kate Williams reminded E-TWG members to not share the draft document outside of the group until the public feedback period in October. A public webinar on the recommendations is being held on October 16[9], and there will be a several-week period for public feedback. Once all public feedback has been received, the committee will revise the document in November with the plan to publish the final document in December.

State of the Science Workshop 2024

Kate Williams (BRI) provided an overview of the 2024 State of the Science Workshop[10]. The Workshop is actively being planned now with tentative dates of July 16-19 on Long Island. Once the venue logistics have been confirmed, a save-the-date notice will be sent out.

The 2024 State of the Science Workshop will include a fisheries focus in addition to the environmental and wildlife focus. Because of this addition, the conference will be longer to account for fisheries sessions and discussions. The conference will extend for three and a half days, including half a day for side meetings. The side meetings will occur in the middle of the conference to help break up the days. There will be a two-stage call for abstracts with the first for the side meetings and symposia and the second general call for individual abstracts. This approach will provide more flexibility with the agenda and help tailor the call for individual abstracts.

[8] For additional information on the Avian Displacement Guidance Committee, visit: nyetwg.com/avian-displacement-guidance

[9] To join the Avian Displacement Guidance public webinar, register here.

[10] For additional information about the 2024 State of the Science Workshop, visit: https://www.nyetwg.com/2024-workshop

The official workshop theme is titled *Taking an Ecosystem Approach: Integrating Offshore Wind, Wildlife, and Fisheries.* Sessions are intended to focus on the following:

- Understanding wildlife and wildlife habitat: populations and distributions
- Offshore wind development effects and species/ecosystem responses
- Offshore wind development effects and fisheries: social/economic responses
- Monitoring, minimization, and mitigation approaches
- Cumulative impacts of offshore wind energy development
- Collaborative processes to improve development and conservation outcomes (including guidance, data sharing, and other collaborative efforts)
- Integration of fisheries data, marine protected species, and wildlife data to identify wind energy areas and planning areas
- Ecosystem interactions: physical and biological interactions and changes in ecosystems across trophic levels in response to offshore wind and other stressors

The scientific planning committee has been providing input on workshop planning and will be reviewing abstracts.

Offshore Wind Master Plan 2.0

Overview

Kate McClellan Press (NYSERDA) introduced the New York Offshore Wind Masterplan 2.0: Deep Water. Kate McClellan Press is co-leading the environment and fisheries studies alongside Morgan Brunbauer. NYSERDA thanked everyone who participated in the Project Advisory Committees for their effort.

Masterplan 2.0 is the next step within the context of New York State's OSW goals. The Climate Leadership and Community Protection Act (Climate Act) mandates the development of a minimum of 9 GW of OSW energy by 2035. It also requires New York State to achieve an 85% reduction in emissions below 1990 levels by 2050 and 100% zero-emission electricity by 2040. The Climate Action Council (CAC) was created by the Climate Act and charged with developing a scoping plan to provide recommendations to meet Climate Act targets and place New York on a path toward carbon neutrality. The CAC plan suggests that 16-18 GW of OSW energy may be necessary to achieve the Climate Act mandate.

The New York State process is running in parallel with the federal BOEM process for identifying offshore wind lease areas. Master Plan 2.0 is happening before the BOEM identification of new lease areas in deeper waters of the New York Bight, in order to inform New York State decision making and allow the State to be more effective advocate for its own interests as part of the federal process.

The objectives of Master Plan 2.0 are to:

- Serve as an organizing principle for all offshore wind work ensuring a robust and transparent strategy for achieving New York's 9GW goal.
- Foster ongoing and proactive stakeholder engagement.
- Enable New York State to assess and characterize the risks and opportunities for offshore wind development in a comprehensive, sequential, and logical approach to achieve 9GW and beyond.

Master Plan 2.0's study area, the area of analysis (AoA), is broken up into 3 zones:

- Zone 1 (remaining shelf) extends from the 60-meter contour to the continental shelf break.
- Zone 2 spans the steeply sloped continental shelf break (unique canyon habitats).
- Zone 3 extends from the continental shelf break out to the 3,000-meter contour.

The Master Plan 2.0 process includes a series of studies to identify areas of high risk or concern, which will inform an "Areas for Consideration" report. The studies include:

- Environment Studies
    - Birds and Bats
    - Fish and Fisheries
    - Marine Mammals and Sea Turtles
    - Benthic Habitats
    - Environmental Sensitivity Analysis
- Marine Activity Study
    - Maritime Assessment Commercial and Recreational Uses
- Technology Studies
    - Offshore Wind Resource Assessment
    - Deep Water Wind Technologies: Technical Concepts
- Feasibility Study
    - Technology Assessment and Cost Considerations

The goals of the Environmental Studies are to understand the marine resource presence and use of the AoA, update knowledge of stressors to resources, review novel stressors from floating OSW, update mitigation guidance, and identify areas for future research to better understand the AoA, the impact of OSW development on resources, and mitigation opportunities.

The goal is to have these studies completed by the end of 2023. NYSERDA intends to make a recommendation to BOEM early in 2024 based on the results of the studies, input from regional states and stakeholders, and concurrence from State agencies. The timeline for Master Plan 2.0 is as follows:

- September
    - Draft study discussions commence.
    - September 11: E-TWG discussion about the studies
    - September 15: all comments on the studies received.
    - September 22: F-TWG discussion about the studies.
    - Reviewer feedback is incorporated into the final studies as appropriate.
- October
    - October 31: complete all studies with TWG feedback.
    - Legal Review.
    - Draft Areas for Consideration Report.
- November-December
    - November 1: complete Areas for Consideration Report.
    - Finalize Master Plan 2.0 supporting studies.
        - Cumulative Impacts Study for environmental, fisheries, and maritime impacts.
        - Any additional studies (NYSERDA welcomes suggestions).

