



REGIONAL WILDLIFE SCIENCE ENTITY FOR ATLANTIC OFFSHORE WIND

A Stakeholder Driven Vision



June 2020

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On behalf of the above organizations, this document was written by Cadmus and CBI (C&C).

About this Document

This document summarizes a high-level vision for a potential Regional Wildlife Science Entity based on a stakeholder engagement process. The contents of the document can inform future decision-making by relevant parties. While the broad ideas expressed in this document intend to reflect a vision based on collective input of key stakeholders. The final product is Cadmus & CBI’s best assimilation of the effort to-date.



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THE CASE FOR ACTION

Growth in Offshore Wind

Currently, the United States has only one operational offshore wind facility, which consists of five turbines in the Block Island Wind Farm located in Rhode Island state waters. However, offshore wind development along the East Coast of the United States is accelerating. The U.S. Department of the Interior's Bureau of Ocean Energy Management (BOEM) has executed 16 individual leases for offshore wind development as of June 2020.

In addition to federal-level action, several states have administratively and legislatively committed to procure electricity from offshore wind facilities, and some states have moved forward with specific procurements. Collectively, more than 25 gigawatts (GW) of power is reasonably planned from federally approved projects to be committed to by the states. In the long-term, there is a total of 2,058 gigawatts of Atlantic Offshore Wind Potential.¹

For example, the Maryland Public Service Commission awarded almost 370 megawatts (MW) of offshore wind energy in May 2017, and a new state law raises this level of credits to be awarded with a goal of at least 1,600 MW by 2030 as part of its renewable portfolio standard. In Spring 2020, Virginia's Governor signed a new law to ensure that more than 5 GW of offshore wind are fully developed by 2034. In May 2018, Massachusetts utilities procured 800 MW of offshore wind, and an additional 800 MW in October 2019; the state has a legislative requirement for another 1,600 MW. In June 2019, Connecticut signed into law authorization to buy 30% of the state's electricity need, or 2,000 MW from offshore wind sources, and has awarded a 300 MW project power purchase agreement. New Jersey's executive order calls for 7,500 MW from offshore wind by 2035 and in June 2019, New Jersey Board of Public Utilities approved a bid to procure 1,100 MW of electricity from offshore wind. Most recently, in July 2019, New York State passed a law committing to developing 9,000 MW of offshore wind energy by 2035 and awarded 1,700 MW in contracts. To date, many procurements for power purchase agreements have identified environmental considerations (e.g., baseline studies, on-going monitoring and approaches to mitigation) to be included in bid packages from prospective bidders.

BOEM requires a baseline survey and other data collection at the outset of a project, and requires that monitoring plans be included in construction and operations plans on federal leases (30 Code of Federal Regulation 585.626(a)(3)). The National Oceanic and Atmospheric Administration's (NOAA) purview, including the Endangered Species Act (ESA), Marine Mammal Protection Act (MMPA), and Magnuson-Stevens Fishery Conservation, the Migratory Bird Treaty Act and Management Act (MSA), require collaborative discussions between BOEM, NOAA and lease holders about developing mitigation, monitoring, and best management practices. As competitive procurement processes move forward to meet these goals, states are increasingly requiring assessment of environmental impacts and that pre- and post-construction data be collected by bidders, in addition to complying with the federal environmental statutes (such as ESA, MMPA, and MSA).

¹From the National Offshore Wind Strategy Report 2016: <https://www.boem.gov/sites/default/files/renewable-energy-program/National-Offshore-Wind-Strategy-report-09082016.pdf>

Opportunity Statement

The growth of the offshore wind industry represents a chance to offer renewable energy to millions of Americans, thereby reducing emissions of carbon and other pollutants and generating a host of related environmental benefits. Pursuing this opportunity requires a balanced approach to development that includes avoiding, minimizing, and mitigating potential effects on the ocean ecosystem as offshore wind development has the potential to affect the marine environments and various trophic levels that constitute their habitats. Additionally, it is critical that a greater understanding of the effects of wind energy on the environment be developed over time to help inform adaptive management.

Several protected migratory and resident wildlife species including fish in waters off the eastern seaboard have ranges that overlap with the current and proposed wind energy areas. These species, and the recreational and commercial interests they support have significant legal protection afforded to them under U.S. wildlife laws, and responsible offshore wind development and siting will require abiding by these laws. Specifically, the protection of marine and migratory birds and bat species are listed as threatened or endangered under the Endangered Species Act (ESA), within the jurisdiction of the Department of Interior, and the protection of all marine mammals is covered under the Marine Mammal Protection Act (MMPA), within the jurisdiction of NOAA.

Studies conducted in Europe, where offshore wind farms have a roughly 30-year history, are providing critical information about potential environmental effects of offshore wind, but there remains much more to understand about the short and long-term effects of offshore wind particularly in U.S. waters, where differences in the marine ecosystems present new challenges for responsibly developing and operating offshore wind projects.

As the first projects are permitted in U.S. waters, regional scale coordination offers an opportunity for all stakeholders to devise their environmental impact study plans in a manner that will convey comparable results while satisfying federal and state regulators. Building regional understanding in this way could lead to greater certainty for developers and lower energy procurement costs for States. Relatedly, a better understanding of the implications of offshore wind energy on the environment including cumulative effects will help build public, and non-governmental organization (NGOs) support. These stakeholders would also benefit from sharing science information, standardizing data collection and monitoring protocols, and defining key scientific research needs at the project, regional and ecosystem-wide scales. A regional wildlife science entity (RWSE) for Atlantic offshore wind could meet these needs.

Currently, numerous federal and state agencies, non-governmental organizations (NGOs), developers, and universities are sponsoring or requiring a host of studies to evaluate potential effects of offshore wind development (e.g. benthic impacts of foundations or other installation activities, acoustic impacts on various organisms from project construction and operation). Requests for Proposals from states to procure power include a range of approaches for environmental research as well as, in some cases, avoidance, minimization, and mitigation measures. There would be value in bringing consistency to these approaches across the region. Finally, parallel efforts regarding studies to inform best practices in offshore wind development as it pertains to the fishing industry are underway through the Responsible Offshore Science Alliance (ROSA); These efforts should be kept in close coordination with the RWSE.

To successfully advance environmentally responsible offshore wind power development activities in U.S. waters, effective, multi-sectoral, regional collaboration is needed. **Through engagements to-date,**

stakeholders have identified several benefits of collaboration on research and monitoring across offshore wind projects that a properly structured RWSE will provide, including a means to identify priorities for relevant science, coordinate on aligning funding to meeting those priorities, and ensuring appropriate data and standards are in place to support pursuing the science priorities. A regional effort can help ensure better understanding of the impacts and mitigation strategies for the many species that interact with multiple developments over time. Only this approach will produce relevant, credible, and broadly beneficial regional monitoring approaches and ensure research needs for wildlife and marine ecosystems are fully and proactively addressed. Appendix 1 outlines further details on the expected benefits of RWSE to specific sectors. Appendix 1 outlines further details on the expected benefits of RWSE to specific sectors.

Complementary Features to Existing Regional Efforts

Numerous shared enterprises for collecting, holding, and synthesizing data for offshore wind and wildlife already exist but have not been established as a public/private model to deliver science focused on the interactions of offshore wind development and wildlife. However, the existing Federal Partnership among the US Fish and Wildlife Service (USFWS) under the US Department of Interior (DOI), the National Marine Fisheries Services (NMFS), the Navy, and BOEM—the Atlantic Marine Assessment Program for Protected Species (AMAPPS) has been operational for close to a decade. AMAPPS monitoring and research has been directed to support Outer Continental Shelf (OCS) offshore wind development processes and data needs and serves as an effective federal model to develop data on the distribution, abundance, behavior, and ecology of marine mammals, sea turtles, and birds. Leveraging lessons and structure from AMAPPS and exploring something similar that allows for private-side structure would be beneficial.

