

Chapter 3 - Plan Administration

The development of the ocean management plan was guided by the goals of integrated management, effective stewardship and protection of marine ecosystems, support for sustainable uses and services, and adaptive management. To carry these goals forward through implementation, mechanisms have been established to ensure successful execution and continued evolution of the plan. The Oceans Act of 2008 (Act) requires the review of the plan and its components—including the baseline assessment and enforceable provisions—at least once every five years. While this periodic formal review is critical, many of the administrative elements described below will provide for more frequent and ongoing integration of new data and information, expert guidance and stakeholder input, communication processes, and performance measures into the plan. EEA will undertake rulemaking in 2010 to implement these administrative provisions.¹

Plan Implementation

In this section, key elements for the implementation of the ocean management plan are described. Some of these components were developed in direct response to the Oceans Act and others generated to ensure effective administration of specific provisions in the plan.

Secretarial Functions and Responsibilities

The Act confers upon the Secretary of EEA the authority for oversight, coordination, and planning of the Commonwealth's ocean waters, resources, and development. The Act further stipulates that all state agency authorizations for structures, uses, or activities must be consistent with the plan. Beyond coordinated regulatory approvals, there is also an important need to ensure that other agency actions related to ocean management—including policy development, scientific research, and regulatory decision-making—are in harmony with and advance the goals of the ocean management plan. During the planning phase, an internal team of EEA agency representatives provided important input and ensured that the draft plan was in step with state statutory and regulatory responsibilities. For plan implementation and evolution, the Secretary hereby designates an interagency ocean management team. The interagency EEA Ocean Team (OT)—chaired by the Office of Coastal Zone Management (CZM) and comprised of personnel from CZM, the Department of Environmental Protection's (DEP) Wetlands and Waterways Program, the Department of Fish and Game's (DFG) Natural Heritage and

¹ The secretary shall promulgate regulations to implement, administer and enforce this section and shall interpret this section and any regulations adopted hereunder consistent with his power to enforce the laws. These regulations shall include provisions for the review of the ocean management plan, its baseline assessment, and the enforceable provisions of relevant statutes and regulations at least once every 5 years.

Endangered Species Program and Division of Marine Fisheries, and the Massachusetts Environmental Policy Act (MEPA) Office—will serve as a coordinating body, offering assistance and advice to the Secretary to support his oversight, coordination, and planning authority functions for ocean waters and development. As explained below, the OT will provide the Secretary with specific counsel on details of plan implementation and updates, coordinated project review, recommendations for mitigation, validity and synthesis of ocean resource and uses data used in plan, and ocean-related policy and research. In addition to the OT, stakeholder and expert advisory bodies, as described in the Stakeholder Input, Expert Advice, and Partnerships section below, will also continue to provide important advisory functions to the Secretary.

Coordinated Project Review

Chapter 2 lays out the management framework of the ocean management plan, which establishes three type of management areas (i.e., Prohibited, Renewable Energy, and Multi-Use) and describes performance standards to protect special, sensitive or unique (SSU) natural resources and important existing water-dependent uses. Under this framework, the implementation of the performance standards occurs both in MEPA—through the development of information necessary to characterize potentially affected resources and uses and the evaluation of siting alternatives and impact minimization and mitigation—and in individual agency permitting—through the administration of specific statutory and regulatory rules and conditions. Because these SSU resources and water-dependent uses are not aligned exclusively with specific agency jurisdiction or sole expertise, the OT will serve as the appropriate venue for coordinating agency review for proposed structures, uses, or activities subject to the plan.

Upon receipt of an Environmental Notification Form (ENF) by the MEPA Office for a proposed project subject to the ocean plan, the OT would convene to review the ENF and determine if the project warranted preparation of an Environmental Impact Report (EIR) because it exceeds mandatory thresholds or by nature of scope and intensity of potential impact. The OT would seek concurrence as to the type and extent of data and information that would be required for the project to evaluate its conformity with the plan's management standards. (Note: As described below, after plan promulgation, guidance is to be developed for minimum and scalable required data and information standards by project type, associated review processes, and basic mitigation guidance.) After consultation in the OT, agencies would convey in their written comments the data and information requirements necessary to characterize SSU resources as recommendations for inclusion in the Secretary's EIR scope.