Master Plan 2.0 will continue in 2024-25 with additional studies.

Discussion

What will the end recommendations from this process look like, and how will it compare to recommendations from Master Plan 1.0?

Kate McClellan Press (NYSERDA) indicated that the intent of the Master Plan 2.0 process is not to define areas for leasing. This is taking place before the BOEM process in order to build a better understanding of the AoA, including potential risks and any information gaps. Master Plan 2.0 studies will be taken into consideration alongside other studies and efforts. Recommendations from New York will not be the end decision on a federal level. Master Plan 2.0 is intended to formulate how to position New York to achieve state goals in the most responsible way.

How is climate change being addressed in the Master Plan 2.0 process and studies?

The study leads will speak to that during their presentations and in the breakout groups (see below). If discussions of climate change should be expanded in these reports, participants are encouraged to raise this as an issue.

Deep Water Wind: Technical Concepts Study

Brian Dresser (Tetra Tech) presented the Deep Water Wind: Technical Concepts Study. The goal of this study is to provide an overview of available technology and environmental issues related to OSW development in waters deeper than 60 meters. It primarily assessed floating wind, which has been the focus of OSW discussions on the east coast of the U.S., but also investigated next-generation fixed bottom technology that could be installed at significant depths in the future.

The Technical Concepts Study explored the technical specifications associated with different deep water OSW developments, including different turbine types, anchoring mechanisms, mooring designs, export and inter-array cables, and offshore substations. .

The study also identified potential environmental impacts and mitigation methods, focusing on broad environmental factors, benthic constraints, risks to fisheries and gear, and potential impacts on oceanographic processes and resulting changes to larval transport.

Throughout the process it has become clear that potential array designs - which are more favorable to different ocean resource users, such as fishermen - is one of the most pressing issues. The current discussions around favorable layouts for fixed technology generally favor spacing out the turbines as much as possible. For floating OSW, however, given the presence of inter-array cables floating in the water column (which would effectively prevent several different types of fishing between them), fishing interests would prefer the turbines to be as close together as possible. Next steps could include pilot studies further assessing next-generation fixed bottom technology.

Environmental and Fisheries Site Assessment Studies

Kate Estler (HDR) introduced the Environmental and Fisheries Site Assessment Studies supporting New York's Offshore Wind Master Plan 2.0: Deep Water. HDR and BRI completed five studies in total: four resource specific studies and an environmental sensitivity study. The goals and objectives of the studies were to:

1. Compile and synthesize the best publicly available data for four key resource groups within the AoA: Marine Mammals and Sea Turtles; Birds and Bats; Fish and Fisheries; and Benthic Habitats.
2. Review and summarize existing literature on the potential stressors associated with each phase of deep-water OSW on each resource.
3. Synthesize existing guidance for avoiding, minimizing and mitigating potential impacts from deep water OSW for each resource.
4. Discuss gaps in data and identify opportunities for future studies that may improve the understanding of each resource and their potential interactions with deep water OSW.

Stakeholder engagement was critically important to these studies as they engaged with the E-TWG, F-TWG, Project Advisory Committees, and New York State Agencies. Some comments have already been incorporated and additional comments will be addressed as appropriate.

Marine Mammals and Sea Turtles

Kristen Ampela (HDR) summarized the study methodology, datasets, and key results from the Marine Mammal and Sea Turtle study. In the case of marine mammals, models were developed by the Marine Geospatial Ecology Lab at Duke University using over 25 regional datasets, including Atlantic Marine Assessment Program for Protected Species (AMAPPS) data from NOAA Fisheries, the New England Aquarium, and NYS Department of Environmental Conservation. . The Sea Turtle density models recently became available in July. Appendix B of the draft report includes more information about included datasets. Comments suggested a more thorough treatment of passive acoustic modeling data, which could not be integrated into density information but could be used for ground truthing marine mammal distribution models.

Birds and Bats

Holly Goyert (BRI) summarized the study methodology, datasets, and key results from the Birds and Bats study. They identified four bat species in the New York Bight and 63 bird species known to be present in the AoA. Some species are federally protected, and others are designated as species of greatest conservation need by New York and neighboring states. Data sources included boat-based and aerial surveys and tagging efforts. Methods for analysis include spatial risk assessment, which incorporated consideration of both exposure and estimated vulnerability. Comments focused on data gaps in Zone 3, documentation of pelagic species in the AoA and on the potential for both positive and negative impacts from bottom disturbance or artificial reef impacts.

An E-TWG member asked about potential limitations in conducting aerial surveys in Zone 3 given the long distance from shore. Holly Goyert (BRI) explained that their recommendation included boat-based and aerial surveys so they would have to dig deeper into technology to understand limitations there, but there would be challenges with both boat-based and aerial surveys in terms of accessing the area. Another E-TWG member added that aerial surveying in deep water is feasible and depends on the amount of fuel that can be stored. Typically, 3-4 hours of surveying can occur but there are limitations with fuel usage.

An E-TWG member noted that areas farther out have higher wind speeds which may have implications for collision, in the same way more birds are prone to collide in bad weather. Holly Goyert (BRI) responded that they have taken this into consideration and can go into more detailed information in the report. Flight heights may vary with wind speed, but more research is needed.