Other related efforts include the Northeast and Mid-Atlantic Ocean Data Portals (run by the Northeast Regional Ocean Council, NROC, and the Mid-Atlantic Regional Council on the Ocean, MARCO), the Northeastern and Mid-Atlantic Regional Associations of Coastal Observing Systems (NERACOOS and MARACOOS), the National Oceanographic Partnership Program (NOPP), the Rutgers University Center for Ocean Observing Leadership (RUCOOL), and the Atlantic Flyway Council. In some cases, there may be opportunities to connect with efforts in other geographies, such as the Collaborative Offshore Wind Research into the Environment (COWRIE) in Europe. Additionally, the Responsible Offshore Science Alliance (ROSA) has recently launched to advance regional research and monitoring of fisheries and offshore wind interactions and NOAA is participating in the International Council for Exploration of the Sea's Working Group on Offshore Wind Development and Fisheries. In the process of setting up the RWSE, it will communicate with these other entities to identify shared goals, synergies, the unique role of the RWSE, and how to best collaborate across efforts to avoid redundancies and increase efficiencies. There is an expectation in setting up the RWSE that coordination and collaboration will occur with these entities, where appropriate.

HISTORY OF THE RWSE EFFORT

This Organizational Vision is the result of a yearlong engagement effort with a range of stakeholders along the Atlantic Coast.

Sponsored by NYSERDA (New York State Energy Research and Development Authority), MassCEC (Massachusetts Clean Energy Center), and BOEM, Cadmus and CBI (C&C) have been supporting the effort to develop the Regional Wildlife Science Entity for Atlantic Offshore Wind (RWSE). Over the course of 18-months, the process has involved **conducting 7 case studies, holding over 55 interviews, facilitating 3 workshops, and soliciting continuous guidance via regular meetings with the Coordinating Group** (described within the table below). The findings from these efforts are summarized in this document, which has been circulated for stakeholder feedback multiple times during late 2019 and early 2020. Details of the process are outlined below.

DATE	EFFORT
April-May 2019	Conducted 7 case studies, 25 stakeholder interviews, and facilitated an initial workshop in New York, NY on May 15 th , 2019, to explore the concept. Case studies included the Gulf of Mexico Alliance, the Offshore Renewable Joint Industry Project, and a matrix of science collaborative models.
May 29-30, 2019	Sponsored by the University of Delaware’s Special Initiative on Offshore Wind (SIOW) , held an additional workshop of 28 leaders and decisionmakers to further discuss establishing this RWSE, on May 29-30 th in Pocantico, NY.
May 2019	Supported the formation of a representative “Coordinating Group” (CG) at the SIOW workshop in May 2019 . This CG includes representatives from federal and state agencies, offshore wind development companies, and environmental organizations. The CG was formed to lead the “progress strategy” and serve as the interim guiding body for the RWSE.
Fall 2019	Held a second round of 30 interviews with stakeholders to advise the development of this document and entity.
Fall 2019-Spring 2020	Developed this document- Case for Action and Vision for Potential Entity - and circulated to all sectors and participants for comment and revision multiple times.
January 31st, 2020	Held a second regional science workshop on January 31 st , 2020 in Boston, MA, with 47 key stakeholders across all sectors, to further advance and refine the details of the entity.
February -April 2020	Revised this document (Case for Action and Vision) to incorporate the feedback from the January 31 Workshop.
March-April 2020	Held calls with all sectors to establish Sector Caucuses .

The remainder of this document outlines a potential organizational vision based on the findings of the above-outlined efforts. **This document is intended to serve as an input to support the sectors involved to advance RWSE from a concept to a functioning, entity.**

ORGANIZATIONAL VISION

REGIONAL WILDLIFE SCIENCE ENTITY (RWSE)

This Organizational Vision articulates a vision for the RWSE as a collaborative entity. It is anticipated that details of the structure and governance process will be refined over the course of the Pilot-Years (see Pilot-Years Workplan section). It is not anticipated that the RWSE will be a new, formalized and stand-alone non-profit organization.

Mission

To collaboratively and effectively conduct and coordinate relevant, credible, and efficient regional monitoring and research of wildlife and marine ecosystems that supports the advancement of environmentally responsible and cost-efficient offshore wind power development activities in U.S. Atlantic waters.

Scope

Geographic Area

The geographic scope includes waters along the Northeast and Southeast U.S. Continental Shelf in the areas where offshore wind development is being developed or is proposed. It is recognized that the concept could eventually be considered in the West Coast, Great Lakes, and/or U.S. territories after additional engagement with stakeholders in these regions and advancements in offshore wind activity.

Wildlife Definition

“Wildlife” includes marine mammals, sea turtles, protected fish species and corals, birds, and bats. Additionally, for the purposes of RWSE, wildlife are part of a complex ecosystem of various trophic levels including fisheries resources and benthic organisms, and oceanographic drivers upon which the aforementioned species depend.

Scope of Inquiries

The primary subject matter scope will initially include wildlife and habitats (e.g., marine mammals, sea turtles and birds, bats, protected fish species, corals, and the complex ecosystems in which affected wildlife exist). RWSE will seek to coordinate with entities such as Responsible Offshore Science Alliance (ROSA) on matters associated with fisheries and other topics of commercial interest.

Shared Values

Collaboration	Accountability	Credibility
Accessibility	Communication	Transparency
Relevance	Quality	Efficiency

Objectives

The RWSE seeks to meet the following objectives:

- **Identify, prioritize, and support hypothesis-based, peer-reviewed science through a shared set of key regional-level data gaps and needs** focused on the interactions between wildlife (species and habitat) and offshore wind development that cannot be readily addressed at a project scale (e.g., potential **cumulative impacts**). This includes but is not limited to behavior, disturbance, avoidance, displacement, injury, or mortality and population-scale effects.
- Facilitate collaborative and independent **scientific products that can be effectively used for management and conservation of wildlife** interacting with offshore wind development activities. This will support research that identifies and evaluates avoidance, minimization and/or mitigation (if necessary) technologies and practices, including post-construction data to inform decision-making under various management authorities, such as the Endangered Species Act, Marine Mammal Protection Act, and other federal and state laws.
- Support consistent **principles, methods and standards** for sampling, data collection, and data management, across projects and jurisdictions to ensure comparability and efficiencies in collection and approach. Comparable data allows for more efficient **data collection** and resulting data that offers broader utility of analysis to a wider set of stakeholders.
- Ensure there is consistent, useful, centralized, and sufficient **regional monitoring, data synthesis, environmental metrics, and predictive modeling incorporating key environmental variables** to supplement baseline information to better understand trends, changes and regional and/or cumulative effects.
- Establish a governance structure that simultaneously facilitates collaboration while respecting **state sovereignty**.
- Ensure monitoring research results are **shared among stakeholders and useful** in advancing offshore wind and sustainable marine ecosystems, providing for **transparency and accessibility of information and data**.
- **Identify and leverage efficiencies** to avoid redundancy and create joint value, including cost efficient data collection and analysis and **pooling resources** to fund joint priority regional-level projects.
- Facilitate the effectiveness of **adaptive learning and management** as future offshore wind projects are advanced through providing data and science.
- **Collaborate and connect scientific entities** across the region and sectors, including coordinating with the many **existing organizations and networks** already undertaking ocean and related monitoring, mapping, and research.²

² Examples of existing organizations and networks: Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS), The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), aquariums, universities, the Mid-Atlantic Regional Council on the Ocean, the Mid-Atlantic Committee on the Ocean, the Northeast Regional Ocean Council, Animal Telemetry Network (ATN), etc.