After the proponent has prepared and submitted an EIR, the OT would again convene to develop a coordinated response as to the EIR's responsiveness to characterizing SSU resources and important existing water-dependent uses and its compliance with the plan's management standards.

Along with the standard finding as to the project's adequate and proper compliance with MEPA, the Secretary's final MEPA Certificate would also contain a determination as to conformity with the siting provision of the ocean plan and outline the provisions for mitigation. The Certificate would direct individual agencies to include in their Section 61 findings a determination that their permit/license authorizations are consistent with the ocean management plan and with the Ocean Sanctuaries Act.

As originally recommended by the Ocean Management Task Force report, mitigation measures shall be coordinated by the MEPA Director on behalf of the Secretary. The OT shall make recommendations for potential projects that support the management and planning of ocean waters, resources, uses, and development as informed especially by the priorities identified in the Science Framework.

Implementation Guidance

While the plan presents a thorough management and administrative framework, important elements will need to be further developed and refined going forward. Accordingly, over the next year, a priority for the OT will be to develop implementation guidance for:

- standards to further characterize SSU resources and important existing water-dependent uses,² including use of plan data and/or additional resource survey requirements;
- requirements for developing and submitting data during project review;
- appropriate criteria to assist with siting decisions for proposed community wind projects, working with regional planning agencies; and
- protocols for the development of appropriate mitigation for unavoidable impacts.

² The compatibility analysis component of the plan (see Chapter 3 of the Draft Ocean Management Plan) considered the potential conflicts between types of allowable development and water-dependent uses and resources, based on existing experience and understanding of current technology. The specific compatibility issues are likely to change on a project-specific basis as further experience with such development is gained, and the nature of particular conflicts changes with evolving technology. Consequently, in the future the OT will periodically review the standards in the implementation guidance to ensure that they continue to be appropriate to characterize SSU resources and important existing water-dependent uses.

The guidance is intended to provide specific direction to agencies and project proponents regarding certain aspects of implementation of the ocean management plan during the review of projects subject to the plan.

Chapter 2 describes the data used in the plan to spatially define each resource and generally describes methodologies that could be used to characterize these resources. The OT will review these methodologies to establish standard, accepted practices in terms of survey methods and data analysis procedures that will be expected of project proponents to properly characterize SSU resources and important, existing water-dependent uses. Accompanying this element of this guidance will be the development of specific requirements for data submittal to state agencies. These requirements may ultimately take the form of metadata standards, but there may be other components addressed as well. Last, commenters have submitted environmental monitoring reports from a recent offshore gas pipeline project to support the proposition that pipeline construction and operation is generally equivalent to those associated with electric or telecommunication cables, for which the Important Fish Resource Area SSU does not apply. EEA will establish a Task Force of agency staff, industry, and environmental interests with the charge to evaluate the available data, consider pipeline-specific compatibility issues, and define and map the appropriate fish resource SSU (see the science framework for additional details).

As described in Chapter 2, regional planning agencies have a role in community-scale and commercial wind energy development projects. EEA envisions that the OT will work with the regional planning agencies and private developers to establish an appropriate level of siting guidance for such projects, acknowledging that there are regional distinctions that would require flexibility in application of this guidance. EEA will then use the results from both of these endeavors to amend the ocean management plan, if necessary, through the provisions for plan modification described in this chapter.

Ocean Development Mitigation Fees and Ocean Resources and Waterways Trust

Pursuant to the Act, an Ocean Resources and Waterways Trust Fund (Trust) has been established by the Executive Office for Administration and Finance. The Trust will receive all proceeds from ocean development mitigation fees as well as appropriations or other credits. Distinct from occupation or displacement fees under Chapter 91 rules or from potential proceeds from competitive bids and/or lease terms associated with renewable energy projects, ocean development mitigation and compensation fees are payments associated with impacts to resources and uses from

development projects subject to the plan. The amount of the ocean development mitigation fees will be established by the Secretary through the MEPA process and represents mitigation for unavoidable resource impacts and compensation for impairments of use. It is expected that this mitigation will serve as the total project mitigation for natural resource impacts, and that permitting agencies will not add to this mitigation through their project reviews. The scope and scale of the mitigation varies depending on the specifics of project. As trustee, the EEA Secretary is also responsible for decisions on expenditures from the Trust which will be made in consultation with the Departments of Environmental Protection and Fisheries and Wildlife and in accordance with the following guidance and prioritization:

- Mitigation funds received from a renewable energy project are to go into the Trust with the provision that fifty percent of the funds be directed to the “host” community(ies).³ The host community(ies) must utilize such funds in accordance with the provisions in Section 1 of Oceans Act (MGL, Chapter 10, Section 35HH) and articulated below.
- Funds received from mitigation for impacts by an ocean development project are to be used for the restoration or enhancement of marine habitat and resources, except that:
 - o Funds derived from impacts to public navigation by an ocean development project should be targeted to navigational improvements.
 - o Funds for projects related to the enhancement of fisheries resources should be targeted to fisheries restoration and management programs.
- Other funds credited to the Trust are to be used only for the purposes of environmental enhancement, restoration and management of ocean resources pursuant to the ocean plan.

Expenditure of funds not deriving from a MEPA process shall also be consistent with the guidance above.

While not included as ocean development mitigation fees, income from occupation or displacement fees under Chapter 91 rules as administered by DEP will continue to be deposited in the General Fund.

³ For renewable energy projects, the term host community will mean any city or town in which all or part of the project's energy generating facilities are located within established municipal boundaries. If the generating facility comprises more than one municipality, the host municipalities shall share the fifty percent on a *pro rata* basis based on the fractional share of megawatts generated by the respective portion of the facility.

Also not included as ocean development mitigation fees, energy royalty fees may be established for renewable energy projects as follows:

- For pilot/community scale renewable energy projects, the renewable energy benefits (e.g., energy, jobs) will stand for any royalty fees.
- For commercial scale renewable energy projects, as part of the Request for Proposal and related contractual process, the Commonwealth will negotiate royalty fees to be made as annual payments for a percentage of total energy production. The royalty shall be matched with a commensurate payment—or combination of energy royalty and benefits of equivalent value (e.g., energy, jobs, municipal improvements)—to the host community(ies).
- For both pilot/community and commercial scale projects, nothing in this plan changes, nor should be construed to change, the authority of a municipality to negotiate impact fees or other community benefits with renewable energy project developers.

Revisions to Plan

While our understanding of the life, habitats, processes, and services of marine ecosystems continues to grow, important gaps still exist in our knowledge of this complex environment. Similarly, our ability to map the locations, occurrence, and intensity of current human uses has improved, but is not fully complete. At the same time, there are new uses being proposed for the Commonwealth's marine waters and in neighboring state and federal waters. For this reason, the Act calls for the ocean management plan to be revisited every five years. In addition to the formal plan amendments, there are other administrative changes that could be critical to the plan's implementation but would not warrant wholesale amendment of the plan. This section details the different types of plan modifications and the processes associated with these changes.

Routine Plan Updates

As an initiative grounded in spatially-explicit information, planning for the Commonwealth's marine waters relies on data that depict the extent, concentration, and temporal nature of the natural resources (biological, physical, and chemical) and uses, activities, and facilities in and affecting the planning area. A significant amount of data and information was compiled, synthesized, and developed for use in creating the plan. As stated above and elsewhere in the plan, there are some missing or incomplete data sets that are being developed or sought as priority actions as part of plan implementation (see the Science Framework). In addition, through ongoing monitoring, assessment, and scientific studies, existing data sets are periodically (or, in some cases, continually) being updated and improved.

The process described in this section is for certain routine updates to the plan deemed necessary for effective and efficient administration, and for keeping the plan up to date with current information, but not warranting wholesale revision through formal amendment. Such revisions would include updated data and information that directly or indirectly affect the state or locations of SSU resources and important existing water-dependent uses (as defined and described in Chapter 2), small shifts in management area boundaries, and other “fine-tuning” adjustments that do not result in significant changes to the management framework or geographic extent of the plan.