Fish and Fisheries

Brian Dresser (Tetra Tech) provided an overview of the fisheries stakeholder engagement efforts that have been taking place through four F-TWG sponsored Office Hour Meetings in relation to the Masterplan 2.0 process. The meetings provided participants with an overview of Master Plan 2.0 and presented a compilation of data pulled from prior fishing industry input on OSW developments, including input about deep water OSW in other regions. The input from these meetings will be captured in a brief memo as an appendix to the Fish & Fisheries Study of the OSW Master Plan 2.0.

Dave Davis (HDR) provided an overview of the Fish and Fisheries Study framework. The study identified and summarized existing data on key fish and shellfish, including species of concern and sensitive habitats. It sought to assess potential impacts of deep water OSW on commercial and recreational fisheries. It identified potential species-specific vulnerabilities to stressors at each stage of OSW development. The study also identified data and research gaps or uncertainties and made recommendations for specific methods and tools to address these gaps. The study categorized three key receptor groups – habitat, key fish species, and commercial/recreational fisheries, giving equal weight to each. A range of spatial datasets were used to inform understanding of each of these three receptor groups in the AoA, primarily drawing from NOAA NMFS datasets and fisheries Management Plans (FMPs).

There are still several uncertainties and data gaps, including spatial data in Zones 2 and 3, which are limited for some species (i.e., highly migratory species). There have been approximately 200 comments already received about the Fish and Fisheries Study, many of which relate to what data is being used and how it is being applied. The main focus of the comments has been on the potential impacts to commercial and recreational fisheries from deep water OSW development, including concerns such as effort displacement, revenue loss, and gear damage/loss, as well as considerations relating to a fisheries compensation fund.

Benthic Habitat

Dr. Andrew Davis (URI) provided an overview of the Benthic Habitat Study. Receptor groups were selected based on the provision of habitat that generally enhances local diversity and have strong functional roles in the local ecosystem, including deep sea corals, sponges, sea pens (biological receptor groups), and hard substrate (physical habitat receptor group). For the biological receptors, occurrence records for the distribution of deep-sea corals, sea pens and sponges were obtained from publicly available databases including the NOAA Deep-Sea Coral Data Portal and the Ocean Biodiversity Information System. These show where species have been found but are not necessarily the best representation of species distributions due to incomplete effort data in much of the AoA. Species distribution models developed by NOAA were also used.

There were several identified knowledge and data gaps in the Benthic Habitat Study. For example, data on the biological receptor groups diminishes rapidly offshore and is limited in deeper waters; there is an incomplete understanding of species distribution in the AoA; there is incomplete taxonomic information for many deep-sea species; and there is a noted lack of high-resolution underwater mapping data that is publicly available, and a general lack of precision in sediment and seabed data. The main comments on the Benthic Habitat Study received to date included requests for more detailed information about particular stressors, the related impacts on essential fish habitat (EFH) and fish populations, and

requests for the removal of spatial locations as designated protection areas from consideration in the AoA.

Breakout Groups

Attendees were split into three breakout groups (Marine Mammals and Sea Turtles, Birds and Bats, and Benthic Habitats/Fish & Fisheries) to discuss the four Masterplan 2.0 draft reports. Each group was provided a worksheet with questions to help guide discussions. Discussion questions included:

1. Report Information/Data Completeness – Is there any information/data that are available that weren't included?
2. Key Data Gaps and Information Needs for the Area – What gaps and needs should be filled in the future and/or taken into consideration when viewing and interpreting results?
3. Areas of High Risk – Where are geographic areas of particularly high risk?
4. Take Home Messages – What do we want NYSERDA to take away from this group report?

Online participants participated in these discussions virtually and were invited to fill out an online form with responses to the questions. The below summary records and summarizes comments received during the breakout group discussions and should not be interpreted to represent the opinions of the full E-TWG.

Marine Mammals and Sea Turtles

Report Information/Data Completeness – Is there any information/data that is available that wasn't included?

- **Has Passive Acoustic Monitoring (PAM) data been considered in the report, as this has the potential to provide much greater temporal coverage than aerial survey data?** Kristen Ampela (HDR) responded that as the analysis stands it does not incorporate PAM into the spatial analysis; however, some PAM data was reviewed and there are current discussions about expanding some of the treatment of existing PAM data and incorporating it in a more descriptive manner.
- **Are there more details about uncertainty and the associated visualization for it?** Kristen Ampela (HDR) noted that there has been a good amount of feedback on this topic. She explained that there is Coefficient of Variation (CV) information on uncertainty for each modeled species and species guild. The uncertainty should be interpreted, not just as it relates to the amount of survey effort, but also about extrapolation with other environmental covariates, so uncertainty will be reflected by that and other model parameters. Kristen added that there have been discussions about creating CV maps for the various receptor groups, including receiving input from the Marine Geospatial Ecology Lab Team (MGEL). For the report, it will likely be noted for the reader to refer to publicly available uncertainties with descriptive text.
- An E-TWG member indicated appreciation for the exploration of ways to communicate the uncertainties and encouraged this throughout the report as much as possible.
- For Zone 3, there are some concerns about the recommendations included in the report, given there is high uncertainty and low survey coverage for this portion of the AoA.
- An E-TWG member indicated that there is North Atlantic Right Whale (NARW) data from the MGEL team that should be included (if possible, given the deadlines for these reports).

Key Data Gaps and Information Needs for the Area – What gaps and needs should be filled in the future and/or taken into consideration when viewing and interpreting results?