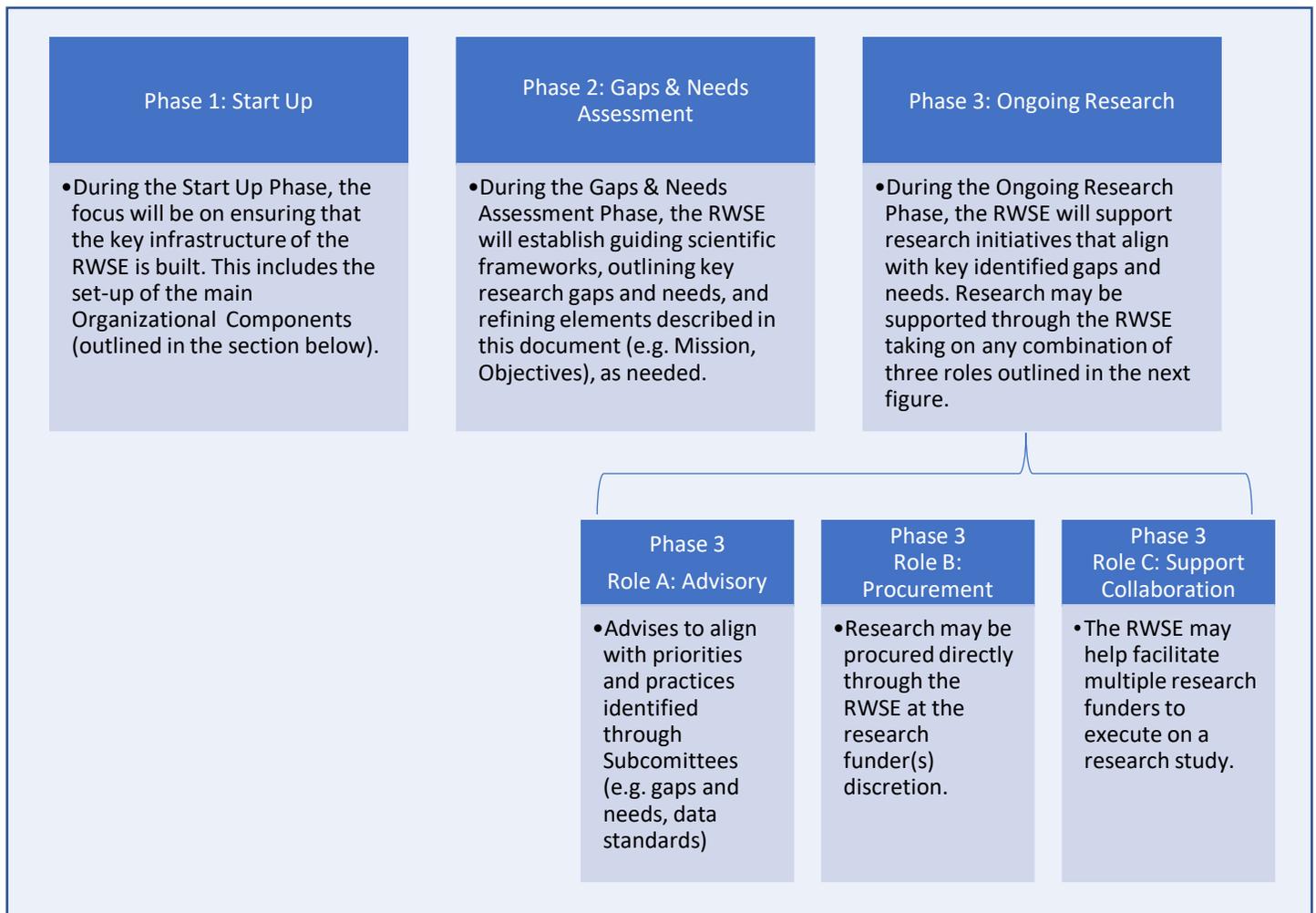
These objectives are also important parameters for identifying what kinds of specific work the RWSE might undertake or choose not to undertake. For instance, the RWSE is focused on regional scientific questions; thus, research particular to a project that is not that relevant to the region as a whole would best be done outside the regional focus of the RWSE. Additionally, some entities might choose to undertake research, but are not be open to the RWSE’s methods, standards, and transparency objectives, and thus that research too would likely be done outside the RWSE.

RWSE Functions in Phases

There are three functional phases that the RWSE is expected to advance through, including 1) Start Up, 2) Framework Development, and 3) Ongoing Research. Note that the type of activity in each phase is not limited to that phase. For instance, following the Start Up Phase, it is likely that the RWSE will continue to improve its organizational infrastructure. Similarly, while the Framework Development phase will emphasize a gaps and needs assessment, the initial findings and framework will continue to evolve. Finally, it is possible that initial research may begin to occur during the Start Up and Framework Development Phases.

The focus of each phase is outlined below in Figure 1.

Figure 1. Summary of the three key RWSE Functional Phases



Organizational Components

Table 1 outlines the key actors within RWSE, and the following sections further delineates roles and responsibilities.

Table 1. Summary of RWSE Elements, Functions, and Eligibility for Participation

Actor	Summary
Steering Committee	A group representing the key sectors. Provides guidance and direction for process and procedure of the RWSE overall, including to the Director and Subcommittees. Representatives are selected from Sector Caucuses.
Sector Caucuses	Sector caucuses will involve periodic meetings and listserv discussions within sectors (e.g. wind energy developers; state government; federal government; and non-governmental environmental organizations). Sector Caucuses will provide input to the Steering Committee to ensure progress on strategic research on offshore wind and wildlife topics.
Fiscal Agent	An organization with existing functional financial and administrative capacities that is willing to provide key functions for RWSE for a reasonable overhead cost. Provides infrastructure to execute administrative and financial duties to administer both operational (e.g. payroll) and research funding (e.g. letting contracts for specific services, and aggregating funding for research, as needed).
Director (and potential other staff)	Skilled staff employed by RWSE with appropriate skills and competencies to coordinate effectively. The Director conducts day-to-day management of RWSE including planning events, coordinating the committees, brokering funding and in selected cases, managing research contracts.
Subcommittees	These are the core entities that identify key gaps and needs, scope initial research concepts initially, and help maintain alignment between ongoing research and the gaps and needs of the RWSE. Subcommittees may be short term and thus are not necessarily established permanently.
Research Funders	A group of stakeholders that provide research funding, or dollars spent toward directly executing research. Research funders will likely not be a single consistent group of stakeholders. Rather, research funders will include any stakeholders that are interested in and have funding to support research that aligns with the objectives of the RWSE and with the gaps and needs assessment led by the subcommittees.
Research Community & Wider Stakeholders	Stakeholders beyond those outlined in the above sections will also be involved in the RWSE's activities. Researchers will be the primary source of scientific knowledge and expertise to support the RWSE. Researchers and broader stakeholders will play a variety of roles including supporting gaps and needs analysis, helping scope and refining RFPs for projects. Note that during the Start-Up phase, the Steering Committee and Director will need to solidify clear delineation of roles and conflict of interest policies. For example, if the RWSE evolves to a stage at which it disburses funding, individuals or groups interested in applying for funding will need to be except from participating in the development of the RFPs.

Steering Committee

What. The Steering Committee will provide governance and oversight on the processes and procedures of the RWSE.

Key Functions. The Steering Committee will likely meet via teleconference monthly or bi-monthly. Key elements of its role in both the start-up phase of the RWSE as well as ongoing are outlined below.

Start-Up Phase	Ongoing
<p>Provide overall guidance to stand-up the new entity in terms of building out its form and structure, including:</p> <ul style="list-style-type: none"> • Procure and retain the Fiscal Agent and Director; • Provide guidance to the Director on refining near-term objectives for the RWSE; • Provide criteria for how and what kind of research the RWSE supports; • Provide oversight on the establishment of funding of the operations of the RWSE; • Establish roles and approaches to membership for subcommittees 	<p>Provide general guidance and oversight to the Subcommittees, Fiscal Agent and Director, including:</p> <ul style="list-style-type: none"> • Based on Subcommittee recommendation, approve plans to align research with gaps & needs assessment • Establish and maintain two-way communication with sectors on RWSE progress, development, and direction • Provide input on cross-cutting issues like data standardization, stressors and impacts as needed; • Liaise with existing and related science efforts that Steering Committee members or others are part of

Who. The Steering Committee would include representatives from the interested sectors, including developers, federal agencies, states, and NGOs. To function practically, the Steering Committee must be relatively small to ease scheduling and general process management, and allow for input from all members (i.e., more people will result in more time spent and may delay consensus).

Number. The Steering Committee would be comprised of up to three (3) members per each of the four sectors: wind energy developers, non-government wildlife organizations, federal agencies, and states, for a total of up to twelve (12) members. The members will be appointed in staggered terms in the first year to ensure continuity and thereafter, every members will serve for three-year terms.