The procedure for these administrative changes to the ocean management plan is anticipated to be:

- Requests for a plan update will be submitted to the Secretary or generated internally by the EEA OT.
- The OT will conduct an initial evaluation of the proposed plan update according to these general criteria:
 - o The proposed update meets a confirmed need for adjustments to the plan.
 - o The proposed update clarifies the management or administrative framework of the current plan.
 - o The extent to which the proposed update results in changes to the management framework or geographic extent of management areas.
- For a proposed update that pertains to new or updated data, the OT will also assess the information along the lines of these general criteria:
 - o The data set is the product of a robust study design that conforms to accepted scientific standards defining the specific study area(s), study period, survey/collection methods and frequency, quality controls, and adheres to other customary principles such as peer review.
 - o The data are accompanied by acceptable geospatial meta-data which identify and document critical elements such as: the creator or originator of the data, an abstract describing the content of the dataset, information about the resolution (or scale) and accuracy of the data, and detailed description of the data table attributes.
 - o If the data has been transformed, synthesized, or extracted, any such modifications are clearly identified and decisions as to the establishment of thresholds (e.g., statistical divisions or other limits/cut-offs set for abundance values or concentrations) are clearly articulated.
- Based on its initial screening review, the OT will make a decision as to the merit of the proposed plan update. If favorable, the OT will forward the

proposed modification along with necessary contextual information describing the proposed change, its necessity, and any associated information to the Ocean Advisory Commission and to the Science Advisory Council.

- With input from the OAC, SAC, and the OT, the Secretary will either (1) move forward to include the proposed change in the plan by providing public notice of the intent to accept to proposed data set and seeking input during a 30 day public comment period, or (2) decline to move forward due to deficiencies or limitations of the proposed update.
- Based on the public comments received, the Secretary may—at his discretion—hold one or more public hearings on the proposed update.
- The Secretary will make a final decision as to approval for inclusion of the proposed update to the plan. This final decision will be noticed in the Environmental Monitor and, if accepted, the modification will be reflected in the most recent version of the plan and—if the change is new or updated data—the data set will be incorporated into the Massachusetts Ocean Resources Information System.

Formal Amendments

In accordance with the statutory requirement under the Oceans Act, the ocean management plan will be formally revised and amended at least once every five years. It is anticipated that the plan amendment process will be akin to the one undertaken to develop the first plan with a few adjustments. Such amendment could include updated data and information that directly or indirectly affect the state or locations of SSU resources and important existing water-dependent uses (as defined and described in Chapter 2), significant shifts in management area boundaries, and other changes that result in significant changes to the management framework or geographic extent of the plan. The process will continue to include intensive efforts for public input and participation, specific stakeholder discussions, engagement of the OAC and SAC, assessments of data and information, and a review of management framework, measures and policies. It is expected that future planning process for plan amendments will make greater use of the issue-specific workgroups that were used in the initial phase of the first draft plan development by enhancing their roles as functional forums for topical experts but also for interested and affected members of the public to engage in focused discussions. Another probable adjustment will be more employment of combined OAC and SAC meetings, where these two consultative bodies can engage directly with one another bringing science, policy and stakeholder perspectives together in deliberation.

The procedure for amendments to the ocean management plan is anticipated to be:

- The Secretary will initiate the plan amendment process by providing public notice of the intent to amend the current ocean management plan and the convening of a minimum of five public hearings (one each in the following regions: North Shore, metro Boston, South Shore, Cape and Islands, and South Coastal).
- Public hearings will be held to receive comment on current version of plan and its implementation over past period (~3-4 years).
- Initial OAC and SAC meetings will be held to initiate consultation with these bodies on the plan amendment and to obtain input on scope for plan revisions (including the baseline assessment and the science framework updates).
- Issue-oriented work groups will be established and meetings will be held.
- OAC and SAC meetings will be held over the period of the plan amendment process.
- A draft plan amendment will be developed and released for public comment.
- Public hearings will be held on the draft amended plan and the public comment period will remain open for a minimum of 60 days after last hearing.
- Based on public comment, revisions will be made to draft.
- The final amended plan will be promulgated.

Stakeholder Input, Expert Advice, and Partnerships

The Oceans Act included several requirements to enhance public input and incorporate scientific expertise during the development of the ocean management plan. EEA developed and implemented an extensive public involvement program both leading up to issuance of the draft plan and subsequently after the draft was published. The Act prescribed two advisory bodies to assist EEA in the development of the plan: the Ocean Advisory Commission (OAC) provided policy input during plan development, and their meetings served as a vehicle for public workshops and general public input. The Ocean Science Advisory Council (SAC) advised EEA on the science and data analysis aspects during plan development.