- An E-TWG member noted that their main concern is the shifts that will occur due to climate change over the lifetime of these proposed OSW projects. They suggested that while there is data for NARW, there is less data available for shelf species and deep-water species, making it more challenging to address for these taxa. It was suggested that climate change and oceanographic conditions should be addressed in each section or a standalone section in the report. Kristen Ampela (HDR) noted that climate change is addressed as a key uncertainty in Section 6.1 of the report. She also noted that species distribution shifts due to climate change will likely make spatial risk assessments potentially obsolete by the time these wind farms are built so frequent updates will be needed.
- Suggestions for the "future considerations" section included: 1) continued gathering of appropriate data for species distributions, and 2) importance of having well thought out monitoring programs, as simply viewing monitoring data will not provide the ability to understand the effects of climate change and other anthropogenic activities.

Areas of High Risk – Where are geographic areas of particularly high risk?

- An important aspect of vessel traffic increasing (and subsequent increases in vessel strike risk), should include the increase in traffic into and out of ports; this is particularly important for juvenile humpback whales that are more vulnerable inshore. These areas are outside of the AoA but should still be considered. In addition, cable routes should be considered as the power from these areas would need to go inshore somewhere, so it is important to consider how this data can be incorporated into planning routes.
- Southern New England area is a hotspot for NARW. This area is primarily outside of Zone 1, but whales moving in and out of this area during migration would potentially transit through nearby areas.
- High sensitivity of leatherback turtles in Zone 3 was surprising, which jumps out as a potentially important area and may need more information to understand what is driving those patterns. An E-TWG member asked what types of data set were used for the sea turtle modeling. Kristin Ampela (HDR) noted that Appendix 3 of the report provides all the datasets from which the sea turtle models were drawn, which includes AMAPPS data, visual boat and aerial surveys, NARW surveys, New England Aquarium aerial surveys, New York State Department of Environmental Conservation (NYS DEC) aerial surveys, University of North Carolina-Wilmington surveys in the Mid-Atlantic, and Virginia Aquarium surveys.

Take home messages – What do we want NYSERDA to take away from this group report?

- Suggestion that the report does not include discussion of mitigation measures, since mitigation monitoring changes significantly over time depending on the available technology.
- Suggestion that it is premature to make any conclusions about risk for Zone 3, as the area is too data deficient, and that it would be helpful to communicate this to BOEM such that there might be a concerted federal and state push to gather data to allow for the baseline characterization of this area.
- Deep water offshore wind represents a new frontier and there are real challenges with monitoring technologies and the amount of financial, logistical, and technological investments that are required, so early identification and resolution of data gaps would be beneficial.

Benthic Habitats and Fish & Fisheries

Report Information/Data Completeness – Is there any information/data that is available that wasn't included?

- **Does the Fish and Fisheries Study use EcoMap and MARMAP data?** HDR responded that those studies were reviewed, but they were not sure how relevant they were to OSW. They include upwelling and other hydrologic processes, but it's hard to focus on these especially when there is uncertainty with where the exact sites will be. This was noted as an area for future exploration.
- **What datasets and fish trawl data were used in the study? Did the study use raw data or publicly available data products?** HDR responded that they drew from existing datasets but also created original data products. They made specific data requests of NOAA and worked with that data to create data products. Automatic Identification System (AIS) data from the Coast Guard was also a large dataset that was used but was limited to the most recent 5 years to try to make it more manageable.
- **Was the AIS data parsed by vessel type, and is vessel speed data available from VMS or AIS?** HDR responded that they only used fishing vessels' AIS data and explained that this was limited to larger vessels. They only got vessel speed for VMS, and are unsure about getting speed data for AIS, but will confirm if they can. For VMS they only used tracking information for less than five knots.
- **Was VMS data from recreational fishing boats used?** HDR explained that there are two reports, one for commercial and one for recreational fisheries.
- **Was HabCam data used in this study**? HDR responded that they requested HabCam from NOAA, but that it has been backlogged. They are meeting with NOAA later in the week to discuss. The HabCam data currently being used overlaps a lot of the same areas that the sea scallop surveys look at. They are unsure how much new information is to be gained from these HabCam studies but were suggested to be used to enhance the sea scallop data.

Key Data Gaps and Information Needs for the Area – What gaps and needs should be filled in the future and/or taken into consideration when viewing and interpreting results?

- There is currently a gap with larval transport datasets and there is a question of how to assess changes in larval transport processes from a baseline, and how it relates to changes in species location. For example, areas that are scallop fished now may change in the future and raises the question of whether there should be use of rotational area modeling to capture this data.
- A participant asked if there are sturgeon concerns in the New York Bight. HDR responded that vessel strikes are the biggest threat for sturgeons.
- Brian Dress (Tetra Tech) asked participants about the focus on sea pens in the same contexts as deep sea corals. Does this group think these things are equally important or is it because they exist in the same habitat? E-TWG members explained that the location where sea pens form a habitat of sea pens is important. On the West Coast, experts have begun to look at "if there is enough of a X that creates a habitat" to determine how essential species or conditions are. Recently sea pens have been reclassified as corals.
- **Are there plans to ground truth NYSERDA report results based on the results of developer analyses?** Morgan Brunbauer (NYSERDA) responded that at this time there are no plans to use additional datasets from developers to ground truth the data presented in the reports. The

BOEM process can use developer analyses. NYSERDA doesn't want to duplicate effort by extending beyond their current scope, when BOEM will be looking at all of these datasets.

Areas of High Risk – Where are geographic areas of particularly high risk?