Decision-making. The Steering Committee makes decisions primarily on process and financial and procedural governance of the operations of the entity. The Steering Committee does not decide on priority research nor collectively make decisions about which research to fund. Decisions will be made by consensus – no sector can “out vote” or form a “winning coalition” against another sector.

Criteria for Membership. General criteria for representatives on the Steering Committee include:

- Be willing to offer the time and commitment to engage meaningfully and regularly in the Steering Committee;
- Be willing to speak on behalf of the sector caucus he/she represents (not just her/his individual organization);
- Be skilled and willing to engage in collaborative, cross-sector deliberations; and
- Preferably have contributed resources to the operating needs of the RWSE.

Sector Caucuses

What. Sector caucuses will involve standing meetings and listserv discussions within sectors. Sector caucuses will be created for the **following sectors: wind energy developers; state government; federal government; and non-governmental environmental organizations (NGOs).**

Key Functions. The sector caucuses will serve several purposes for the RWSE. Their overall role is to provide input to the Steering Committee to ensure progress on strategic research on offshore wind and wildlife topics. Specifically, the sectoral caucuses will:

Start-Up Phase	Ongoing
<ul style="list-style-type: none"> • Select Steering Committee Representatives. Select three representatives for the RWSE Steering Committee (SC) from their sector caucus members • Identify funding approaches. Each sector caucus should identify the approach they will take to provide funding for the operations of the RWSE 	<ul style="list-style-type: none"> • Stay connected to RWSE work. Caucuses provide a regular forum for all members of a sector to engage, share, learn, and keep abreast of the RWSE work. • Raise issues. Provide a forum in which sector opportunities, issues or concerns can be raised to the Steering Committee via their Steering Committee sectoral representatives • Respond to questions, and ideas. Provide a forum in which Steering Committee representatives can pose questions, issues, and ideas from the Steering Committee to the sectors

Who. Membership is meant to be clear but not onerous or overly formal. Members need only to agree to support the general mission and principles of the RWSE and to participate and engage in their caucus and in periodic or occasional RWSE activities or events.

Number. The number of caucus members may vary by sector, however, should be manageable enough to facilitate efficient yet comprehensive input.

Decision-making. The caucuses are not primarily a decision-making body. However, they have an option to utilize Consensus Procedure. On feedback and advice on substantive issues, the caucus may report a range of views if the sector is not in general agreement. The caucuses will self-appoint representatives to the Steering Committee. These sector caucus representatives will also lead and coordinate the caucuses.

Criteria for Membership. While each Caucus will develop its own framework for operating, in general, caucus members should be able to:

- **Attend meetings.** Attend and actively participate in regular caucus meetings;
- **Complete follow-up work.** Complete any follow up actions or reviews as determined through caucus meetings;
- **Attend events.** Participate in RWSE events as required, but not envisaged to exceed more than two events annually (events may include a State of the Science Workshop or Annual Forums);
- **Communicate with sector.** Ensure partners are well informed of current and relevant advancements;
- **Provide expert guidance.** Provide ad hoc guidance on projects.

Criteria for Steering Committee Membership

The sectors may select up to three representatives per sector on the Steering Committee. Each caucus should consider the following criteria for selecting its Steering Committee member representatives:

- **Aligned purpose.** Support the general principles and purpose of the RWSE;
- **Commitment.** Be willing to offer the time and commitment to engage meaningfully and regularly in the Steering Committee;
- **Open-minded.** Represent the caucus as a whole and not just her/his individual organization;
- **Clear communication.** Ensure two-way communication between the Steering Committee and caucus members;
- **Collaborative.** Be skilled and willing to engage in collaborative, cross-sector deliberations; and
- **Contribution.** Preferably have contributed resources to the operating needs of the RWSE.

Sector-Specific Caucus Guidelines. Each sector will develop its own Framework to guide the creation and use of their caucus including a clear definition of membership or participation in that caucus. Elements that sector’s Framework should include are listed in the table below.

Table 2. Sector-Specific Caucus Guidelines.

Element	Example of a sector-specific consideration
Caucus Membership requirements	<p>Membership: Caucuses should define who their membership is, recognizing different sectors may have different approaches to membership given the unique considerations relevant to each sector.</p> <p>For instance, the state government caucus will have to consider whether participation includes one lead agency per state, multiple agencies involved in energy, coastal management, and wildlife, or takes some other approach.</p>

	Levels of Membership: Caucuses should determine if they intend to have different levels of membership, and if so, what categories and commensurate rights and responsibilities go with those levels.
Selecting Steering Committee representatives	Criteria. For instance, the States might desire to have a Steering Committee member from each sub-region (e.g. New England; the mid-Atlantic, and the Southeast). Selection Process. For instance, the caucus may appoint by those who volunteer, by consensus of the caucus, or by majority vote.
Communication	Determining the process for communication between caucus members and their representatives, and the representatives communicating to the caucus from the Steering Committee. For instance, a caucus may empower its Steering Committee members to call a caucus meeting as needed or might establish a periodic meeting on a regular schedule.
General Funding	Determining financial contributions from the sector, in total, and in allocating funding expectations within the sector, at least to start, for the <u>operational costs</u> and needs of the RWSE. Financial contributions may not be equal across sectors. For instance, a caucus may suggest that it can collectively contribute XX dollars toward the RWSE operations and that the cost within the caucus is allocated according to a formula such as equal shares, by ability to pay, or some other approach.
Other Resources	Determining contributions from the sector that may be indirect funding, specialized funding or non-dollar resources. Such contributions might include dedicated staff or FTEs, financial support for events and their costs (such as meeting space, AV, facilitation, etc.), or other non-financial contributions.

Organizational Fiscal Agent

What. To avoid the cost, complexity, and time of establishing an entirely new organization to house the RWSE, an existing fiscal agent would be selected to serve in an administrative and financial role.

Key Functions. Core administrative and financial functions of the Fiscal Agent are described below.

Start-Up Phase	Ongoing
<ul style="list-style-type: none"> • Serve as the vehicle through which to technically execute the hire of and host the Director and any other potential staff (e.g. Administrator and Fellows), in close consultation with the Steering Committee • Provide a vehicle to maintain <i>operating funding</i> – funds for the Director and other staff, various service contracts (legal, communication, auditing, facilitation, 	<ul style="list-style-type: none"> • Provide technical platform to administer payroll, benefits, and other human resources functions • Provide platform through which to execute invoicing, contracting, expense management, and managing funds (at least for consultants if not research), and systems management for the effort

<p>technical consulting), and other potential operational funds needed by the RWSE</p>	<ul style="list-style-type: none"> • In selected cases, accept and pool funds from multiple sources for research. This <i>research funding</i> includes dollars spent toward directly executing research. • Procure and contract for research as needed
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Who. The Fiscal Agent would likely be an organization with have capacity in:

- The marine environment; and
- The wind energy market, technology, and actors.

How Selected. In order to retain the Fiscal Agent, the Steering Committee will conduct a procurement process.

- The Steering Committee will develop and let (release) a Request for Qualifications (*RFQL*) requesting interest in the fiscal agent role, in consultation with the sectors..
- The procurement process will be determined by the Steering Committee, and it may involve one of the Steering Committee members serving as the procurement entity. In any case, regardless of the mechanics of procurement, the Steering Committee will have a substantial role in both the process and outcome of the effort to retain a fiscal agent and to ensure full cross-sector support for the final choice.

RWSE Director and Other Staff

What. RWSE would be staffed primarily by a full-time Director. This Director will likely need to play an executive director or leadership role and come with both scientific and strong relationship and project management skills. The Steering Committee will develop guidance and strategy to determine what additional staff and/or consultants may be needed over time to both to stand up the RWSE and deliver on projects, as funding becomes available. As the volume of work grows, this position may be divided between a Science Director and a Process Director.

Key Functions. Selected functions of the Director and other staff are outlined below.