The extensive effort in public involvement, OAC and SAC input, and the effective relationship with the Massachusetts Ocean Partnership (MOP) all were important in the development of the ocean management plan. As the ocean management plan enters into its implementation phase, EEA anticipates continuing these efforts and partnerships with various entities such as the OAC, SAC, MOP, regional planning agencies, federal agencies, the Northeast Ocean Regional Council, and other institutions and agencies involved in related science and research. The sections below describe these partnerships and the

approach EEA will take to working with various stakeholders to ensure the continued success and evolution of ocean management.

Ocean Advisory Commission

The Oceans Act requires the OAC to meet at least quarterly, at the discretion of the Secretary of EEA (Secretary), and also prescribes OAC membership terms. As described in the Oceans Act, responsibility for selecting OAC members lies with the Governor, Speaker of the House of Representatives, Senate President, Senate Minority Leader, and House Minority Leader. This statutory requirement also includes mandates for OAC member terms, which are staggered one-, two- and three-year appointments. Because the Oceans Act envisions the OAC continuing its policy advisory role during plan implementation, the OAC will have standing meetings scheduled quarterly. However, at the discretion of the OAC Chair and in coordination with EEA, the OAC will meet only if there are agenda items.

The OAC will have several main functions: first, it will continue to serve as a policy advisory body to the Secretary during plan implementation, with a specific role as part of plan amendments (see above section describing plan amendment process). The OAC also will be a forum for annual discussions of plan implementation, using the plan's performance indicators and other information as appropriate. Finally, the OAC will be a forum for discussing new and/or emerging policy issues, which will include opportunities for specific-issue oriented meetings including appropriate stakeholder groups. For example, panel discussions will be used to help inform OAC members, EEA, and other stakeholders on particular subjects, allowing for an in-depth understanding to be gained. OAC meetings will be public and will be noticed appropriately. As feasible, OAC meetings will be held in various regions of the coast to enhance opportunities for stakeholder involvement.

Ocean Science Advisory Council

The Ocean Act establishes the SAC to assist the Secretary in compiling scientific information necessary for plan development and tasks the Secretary as coordinator of the SAC. The Act gives the Secretary responsibility for appointing SAC members and specifies institutions to be represented. The Oceans Act does not prescribe membership duration, but EEA anticipates reviewing SAC membership annually or establishing staggered terms.

As described in the science framework, EEA has identified several priority science and data acquisition tasks, and SAC input regarding these tasks will be important. To balance this need with the practical aspects of asking SAC members to commit their

time and expertise, EEA envisions forming issue-specific committees to focus on particular science-related aspects of implementing the ocean management plan and the Science Framework. Priority issues in the science framework, such as habitat classification, acquisition of spatial and socioeconomic data regarding human uses, climate change, and the assessment of performance indicators, will benefit from SAC committees of select scientists with specific expertise in these issues. These committees will meet as necessary and appropriate, on the order of two or three times annually, to provide input to EEA. Committee members will be selected for their expertise in committee subject matter and will be appointed by the Secretary, who will also serve as coordinator for these committees. Organization of these committees will occur in early 2010, and the membership and need for individual committees will be reviewed by the Secretary annually.

EEA also anticipates coordinating with MOP on issues related to the work of the SAC. For example, during fall 2009 MOP worked with EEA to bring together a national panel to discuss alternative approaches to defining ecological value of ocean resources. In the future, EEA envisions working with MOP on similar, targeted, issue-specific workshops involving national experts in particular scientific disciplines.

Regional Planning Agencies

As described in Chapter Two, regional planning agencies (RPAs) have a particular role in the ocean management plan for the development and review of renewable energy projects, including commercial-scale and community-scale wind energy projects. Regional planning agencies (Merrimack Valley Planning Commission, Metropolitan Area Planning Council, Cape Cod Commission, Martha's Vineyard Commission, Nantucket Planning and Economic Development Commission,⁴ and the Southeastern Regional Planning and Economic Development District) are also represented on the OAC. The RPA's presence on the OAC will continue to provide valuable insight regarding local and regional ocean management-related issues.

EEA anticipates working closely with the RPAs to implement provisions of the ocean management plan related to commercial-scale and community-scale wind energy projects. As discussed in Chapter Two, those regional planning agencies with regulatory authority will be developing terms for defining "appropriate-scale" as related to renewable energy projects; EEA will coordinate with the RPAs during this work. Additionally, EEA will coordinate with pertinent RPAs when community-scale

⁴ The Oceans Act currently does not list the Nantucket Planning and Economic Development Commission on the OAC. For operative purposes, the Nantucket Planning Commission will serve on the OAC at the request of the Secretary, and has been participating in the OAC to date as an active observer. EEA will support adding the Nantucket Planning and Economic Development Commission to the OAC as part of a future amendment to the Oceans Act as practical.

wind energy projects are proposed and being reviewed. See Chapter Two for additional detail about RPA roles and responsibilities regarding community-scale wind energy.