- There has been considerable feedback regarding the importance of Hudson Canyon, and all canyons on the shelf in Zone 2.
- Central Atlantic Planning Area efforts essentially pulled all of the shelf break (e.g., Zone 2) off the table. It seems like the most likely outcome is that Zone 2 will be taken off the table in the New York Bight as well. Morgan Brunbauer (NYSERDA) responded that it is important to state that they aren't looking for places to slate for development, but instead trying to build info about the AoA. Zone 2 is clearly an essential area from an environmental standpoint, but still needs to be explored further. Cables from Zone 3 will pass through Zone 2, so any development in Zone 3 will impact Zone 2, and data is needed to understand what this could look like.
- Understanding impact differences by gear type and mapping those gear types could provide additional insight into high-risk areas. Previous feedback has suggested that floating long line will be heavily impacted, however, and it would be difficult to put floating long line use on a heat map like scallop fishing, because where the fishery goes is highly variable.

Take home messages – What do we want NYSERDA to take away from this group report?

- There is a big difference between high tension floating and loose cable floating technologies. High tension floating systems have the potential to be less impactful in certain zones.
- It's important to keep in mind the timeline for development and where this fits into the BOEM process, given how everything is happening in parallel.

Birds and Bats

Report Information/Data Completeness – Is there any information/data that is available that wasn't included?

- Was New York and New Jersey Audubon data used, and if not, it was noted that this information could be useful for the future. Holly Goyert (BRI) agreed with this idea and noted it can be looked into for future studies.
- Is data available from land-based wind or electric utilities who have done work for collision and electrocution that could provide some understanding about how birds behave in high winds and bad weather or maneuverability? Kate Williams (BRI) responded that flight maneuverability metric is built into the vulnerability metric. Holly Goyert (BRI) added that many other factors go into the vulnerability metric as well.

Key Data Gaps and Information Needs for the Area – What gaps and needs should be filled in the future and/or taken into consideration when viewing and interpreting results?

- There is a big data gap with spatial information for bats and the understanding of bat activity. Was Block Island Wind acoustic information useful? Holly Goyert (BRI) replied that the only location estimates available for bats within the AoA are historical records from the 1950s-1970s. However, it is fairly easy to put acoustic sensors on buoys and there will be a Department of Energy LIDAR buoy going in the AoA that will have an SM4 bat detector, which may help fill this gap in the future.

- Recommendation to separate the analysis of birds and bats to make it easier to understand, since the data are data are not consistent between the two taxa and there are a lot of uncertainties for bats.
- It was suggested to examine bat data from other regions, though there is limited information on offshore bat habitat use (and offshore land bird habitat use) regardless of exact location. Trevor Peterson at Tetra Tech is doing a study for BOEM on the west coast, and they could get in contact with him, for example. Holly Goyert (BRI) responded that it is a valid point to want to extrapolate for other regions, but the information from Europe is very region specific. She could consult with the experts but doubts that it would be easy to extrapolate information from bats in Europe.
- Could be a bigger push for Motus automated radio telemetry for bats. White nose syndrome is clearly the biggest issue for bats, except for migratory tree bats, for which the biggest threat is wind energy development. Increasing sample size of bat tags could be beneficial.
- There are some new datasets that were not included in this analysis because they were not readily available. Holly indicated she could work on incorporating more if people know of existing datasets.
- There are pelagic species to consider in the region that might be expected offshore, but there is no documentation of them in the AoA specifically.
- Suggestion to look into eBird data; however, eBird data have substantial imitations offshore and are non-systematic.
- Zone 3 hasn't been covered well by previous surveys. It needs more coverage to understand the presence and distributions of classic pelagic species that are in deep water areas, but not shallow water areas.
- There is new data available that shows black-capped petrels use the AoA, including Zone 3, which did not appear in other data.
- The report should include a recommendation for more tracking and survey efforts.
- Increasing the number of buoys in Zone 3 would be helpful to serve as platforms for monitoring. Holly Goyert (BRI) explained in their recommendation they were referring more to radio telemetry but could note to increase the number of buoys for passive acoustic and radio telemetry as well. Kate Williams (BRI) added that there is research and testing going on for cameras that can be deployed on buoys but are still in development. BOEM also funded USGS to work on marine radar that can be installed on boats to help with information on distribution and offshore activity patterns. There is a need to reduce noise (clutter) to make marine radar on floating platforms more usable.
- Concerns in the report about lighting during operations - wind farms will use blinking red lights and there won't be nearly as much light as during construction. Why is this emphasized? Kate Williams (BRI) agreed that she has seen concerns about construction lighting, but not as many concerns about operational lighting on turbines. The lights on turbines also use Aircraft Detection Lighting Systems (ADLS). An E-TWG member indicated that vessel navigation lights at the bottom of the turbine are yellow flashing lights.
- Les Kaufman and Suchi Gopal at Boston University are working with BOEM on modeling at ecosystem level and are bringing climate change and uncertainty into the model as well. They are working in Maine and New York - should get in contact with them.

- Are feathering or curtailments potential mitigation options? It would be helpful to see some evaluation about curtailment in the report. E-TWG members discussed curtailment viability (e.g., in relation to cost, wear & tear, and turbine warranties) and proof of efficacy (e.g., has not been tested for bats offshore, though it's effective onshore; no proof of efficacy for birds, except possibly for on-demand shutdowns).

Areas of High Risk – Where are geographic areas of particularly high risk?

- The slopes are the areas of high risk as well as areas south of Cape Cod and Nantucket. An E-TWG member asked if the slope is shallower and not as steep there. Holly Goyert (BRI) responded that she will look into that but noted that it looks like the break is narrower and shelf is wider. Historically, the area near the Shoals is a lot sandier and there is limited data from surveys on the shelf break.
- Recommendation to expand the geographic area to look at Rhode Island, Massachusetts, and New Jersey as birds occur outside of the focused AoA.
  Is any reason to think behaviors might be different further offshore? Holly Goyert (BRI) responded that they're only now starting to get more information on offshore movements of birds and flight heights.