Ongoing
<ul style="list-style-type: none"> • Organize all events or workshops, conduct initial research on data and science gaps, and organize all communications and facilitation amongst the steering committee, sub-committees, stakeholders, and general public. • Key role in helping the sectors and organizations identify funding for key gaps and needs, including brokering partnerships or joint funding for projects of interest. • Conduct communications and marketing, including using targeted tools • In selected cases in which the RWSE is procuring and contracting research, the Director and staff would provide contract management • Support the Subcommittees and Steering Committee with an initial screening of potential research projects based on the objectives of the RWSE (e.g. regional, data standardization, data transparency, etc.)

Who. The Director will need to have at least a master's or PhD in wildlife biology, marine resource management, marine ecology, public policy, environmental planning, or closely related disciplines.

How Selected. The Director will be retained by the Fiscal Agent and selected with substantial input from the Steering Committee.

Director Possible Position Requirements:

- Master's degree or PhD in wildlife biology, marine resource management, marine ecology, public policy, environmental planning, or closely related disciplines required, with at least five (5) years of professional experience.
- Knowledge of marine ecosystems of the eastern seaboard.
- Demonstrated commitment to evidence-based decision-making and the unbiased pursuit of scientific knowledge.
- Track record of effectively designing, leading, and managing multi-disciplinary teams to address complex problems in natural resource science and management.
- The ability to manage budgets, broker partnerships, and coordinate among numerous sectors and entities to achieve goals.
- Past success working with diverse audiences with the ability to cultivate strong relationships and engage in conflict resolution. The ability to work with diverse agencies, NGOs, the private sector, and researchers in a non-partisan, fair, independent, and trusted manner.
- Familiarity with principles of meeting organization and facilitation for effective group decision-making.
- Ability to effectively communicate technical data and information to non-technical audiences, and efficiently provide information to various audiences both verbally and in writing.
- Proven ability to work independently with minimal supervision.
- Action-oriented, passionate, entrepreneurial, and adaptable approach to professional responsibilities.

Other Staff. To maximize effectiveness of the Director's time, it is possible that some organizational functions could be provided through other means.

- The Director could be assisted by an administrator to execute the high anticipated amount of administrative work needed for event planning, organizational management, basic communications and operations.

- Graduate student fellows could assist the Director in desktop research, event planning, and other activities appropriate to their skill level.
- The Director would also have the ability, with Steering Committee approval and/or input, to hire consultants for specific tasks (e.g. gap analysis, communications, facilitation).

Subcommittees

What. Under the parameters and procedures set forth by the Steering Committee, the core working body of the RWSE will be the subcommittees. The subcommittees will review existing research and data, and identify gaps and needs pertinent to offshore wind development and wildlife. At the end of the gaps and needs assessment, the subcommittees could support scoping conceptual research projects that would address the gaps and needs. The hypothetical project scopes could list a purpose, key methods and magnitude of cost and effort. Subcommittees would submit recommendations to the Steering Committee.

The subcommittees would meet at least quarterly via phone and more frequently when planning workshops, and coordinate with other subcommittees on common research and monitoring topics prior to recommendations on research.

Key Functions.

Start-Up Phase	Ongoing
<ul style="list-style-type: none"> • Hold initial meeting to confirm participants • Conduct gaps and needs assessment (each subcommittee) • Based on gaps & needs assessment, identify initial priorities to recommend to Steering Committee 	<ul style="list-style-type: none"> • Continue to update gaps and needs in light of inputs from relevant workshops and reports • Review potential research projects for alignment with gaps & needs assessment • Serve as the primary “filtering mechanism” to identify the priority gaps and needs that require research (see funding section further below). • A subset of Steering Committee members may sit on a review panel to select specific researchers or projects as well as continue to serve as an advisory body to that project or projects once selected.

Organizational Options.

While the Steering Committee and Director will ultimately decide the structure of the subcommittees, this section aims to inform that discussion. This section lays out the primary options by which the subcommittees could be organized, the principles for organization, key components for inclusion, and the advantages and disadvantages of each option. The subcommittees could be organized under at least two different options. Note that regardless of which arrangement is selected, there are likely to be topical themes that cut across multiple subcommittees.

1. Taxa

Primarily around taxa of interest along the Atlantic Coast. Taxa subcommittees could include: marine mammals; sea turtles; avian and bats; and one focused systems-wide on ecosystems or habitats. Under a taxa arrangement, the subcommittees would be organized as follows.

- **Birds and bats**
- **Marine mammals**
- **Sea Turtles**
- **Protected species** (when and if needed around Atlantic sturgeon and salmon)
- **Habitat and ecosystem** (might cover benthic & pelagic habitat and ecosystem interactions & effects, such as offshore wind energy effects on forage fish and consequently cascading effects on higher trophic levels)

Note that the habitat subcommittee would address larger oceanographic effects and perhaps be comprised of the chairs of each of the taxa subcommittees along with other experts (e.g. experts in physical and biological oceanography, ecosystems as a whole, and perhaps a fish ecologist, and a benthic ecologist).

2. Stressors

Cross-cutting stressors that may affect multiple species and across taxa such as physical change, energy change, and acoustics. Under a stressor arrangement, based on the Boehlert and Gill (2010) paper, subcommittees would be organized primarily around stressors across species and taxa including:

- **Physical presence of devices** (structure in the water, allisions with marine mammals and sea turtles, scour, possible displacement of birds who avoid the array, etc.)
- **Dynamic effects of devices, including energy removal effects** (such as collisions with birds and bats with spinning rotors or changes in surface/water due to turbine wake and other effects)
- **Acoustics** (the effects of pile driving, for instance)
- **Electromagnetic frequencies** (EMF) from cables, particularly to benthic and sensitive species)
- **Chemical**, if needed (chemical effects say spills from ships or hydraulic spills from equipment).

Principles for Organization

Regardless of how subcommittees are ultimately organized, they should:

- Provide an inclusive forum for a diversity of sectors and disciplines to explore existing knowledge, research gaps and needs, and potential priorities for gaining knowledge across the region on offshore wind and wildlife;
- Address overall, in some way, stressors, species of concern or interest, methods of study;
- Address broad, cross-cutting areas such as benthic habitats and ecosystems;
- Address oceanographic and physical parameters (temperature, acidity, etc.);
- Inform one another, be coordinated, and find synergies and efficiencies across taxa or across other subcommittees as organized; and,
- Take into consideration the six-level framework laid out by Boehlert and Gill (2010).

The subcommittees will need to address a range of species, stressors, methods, and ecosystems in some way to develop a coherent framework for research. These considerations are summarized in the table below.

Table 3. Range of encompassing considerations for research framework

Species	Stressors	Ecosystems	Effects & Impacts	Methods*	Oceanographic Parameters
<ul style="list-style-type: none"> • Birds • Bats • Marine mammals • Sea turtles • Protected fish species (Atlantic sturgeon; Atlantic salmon) 	<ul style="list-style-type: none"> • Allisions (water) • Strikes (air) • Benthic change • System energy alteration effects • Acoustics • EMF 	<ul style="list-style-type: none"> • Benthic • Pelagic • Eco-system • Other 	<ul style="list-style-type: none"> • Direct mortality • Injury • Avoidance • Displacement • Effort & energy expenditure • Behavioral change (congregation, dispersion, etc.) 	<ul style="list-style-type: none"> • Aerial surveys • Passive acoustic monitoring (PAM) • Tagging and tracking • Physical sampling of individuals 	<ul style="list-style-type: none"> • Biological • Physical

*Note: Methods may include both existing and potential new technological options

Comparing Organizational Structure Options

The following table briefly describes initial understandings of the advantages and disadvantages of the two options. These are not meant to be a comprehensive list, but rather, provide context for the Steering Committee and Fiscal Agent to decide on the structure of the subcommittees.

Table 4. Subcommittee organization approaches: advantages, disadvantages and mitigation measures

	Taxa Approach	Stressor Approach
Advantages	<ul style="list-style-type: none"> • Considers cumulative impacts within taxa across stressors • Some threats might be taxa specific like ship strikes on whales or rotor strikes on birds • Experts are already organized primarily around taxa (bird biologists, bat biologists, etc.) • The regulatory regimes are primarily organized around taxa 	<ul style="list-style-type: none"> • Considers competing impacts across species • More ecosystem-oriented • Science tools likely used to measure stressor impacts across multiple taxa • Brings diversity to science thought (e.g. oceanographers working with biologists) • Removes scientists from their silos and possibly engenders new ways of thinking
Disadvantages	<ul style="list-style-type: none"> • Without cross cutting work, this will not assess cumulative impacts to broader ecosystems across taxa • May increase redundancy as different taxa groups take up similar issues around stressors like noise, collisions, or energy dynamic change • Charismatic megafauna or endangered species can dominate resources to the expense of other species or ecosystems more broadly 	<ul style="list-style-type: none"> • May not assess cumulative impacts to broader ecosystems across stressors • May increase inefficiencies such as species biologists attending multiple workshops across stressors rather than just a one or a few taxa-specific ones • May not as easily address regulatory & permit needs/requirements organized primarily under taxa

		<ul style="list-style-type: none"> • Charismatic megafauna or endangered species can dominate resources to the expense of other species or ecosystems more broadly
Mitigations for Disadvantages	<ul style="list-style-type: none"> • Have taxa focused subcommittees but also cross-cutting workshops on stressors, say acoustic effects • Have a habitat or ecosystem subcommittee comprised of the chairs of each taxa subcommittee 	<ul style="list-style-type: none"> • Have stressor focused subcommittees but also species-specific workshops to assimilate knowledge across stressors for a taxa • Have a habitat or ecosystem subcommittee comprised of the chairs of each stressor subcommittee

Operating Environment

The final organization of subcommittees should support the RWSE to work efficiently in conjunction with other entities within a complex and dynamic environment. The following Venn diagram illustrates the need to connect ocean sciences (and key actors like the Cooperative Ocean Observing System (COOS)), wildlife and protected species (and key actors like NOAA, NMFS, FWS, and others) and commercial and recreational fisheries (and key actors like the Fisheries Management Councils, NMFS, and the Responsible Offshore Science Alliance or ROSA).

Subcommittees might use State of the Science workshops or retain consultants or agency personnel (or both) to identify gaps and needs (the Steering Committee, with input from the subcommittees may determine whether RWSE or other funding is utilized for these workshops);

Subcommittees would need state government, NGO, and developer participants, and also key academics or consulting-based experts to help shape the science. If academic or other experts participated in scoping and conceptual approaches to research, they could be precluded from bidding on work or precluded in playing a role in final procurements and selection processes. The Steering Committee would develop Conflict of Interest policies applicable to all subcommittees to address this issue; and

How Selected. The Director would draft a list of potential organizations for membership in each group for input and affirmation by the Steering Committee. Invitations would be issued to selected organizations (not necessarily those who are already part of the RWSE via other representation) who would self-appoint individuals based on guidance drafted by the Steering Committee. Subcommittee member numbers and numbers by sectors are less subject to exact requirements as long as there is the necessary scientific expertise included and all sectors’ interests are meaningfully represented. The Steering Committee should set subcommittee terms for term length, consensus building, and expected roles and responsibilities.

Research Community and Wider Stakeholders

What. The broader research community and other stakeholders would have a variety of roles to play in the RWSE. They may have a role in support of subcommittees, as participants in workshops or meetings, as consultants helping to identify gaps and needs, or as advisors helping scope, shape and advise on research projects. Because researchers could come from a variety of sectors and could play a

variety of roles (including potentially responding to RFPs that the RWSE lets or helps shape), the Steering Committee will need to clearly define roles and responsibilities for various activities and establish clear conflict of interest policies to avoid any problems.

Who. These stakeholders may include representation from a wide variety of organizations across all sectors e.g. universities, colleges, research centers, nonprofits, federal and state agencies, wind energy developers, and consultancies.

Research Funders

What. A group of stakeholders that provide *research funding*- dollars spent toward directly executing research. (Note that research funds are separate from *operating funding*- dollars spent to support the Director and other staff as well as various service contracts (legal, communication, auditing, facilitation, technical consulting), and other potential operational funds needed by the RWSE.

Who. Research funders will likely not be a single consistent group of stakeholders. Rather, research funders will include any stakeholders that are interested in and have funding to support research that aligns with the objectives of the RWSE and with the gaps and needs assessment led by the subcommittees. This could be federal agencies, federal grantmaking institutions like the National Science Foundation, state agencies or entities, developers, foundations, or non-governmental organizations.

Details on the funding process are outlined in the Research Funding section of this document.

Research Funding and Oversight

Following the gaps and needs assessment, the Director and RWSE at large will have an important role to play to help ensure that research is undertaken to meet those gaps and needs. Given the conversation to-date, research itself might be funded and undertaken in the following ways.

- Research can be undertaken through existing federal mechanisms such as BOEM's environmental studies program, the NMFS protected species program, the state mechanisms' such as NYSERDA or MassCEC's research funding efforts, and the private sector; and
- Research dollars might also be pooled by research funders, if they see it in their interest to do so, for synergy, efficiency, scale, legitimacy and impact. The RWSE Fiscal Agent could be the primary means to pool those joint research dollars.

The following figure outlines the various parties and their roles in securing and managing research funding. It assumes that a Gaps & Needs Assessment has already been completed.

Decision-making and Example Scenarios

Details of the process outlined in the figure above will need to be clarified further as the RWSE is fully stood-up. The Steering Committee (with recommendation from the subcommittees and Director) will need to decide whether a project or projects should be part of the RWSE process managed by the fiscal agent and RWSE director.

In general, the process is designed so that priority research projects emerge from the work of Subcommittees. In addition, funders will choose how they spend their money. For example, states may choose to fund projects regardless of others' interest through their own existing processes. Developers may choose to fund any number of monitoring or research efforts without any input or approval from others. In such instances, the benefit of the RWSE is that it offers a structure through which research can be aligned to the gaps and needs. This includes support in determining those gaps and needs around which research can be proposed (e.g. cumulative impacts), as well as support in ensuring research is executed in a manner that aligns with gaps and needs (e.g. data consistency).

If there are too many funded projects for the RWSE to support in one year, it is possible that the RWSE stakeholders may need to decide which ones get prioritized and which ones either wait or are executed with less input and coordination from the RWSE. This decision could be left in the hands of the Director, the Steering Committee, or some joint process between the two with input from Sector Caucuses and Subcommittees.

To provide a clearer understanding of how the process might work from research conception to research completion, we offer a few example scenarios. As noted in the image above, the Director would conduct coordination throughout all examples.

- 1. Subcommittee Recommends, State Procures.** A subcommittee details that one research project that is needed is a bird avoidance study of five common species of seabirds along the east coast. A state determines that given their interests, dollars, and procurement processes, it is interested and willing to fund this project alone. The state asks the subcommittee for a subset of experts from the subcommittee from universities, consulting firms, and federal agencies to serve as scientific advisors/review panel to the project (anyone sitting on this subset of the subcommittee would not be allowed to bid on that study). The state prepares the Scope of Work, obtains advice from the subcommittee's review panel, lets the Scope of Work for responses through their standard procurement, reviews the proposals with advice from the review panel, selects, contracts, and oversees the research. The subcommittee's review panel continues to participate in advice and oversight to the state for the work.
- 2. Developer Recommends, Subcommittee Reviews, RWSE Fiscal Agent Procures.** An individual developer proposes -- apart from the subcommittee gaps and needs projects -- a new, different project around piping plovers and impacts of construction noise on migration because this issue is affecting several of their project sites. The subcommittee reviews this "unsolicited" research study, offers comments, and either recommends or doesn't recommend that the study meets regional needs to the Steering Committee. The Steering Committee, in consultation with the Director, would ensure it met the criteria for regional research laid out as part of overall procedures. If it does meet regional needs, the developer may then decide to run the study through the RWSE. The fiscal agent works with the funding developer to prepare a Scope of

Work. The Fiscal Agent asks the subcommittee for a subset of experts from the subcommittee from universities, consulting firms, and state and federal agencies to serve as scientific advisors/review panel to the project (anyone sitting on this subset of the subcommittee would not be allowed to bid on that study). The funding developer and fiscal agent obtain advice from the subcommittee's review panel, lets the Scope of Work for responses through the fiscal agent's standard procurement, review the proposals with advice from the review panel, select, contract, and oversee the research. The subcommittee's review panel continues to participate in advice and oversight to the funding developer and fiscal agent for the work.