Environmental Sensitivity Report

Background and Literature Review

Jaak van den Sype (HDR) provided an overview of the Environmental Sensitivity Report. This included stressors, risk weighting, and overall methodology in the Master Plan 1.0 (2017) and other relevant risk assessment models. The current report develops a new spatial multi-criteria decision analysis framework for showing temporal and spatial risk to marine resources from stressors and provides geographic depictions of areas of potential conflict for OSW during each stage of development.

The report makes use of a framework with five organizational levels: Overall Sensitivity (relative environmental sensitivity on a common scale), Resources (four primary marine resource groups), Receptors (individual or population that could be impacted by OSW development), Stressors (for any receptor, what are the possible stressors that could impact it), and Development Phase (relative prevalence of each stressor during OSW phases). The report assessed 4 resources, 21 receptors, 10 stressors, and 4 phases. Input data was put into a common spatial scale through the use of BOEM Lease Blocks, which were applied as a layered grid over the AoA. This allowed for receptor data sets to be put on a common "sensitivity" scale while still preserving the properties of the data. Weights were determined using the analytic hierarchy process, which utilizes expert elicitation and subject matter expert questionnaires as part of a methodology to determine the appropriate weights for different data layers.

It is important to interpret sensitivity results in the context of data gaps. Uncertainty was defined and quantified based on two components: completeness (percentage of the AoA that has data for a particular receptor) and confidence (degree to which data accurately reflect this receptor).

Discussion

Can you elaborate on the expert elicitation process and whether there was alignment between people involved? Jaak van den Sype (HDR) explained that the process included a pairwise set of comparisons

along with justifications for choices to add a sense of quantitative rigor to an inherently subjective process.

How does this compare to the suitability process NCCOS is doing with NOAA and BOEM? Jaak van den Sype (HDR) replied that there are six factors NCCOS looks at that are non-biotic. For the biotic section, the process is similar to a weighted overlay.

Results

Jaak van den Sype (HDR) next provided a summary of the Environmental Sensitivity Report results. Each resource (Marine Mammals and Sea Turtles, Birds and Bats, Fish and Fisheries, and Benthic Habitat) had two maps summarizing the results of the study – one depicts overall sensitivity, and one shows data gaps.

Comments received about the Environmental Sensitivity Report focused on uncertainty, data, and stressors, and generally requested more detail and context in the report.

Discussion

- **What is driving the inclusion of fish with fisheries? What is beneficial for fisheries may have a negative impact on fish, and there would be utility in separating them.** HDR responded that fish and fisheries are separate receptor groups and could be separated in the analysis. As it currently stands, the study gives fish and fisheries equal weighting in the analysis.
- **What is the most impactful phase for water quality and vessel strikes? Is construction really the most impactful phase for birds?**
- **Are data from OSW in Rhode Island and Massachusetts to be included?** HDR shared that framework is adaptable for new data and if there is more data from Rhode Island and Massachusetts wind farms, they could incorporate that.
- **Is it correct that the analysis for birds and bats is based on MDAT data layers, and if so, does this mean there was not any bat data included in the environmental sensitivity?** HDR responded that MDAT data layers are utilized, and these do not include bat data. Given this answer, it was suggested that this be addressed upfront within the report to be clear about the data being used and to acknowledge that the data map outputs do not have bat data.
- There is a discrepancy between the Marine Mammals and Sea Turtles chapter and the Sensitivity Analysis in the way the leatherback turtle data is represented. In a similar situation with the Pacific Fisheries Management Council, fishermen defined different representation of leatherback data between sensitivity analysis and other analyses. This is a complex process and New York State should think about how readers are going to interpret the results with a need for any stark differences to be explained.
- Heat maps and output data maps are the kinds of analyses that people grab on to. The relatively involved methodologies that are involved in these data outputs means that there is a lot baked into the end results. Readers will not dive into the methodology and will just view the outputs, which could lead to undesirable results. There could be benefits to attempting to mitigate this in work products. For example, due to the lack of data in Zone 3, that area could be blocked out and labeled up front as not having enough data. It could also be explained how Zone 1 and Zone 2 compared to the inshore area within the 30-fathom line. This would be helpful for readers to understand the relative risks of offshore wind in different locations.

- From a visual perspective, it can be hard to differentiate heat mapping, so adding a note on the figure stating how areas with no data are represented would be helpful. There was one area that was circled as an area of interest for benthic habitats. That map could be helpful for directing additional research if we find out these areas are data poor.
- Output maps should not give the impression that there are no concerns in Zone 3, but – rather – that there is uncertainty. It is also important to not give the reader the impression that the uncertainty about Zone 3 means "no development should happen there." Instead, the research should aim to communicate "that data is needed before thoughtful considerations about this area are made." HDR agreed with this articulation of uncertainty.
- **Did you experiment with weighting resources differently to see how that impacted the results?** HDR responded that through an expert engagement process, they did an iterative process though it was not completely exhaustive.
- It is important to highlight uncertainties because the study will help inform the BOEM process and can drive resources to help answer research questions.