- 3. Subcommittee Recommends, Director Brokers, Fiscal Agent Procures.** A subcommittee details that one research project that is needed is a broader scale study to test the placement and use of Passive Acoustic Monitoring (PAM) devices to detect marine mammals across an entire wind energy area (not just one project site). No single organization offers to fund this study. The RWSE Director reaches out to potential funders, developers, state and federal agencies, and identifies a mix of five (5) funders all willing to contribute to the effort. The fiscal agent works with the funders collectively to prepare a Scope of Work. The fiscal agent asks the subcommittee for a subset of experts from the subcommittee from universities, consulting firms, and federal agencies to serve as scientific advisors/review panel to the project (anyone sitting on this subset of the subcommittee would not be allowed to bid on that study). The funders and fiscal agent obtain advice from the subcommittee's review panel, let the Scope of Work for responses through the fiscal agent's standard procurement, reviews the proposals with advice from the review panel, select, contract, and oversee the research. The subcommittee's review panel continues to participate in advice and oversight to the funders and fiscal agent for the work.

The above examples do not represent an exhaustive list of ways in which the RWSE could function. For example, it is possible that over time the RWSE could coordinate a regional study for which a set of states then procure individually for their territory. It should be noted that each of these different examples has a different level of resource demand and engagement by the RWSE and its staff. For instance, in the first example, a state undertakes the procurement, so this is less time intensive for the RWSE staff. In example 3, however, the RWSE Director will spend considerable time assembling and supporting the funders as well as overseeing and running procurement and research oversight. Thus, the RWSE might charge a lower overhead rate on non-procured but vetted research as in Example 1 versus while charging a higher overhead rate for assembled and procured research as in Example 3. In general, these different approaches could allow the RWSE to grow over time from one mostly focused on process and coordination to one overseeing an extensive amount of research.

Operating Costs

RWSE would require operational dollars to function (separate from research funding). Operating costs would involve:

- **Personnel.** Staff including a Director and maybe an administrator;
- **Overhead.** Overhead charged by a fiscal agent;
- **Events.** Including associated costs such as AV, meeting space, food (if not funded by federal agencies), facilitation, travel for personnel and some kinds of participants (e.g. key scientists); and
- **Contracting.** For some services such as consulting for reports or gaps analysis, communications, facilitation, and other service functions.

The total estimated annual operational costs (for the pilot year) of these activities, not including research, is as follow:

- Roughly \$325,000 for basic staffing, overhead, and administrative functions;
- An additional \$100,000 for consulting on gaps and needs;
- An additional \$165,000 for events and workshops;
- For a total of approximately \$625,000.

Table 5. RWSE Operating Cost for Pilot Year

An approximate pilot year-year budget follows below. Note the costs below would likely need to increase to match the scope of the objectives described in this document. Additionally, travel costs have been included as reference but may not apply given COVID-19-related travel advisories.

BASELINE COSTS (no events)		
Staffing	Amount	Subtotals
Full Time Director	\$ 125,000	
Half-Time Administrator	\$ 35,000	
<i>Sub-Total Salaries</i>	\$ 160,000	
Benefits (FICA, Health and Dental) (25% of Salaries)	\$ 40,000	
Graduate Student Fellows (1 per semester plus summer)	\$ 15,000	
Total Staffing		\$ 215,000
General Administrative		
Internet, Cell Phone (\$150 per person per month)	\$ 2,700	
Office Supplies	\$ 5,000	
Software purchases	\$ 5,000	
Computer purchases/leasing (annual cost for leasing)	\$ 5,000	
Printing	\$ 5,000	
Total Overhead		\$ 22,700
Communications		
Basic website design and maintenance	\$ 20,000	
Webinar and conference call license	\$ 5,000	

<i>Total Comms</i>		\$ 25,000
Consulting		
Prioritization, Gaps Analysis, facilitation and other technical needs	\$ 75,000	
Legal and other support	\$ 25,000	\$ 100,000
Travel		
<i>Travel for Staff</i>	\$ 25,000	\$ 25,000
TOTAL CORE BASELINE COSTS		\$ 387,700
Fiscal Agent Overhead (assumes 15%)		\$ 58,155
TOTAL CORE BASELINE COSTS + OVERHEAD		\$ 445,855

SUPPORT, EVENT AND CONVENING COSTS		
Meeting Costs (for various committees)		
<i>Biennial State of Science RSE Meeting</i>		
Paid meeting space, AV, Food, Facilitation, Travel Stipends for	\$ 50,000	
Travel stipends for scientists	\$ 25,000	
Subtotal (1 meeting in total, every other, or cost x .5)	(X 0.5)	\$ 37,500
<i>Taxa Regional Needs Workshops</i>		
Paid meeting space, AV, Food, Facilitation, Travel Stipends for	\$ 30,000	
Support of Principal Investigators	\$ 40,000	
Travel stipends for scientists	\$ 15,000	
Subtotal	\$ 85,000	
1.5 workshops per year (3 in total, each, every other year)	(X 1.5)	\$ 127,500
TOTAL SUPPORT AND EVENT COSTS ANNUALLY		\$ 165,000
TOTAL ANNUAL BUDGET		\$ 610,855

Operating Funding

Operating funding could come from multiple sectors, depending on interest, ability to pay and legal constraints for what can be paid for. The entity will need baseline operational funding for staffing, overhead, and events, though funding for research itself may fluctuate year to year depending on need. Funding commitments will be sought across sectors, although details on commitments have not yet been determined. It is possible that all sectors will contribute operational funding at some level and toward different budget line items. For instance, funding may include federal dollars for staffing and research, as well as private sector dollars for staffing and public funds for events, products and research.

First 18-Months' Major Activities

RWSE's major activities will include an early focus on setting research needs and identifying data gaps, developing data standards and common methodologies for monitoring and other activities, and funding (or brokering funding) for priority research needs. It will secondarily also seek to ensure research collected is shared in appropriate data formats and to communicate to various audiences' progress, findings, and results. The Director will work closely with existing regional ocean planning efforts (e.g. MARCO and NROC and the COOS system), among others, to ensure data is shared and disseminated on appropriate platforms.

Sample Workplan

The first 18 months are anticipated to commence in Spring 2020, will focus on building core organizational structure and infrastructure and begin to advance science objectives. The table below provides an overview and is followed by additional details on actions within each section of the timeline.

As a note, the Coordinating Group (CG) will continue to serve as the interim process strategy structure until a Steering Committee is formed. A proposed transition is included in the steps below.

This section provides further detail on the Sample Pilot-Year workplan.

Pre-Pilot Period (February-April 2020)

- **Generate alignment on this Organizational Vision and Pilot-Year Workplan** within the CG and solicit initial input from stakeholders involved in workshops and interviews to-date. Key actions include:
 - Revise Organizational Vision and Pilot-Year Workplan;
 - Incorporate CG input; and
 - Circulate to stakeholders for initial input and incorporate.
- Utilize the **existing Coordinating Group** to oversee the process until the Steering Committee is established.

May-July 2020

- **Collect commitments** from funders which indicate interest and willingness to support at least the operations of the RWSE.
- **Establish Caucuses** by the Coordinating Group establishing a framework for caucuses then allow the sectors to convene their own sectors to create a sector-specific caucus framework, including selecting sectoral members for the Steering Committee
- Sectors via caucuses **appoint their interim**
- Evolve the Coordinating Group into the interim Steering Committee (interim until a Fiscal Agent is selected and the process is formalized).
- **Steering Committee members Issue an RFQL for a Fiscal Agent.** Supported by C&C, one or more entities from the interim Steering Committee would issue the procurement upon behalf of the full Steering Commitment. This procurement would seek to identify interest, abilities, and the yield the best entity into which to enter into detailed discussions about how to move forward.
- **Issue communication on the above steps to existing draft list of Wider Stakeholders.** The interim Steering Committee (potentially with help from C&C) will draft and distribute an email

communication summarizing progress. The email will be sent to the existing list of stakeholders engaged in workshops and interviews that occurred with C&C during 2019. This list will form the basis of the “Wider Stakeholders” group.