Take Home Messages

- Create a companion map product that outlines data gaps for each resource group to direct future research.
- There needs to be some close scrutiny for marine mammal data in particular. The slide shows 100% data completion for marine mammals, and this is misleading. In the final maps, areas of uncertainty should be directly addressed.
- Results and uncertainty maps should always be presented together. As the public goes through the report, they may forget how data poor some areas are.
- Suggestion to present Zone 1 and Zone 2 in most maps and exclude Zone 3 – it is not reasonable to compare Zones 3 to Zones 1-2 in most cases given the lack of data in that region.
- Maps should more clearly describe what data they are showing.

Surprising Results

- There could be a relationship between the type of offshore wind technology and EMF concerns. It would stand to reason that there is potentially a big difference for EMF between a cable buried six feet and a bunch hanging in water column. Another member indicated that they have not studied existing offshore structures to know whether the cables are emitting enough to produce an EMF impact. There is a significant amount of public sensitivity about EMF, but that is a bigger discussion.
- **Is the EMF data map showing the abundance of species that are likely to see impact? Does it also factor in the degree of expected impact?** HDR responded that the data map factors include both the degree of sensitivity and abundance of species likely to be impacted. Viewing the color gradient maps is confusing given the massive lack of information about EMF. Kristen Ampela (HDR) noted that current knowledge is incomplete, and EMF impacts may be negligible for marine mammals, as data is much clearer for fish species with lateral lines. Because of these differences, it is important to look at EMF impact by receptor group.
- Risk for benthic habitats was highlighted in Zone 2, seemingly due to deep sea corals and sponges. As there is not a strong understanding of featureless benthic habitats, we don't want to give impression that there is only risk in Zone 2 as benthic habitats are everywhere.

- Impacts of artificial light are more of an issue during construction and less so during operation. It seems there are sensitivity data that are counter intuitive in the current report. Lighting during operation should not be more intense than construction.
- It is known that vessel traffic will be lower during operations, but the data doesn't reflect this.
- It is difficult to view the effort map and sensitivity map at the same time and would be beneficial to have both maps integrated and display the data gap areas. Jaak van den Sype (HDR) agreed with the idea of integrating the data gaps into the effort sensitivity maps, which would be the logical next step.
- Question about oceanographic and atmospheric impacts for fish and fisheries in comparison to those for marine mammals. Jaak van den Sype (HDR) responded that the goal of the study was to identify areas where there would be more stress, not quantify the stress.
- **Regarding larval transport, is change treated the same as predicted negative impacts from the change, and is there any delineation of these in the models?** HDR responded that the Fish and Fisheries Study highlights a large degree of uncertainty. If the report was further refined by species, it would require another analysis to provide a more accurate image of uncertainty.
- **Is there is any thought being given to prioritizing research recommendations?** Prioritization is a bit of a moving target where data are constantly being collected – as part of the RWSC science plan, need to establish how we change or maintain priorities as new reports and datasets become available.
- **Why does bottom disturbance show different impacts for Zone 1 and Zone 2 for fish and benthic habitat?** Jaak van den Sype (HDR) explained that that is due to occurrence data and habitat suitability, as there are high occurrence data in Zone 2 for benthic habitat which is different than occurrence data for fisheries. There is more fishery occurrence data in Zone 1.
- **Will the overview summary map that shows all the stressors together be sent to BOEM?** Kate McClellan Press (NYSERDA) responded that the driver is not only the environmental and fisheries parts of the Environmental Sensitivity Report. The first Master Plan studies will also be incorporated narratively with mapped identifications of risk. One issue with overlaying all sensitivity groups together is it becomes confusing and difficult to talk about, which is why it has been broken out into different receptors. An overall map may look a lot different after these conversations. It is important to determine if it is going to be a helpful resource.

Key Takeaways from Discussion

- Highlight uncertainty more, as it needs to be front and center. Uncertainty is an especially pronounced concern with Zone 3, which needs to be communicated separately due to the lack of data.
- Highlight gaps and areas of confidence.
- Use uncertainty to highlight the need for data. Eventually this can facilitate the determination of research priorities.
- EMF is dealt with too broadly in the study, and there needs to be more nuanced discussion about the uncertainties around EMF effects to different resources.
- Climate change needs to have more of a focus.
- The ways readers might view or use this document must be considered carefully.
- Finally, there is utility in splitting out fish and fisheries in this analysis.

Reminders and Wrap Up

Bennett Brooks (CBI) and Kate McClellan-Press (NYSERDA) wrapped up the meeting by thanking all attendees for all their hard work on the E-TWG Specialist Committees and Masterplan 2.0 draft study reports. Both also provided reminders on the following:

- The online notes for this meeting will remain open until September 15th, so participants are encouraged to provide further feedback on any of the Masterplan 2.0 draft study reports.
- E-TWG members can provide feedback and comments on the draft Avian Displacement Guidance document by September 29th. Track changes should work within this document, but if there are any difficulties, E-TWG members can reach out to Julia Gulka (Julia.gulka@briwildlife.org) or Kate Williams (Kate.williams@briwildlife.org) to troubleshoot the issue. The public webinar to provide comments on this guidance document will be held on October 16th.
- The Whale Communications Specialist Committee will have in-depth discussions about the topics and ideas that were brought up during this meeting, including mapping out the various reporting tools that are used by developers. A survey is currently available for anyone to complete to help determine the topics of focus for the FAQ document. Anyone interested in joining this committee can reach out to Julia Gulka (Julia.gulka@briwildlife.org).