July-October 2020

- **Coordinate and hold first Steering Committee meeting.** Coordinate and hold the first Steering Committee meeting, which will focus on updating the remaining Workplan. Specifically, further breakouts on roles and responsibilities will be discussed and determined.
- **Secure the Fiscal Agent** through on-going conversations with the Steering Committee.
- **Establish Subcommittees.** The Steering Committee, will take the following key actions:
 - Draft high-level outline of Subcommittee charges and proposed members
 - Issue invitations to serve on Subcommittees
- **Set up a Data Standardization workgroup** subcommittee or one across all groups
- **Refine list of Wider Stakeholders.** Build on the list of 100+ stakeholders C&C has developed and maintained to create a list of “Wider Stakeholders”.
- **Create Memorandum of Understanding (MOU) with funders that generates specific dollar-value commitment.** An MOU would outline an agreement to a good faith effort to develop a structure in line with the **Organizational Vision** through efforts listed in the Workplan.
- **If funds are secured, hire for a Director** via the Fiscal Agent. Key actions for hiring a Director include:
 - Draft job posting for a Director position by the Fiscal Agent
 - Post job posting for Director position by the Steering Committee
 - Review responses and Steering Committee advice on hire and Fiscal Agent hires Director.

November- January 2020

- **Identify data gaps and needs** to inform the RWSE, state, federal and independent research efforts.
- **Subcommittees meet to begin to identify a general framework and at least a few research projects to fill gaps and needs.** Key actions include:
 - Refine high-level outline of their charge (initially drafted by Director and Steering Committee)
 - Generate list of potential research needs
 - Each Subcommittee to select a few areas to focus on for initial research, potentially that align with existing research underway

February-April 2021

- **Develop a process of issuing RFPs by the entity** to allow for initial research to begin quickly.
- **Subcommittees continue to identify a general framework and at least a few research projects to fill gaps and needs.** Key actions include:
 - Finalize frameworks and immediate and longer-term research needs and data and method standardization
 - Each subcommittee to select a few areas to focus on for initial research, potentially that align with existing research underway
- **Hold first Workshop** to share findings to date and solicit input from wider stakeholders.

- Steering Committee, Director and Fiscal Agent work with **potential funders to secure funding and procurement methods** for initial, specific research needs
Director reports out in the first annual report.

Appendices

Appendix 1: Benefits to Sectors

Participating sectors (e.g. developers, state and federal agencies, NGOs, and academic/research organizations) will build relationships within their sector and across sectors, gain opportunities for efficiencies, be able to contribute to mutual learning, and serve as a leader contributing to science that supports responsible offshore wind development. The types of benefits that different participating organizations would gain by sector are listed below to complement the general benefits listed above. These benefits were developed by the sector stakeholder representatives themselves.

Developers

- Provides a forum across jurisdictions to **describe and establish regional scientific needs related to the interaction of offshore wind and wildlife.**
- **Reduces inefficiencies** by acknowledging best science and focusing spend on true and relevant data needs.
- **Optimizes the investment and execution of science** by pooling resources to address topics.
- **Harmonizes** (to the extent possible) monitoring protocols, data collection, and other activities across sites to ensure easier comparability and consistent approaches across projects.
- Provides **more uniform, consistent, and clear regulatory expectations and requirements.**
- Allows for data collection and scientific inquiry needed to assess **regional and cumulative effects and impacts** beyond the project-by-project scale.
- Provides for learning and understanding across projects and developers, increasing the ability of developers to **assess, avoid, or reduce risk with greater certainty.**
- **Creates credibility and certainty** when dealing with project stakeholders concerned about wildlife impacts.

Federal

- To achieve **co-existence** with the conservation and management of protected species and offshore wind energy development.
- Provides a coordination entity to better **inform needs for BOEM's Environmental Studies Program** as it pertains to Offshore Renewable Energy on the Atlantic Outer Continental Shelf, as well as other potential programs of the Department of Energy, the Navy, and National Oceanic and Atmospheric Administration.
- Provides scientific understanding **to inform cumulative impact assessments** at the regional level of analysis.
- Coordinated and standardized research and monitoring will help **inform federal lease conditions**, regional and site-specific impact assessments, and adaptive mitigation and monitoring requirements.
- Provide guidelines and standards for oversight that **ensures unbiased data collection and analysis.**

States

- **Preserves state autonomy** while creating opportunities for sharing, learning, and joint research.
- Allows for focus on **regional and cumulative effects and impacts** beyond the project-by-project scale.

- Provides for learning and understanding across jurisdictions, increasing the ability of states to **assess, avoid, and reduce risk**.
- Allows for coordination of efforts and pooling of multiple sources of resources (e.g. funding, capabilities, expertise, survey platforms) to support research and review, **potentially leveraging more resources than otherwise would be available**.
- **Optimizes fund allocation across states and the federal government** by aligning and differentiating spending.
- **Reduces offshore wind energy procurement costs** by reducing permitting risk and stakeholder pushback.

NGOs

- Allows for focus on **regional and cumulative effects and impacts** beyond the project-by-project scale.
- Leverages multiple funders to provide for **sufficient resources** to tackle issues at the necessary scale and robustness.
- **Provides independent consideration and review** of research done by various participants.
- Helps information to be **shared transparently**.

Academic/Research/Other Organizations

- Opportunity to **understand and to participate in a focused and meaningful research and monitoring agenda** and to **strategically collaborate** to answer key scientific questions
- **Provides access** to a range of sectors and stakeholders to both understand their interests and needs and to share data, analysis, and recommendations
- **Maximizes value of research and monitoring** funding to obtain better outcomes
- Enables **access to funding for data gaps** for areas of research that are otherwise difficult to fund
- Provides a **comprehensive, regional research plan** that can aid in the development of research proposals and funding-raising

Appendix 2: Fiscal Agent

The Fiscal Agent would need to meet at least the following criteria:

- Payroll, benefits, and other human resource functions;
- Invoicing, contracting, and managing funds (at least for consultants if not research);
- Adequate fiscal controls, including auditing;
- Proven capacity in the marine environment;
- Communications ability and tools;
- Proven capacity in wind energy; and,
- Other, as determined by the Steering Committee.

In addition, it may need:

- Capacity to accept and pool funds from multiple sectors and sources; and
- Expertise or capacity in contracting for and overseeing research, and developing a Statement of Work

Appendix 3: Funding

It should be noted we explored the possibility of a “pay to play” model whereby those who contributed meaningful financial resources would have a larger role in the governance committees (Steering Committee, Subcommittees). However, not all, but many, interviewees were concerned about this approach because it: 1) limits some entities’ participation despite their strong interest in participating; 2) creates inequities and the resentments that go with it; and 3) could feed the perception or reality of undue influence over the science by paying entities. Thus, we do not recommend a model where funding is directly tied to governance.

In order to fund the above estimated costs of some \$625,000 per year on average,, the following model seems most practical. ***These numbers are to stimulate discussion and should not be seen as definitive.*** However, we also offer some other considerations after explaining the most likely scenario. Please note the following assumptions that go with this approach.

- Developers and NGOs are more likely to be able to provide general funds that go toward the operations of the entity, primarily because most, though not all, state and federal agencies have procurement, contracting, and even statutory limitations to funding staff and operations.
- At least some state and federal agencies, however, can fund events, activities, and specific projects and should be asked to do so.
- States will have a varying ability to pay, given their own interest and resources.
- NGOs with a strong interest in these topics can contribute but to a much lesser degree than other entities.
- While developers could consider contributions by MW or areal extent of lease, it is simpler, and the experience of ORJIP, to have each company with one or more leases contribute equally. That being said, there is some complexity around joint ventures and the like that need to be sorted out to determine who is and should be the “paying” companies.