Appendix A: List of Participants

Point of Contact	Organization	Stakeholder Type	Role
Kate McClellan Press	NYSERDA	State Government	Convener/chair
Jesse Aman	Atlantic Shores	Developer	Advisor
Kirsten Barnstead	Leading Light Wind	Developer	Advisor
Carmen Bernett	Invenergy	Developer	Advisor
Isabella Betancourt	New York Department of State	State Government	Observer
Koen Broker	Shell Renewable Power and Energy Solutions	Developer	Advisor
Colleen Brust	New Jersey Department of Environmental Protection	State Government	Observer
Candice Cook-Ohryn	Shell Renewable Power and Energy Solutions	Developer	Advisor
Alison Chase	Natural Resources Defense Council	eNGO	Advisor
Kira Dacanay	National Marine Fisheries Service	Federal Government	Observer
Michael Evans	Orsted	Developer	Advisor
Sharon Farris	Bluepoint Wind	Developer	Advisor
Catherine Fede	New York State Department of Environmental Conservation	State Government	Observer
J Christopher Haney	National Audubon Society	eNGO	Advisor
Megan Hayes	Atlantic Shores	Developer	Advisor
Scott Johnston	US Fish and Wildlife Service	Federal Government	Observer
Shannon Kearney	Connecticut Department of Energy and Environmental Protection	State Government	Observer
Francine Kershaw	Natural Resources Defense Council	eNGO	Advisor
Kira Lawrence	New Jersey Board of Public Utilities	State Government	Observer
Carl Lobue	The Nature Conservancy	eNGO	Advisor
Maria MacArdle	Bluepoint Wind	Developer	Advisor
Elizabeth Marsjanik	Vineyard Offshore	Developer	Advisor
Caitlin Mcgarigal	New Jersey Department of Environmental Protection	State Government	Observer
Laura Morse	Invenergy	Developer	Advisor
Carissa King Nolan	Wildlife Conservation Society	eNGO	Advisor
Ashley Norton	Delaware Department of Natural Resources and Environmental Control	State Government	Observer
Darrell Oakley	Equinor	Developer	Advisor
Kimberly Peters	Orsted	Developer	Advisor
Meghan Rickard	New York State Department of Environmental Conservation	State Government	Observer
Emily Rochon	Vineyard Offshore	Developer	Advisor
Nick Sisson	National Oceanic and Atmospheric Administration	Federal Government	Observer
Emily Shumchenia	Regional Wildlife Science Collaborative	eNGO	Advisor
Joel Southall	RWE Renewable Americas	Developer	Advisor
Ally Sullivan	Total Energies Renewables	Developer	Advisor
Bailey Wild	New Jersey Board of Public Utilities	State Government	Observer
Fred Zalcman	New York Offshore Wind Alliance	State Government	Observer

Support Staff

Ashley Arayas (The Cadmus Group)
Sean Brennan (The Cadmus Group)
Bennett Brooks (Consensus Building Institute)
Una Darrell (The Cadmus Group)
Casandra Guillen (The Cadmus Group)
Julia Gulka (Biodiversity Research Institute)
Nick Rico (The Cadmus Group)
Stefanie Sganga (The Cadmus Group)
Jacqueline Sharry (The Cadmus Group)
Alex West (The Cadmus Group)
Kate Williams (Biodiversity Research Institute)

Other Attendees

Kristen Ampela (NYSERDA)
Tess Arzu (NYSERDA)
Morgan Brunbauer (NYSERDA)
Jane Carrick (University of Rhode Island)
Andrew Davies (University of Rhode Island)
Dave Davis (HDR)
Brian Dresser (Tetra Tech)
Kate Estler (HDR)
Josh Gillespie (HDR)
Holly Goyert (BRI)
Marisa Guarinello (INSPIRE Environmental)
Jeremy Magliaro (NYSERDA)
Darren Sinnott (HDR)
Jaak van den Sype (HDR)

Appendix B: Meeting Agenda

New York Environmental Technical Working Group (E-TWG)

Meeting Agenda

11 September 2023, 9:30 am - 4:30 pm EDT

Location: Building Energy Exchange, 31 Chambers St, New York, New York, and online via zoom

Meeting Objectives

- Discuss updates on E-TWG-related activities.
- Provide input on New York Offshore Wind Masterplan 2.0 draft reports, including key findings and data gaps.

Time	Agenda Item
9:30-10:00 am	*Breakfast Social (coffee and light refreshments provided)*
10:00-10:20 am	**Welcome** • Introductions • Meeting Agenda and Ground Rules
10:20-11:10 am	**E-TWG Activities Updates and Discussion** • Whale Communications Specialist Committee • State of the Science Workshop • Regional Synthesis Workgroup • Avian Displacement Guidance Committee
11:10 am –11:40 pm	**Masterplan 2.0: Overview** • Overview of the Master Plan process and focal area • Review of deep water wind technologies • Goals for the five environmental studies included in the E-TWG review
11:40 am -12:10 pm	**Masterplan 2.0: Key Findings (Part 1)** • Birds and Bats • Marine Mammals and Sea Turtles
12:10-1:10 pm	*Lunch (provided on site)*
1:10-1:40 pm	**Masterplan 2.0: Key Findings (Part 2)** • Fish and Fisheries • Benthic Habitat

Time	**Agenda Item**
1:40-2:20 pm	**Breakout Group Discussions on the Four Reports** • Completeness- What information/data is available that wasn't included? • Key Data Gaps - What gaps should be filled in the future and/or taken into consideration in interpreting results? • What are the geographic areas of particularly high risk? • What key messages do you want NYSERDA to take away from this report?
2:20-2:35 pm	*Coffee Break*
2:35-4:30 pm	**Masterplan 2.0: Environmental Sensitivity and Group Discussion** • Environmental Sensitivity Report: Methods and key findings • Group discussion: Feedback on environmental sensitivity report and key findings and take home messages • Action Items and Wrap Up