Federal Agency and Tribal Government Coordination

A key component of the development of the ocean management plan was the coordination with federal agencies. EEA made significant efforts to coordinate with federal regulatory agencies, including the US Environmental Protection Agency, National Marine Fisheries Service, US Fish and Wildlife Service, and US Army Corps of Engineers (Corps) to seek consistency and maximize efficiency with federal regulatory programs. As EEA develops regulatory provisions for plan implementation, EEA will continue to coordinate with appropriate federal agencies to ensure such regulatory efficiencies are realized. In particular, such coordination mechanisms will include working with the Corps regulatory processes through pre-application consultations, National Environmental Policy Act (NEPA) and Massachusetts Environmental Policy Act (MEPA) consistency.

During the development of the ocean management plan, EEA also met with representatives of Mashpee Wampanoag Tribe and the Wampanoag Tribe of Gay Head (Aquinnah). EEA as appropriate will continue such coordination efforts in the future. Projects subject to federal review will conduct formal tribal consultation as required under Section 106 of the National Historic Preservation Act and any other necessary federal or state law or policy.

In addition to project-specific coordination with federal agencies, EEA, through the Office of Coastal Zone Management (CZM), will also be working with the NOAA Office of Ocean and Coastal Resources Management to formally adopt the ocean management plan into the Massachusetts CZM Program. The Oceans Act mandates this effort, which CZM anticipates will begin in early 2010. Once the ocean management plan is adopted into the CZM program, EEA will be able to apply the federal consistency provisions of CZM (enabling the ocean management plan provisions to apply to the state's review of federal actions and permitting decisions).

Finally, EEA also will be coordinating with the Minerals Management Service (MMS) through a recently constituted Task Force on developing renewable energy projects in federal waters. This MMS-Massachusetts Task Force convened for the first time in November 2009 and will be meeting to discuss appropriate steps in the MMS renewable energy and leasing program. The Task Force includes state and federal agencies, tribal representatives, regional planning agencies, and Cape Cod, Nantucket, Martha's Vineyard, and Buzzard's Bay municipal representatives.

Northeast Regional Ocean Council

In June 2009, President Obama issued an executive directive calling for the development of a national ocean policy to ensure the protection, maintenance, and restoration of the health of ocean, coastal, and Great Lakes ecosystems and resources and a national framework for effective marine spatial planning in the United States. Led by the White House Council on Environmental Quality, an Interagency Ocean Policy Task Force released its interim report on national ocean policy in September 2009 and its interim marine spatial planning framework in December 2009. Among other recommendations, the marine spatial planning framework calls for regional ocean bodies—such as the Northeast Regional Ocean Council (NROC)—to coordinate the development of voluntary regional ocean plans. Massachusetts was a founding member of NROC and continues to be active in this entity, which brings state and federal agencies together to address regional ocean issues. As a continuing member of NROC, EEA anticipates working closely with NROC (and other entities as appropriate) on the development of a regional ocean plan.

Massachusetts Ocean Partnership

The Massachusetts Ocean Partnership (MOP), an independent organization of ocean stakeholders funded by the Gordon and Betty Moore Foundation, was a key partner during the development of the ocean management plan. MOP worked closely with EEA by providing financial and technical assistance with data analysis, background marine spatial planning research, other various science and research projects, and communications and stakeholder involvement. MOP provided funding and staff that enabled EEA to hold workshops, post on-line videos of meetings and hearings, and engage stakeholders throughout the development of the ocean management plan.

Following plan promulgation, EEA and MOP will continue this effective partnership to ensure continued stakeholder involvement and to enable evolution of the ocean management plan. As described in the science framework (see Volume Two), EEA and MOP anticipate collaborating on a number of the priority science and data acquisition items. These priority research tasks (such as acquisition of higher resolution data related to human uses, development and implementation of a habitat classification methodology, implementation of a data network, and others) are key aspects of the EEA vision for the next version of the ocean management plan and are also MOP priorities. To assist in these tasks, MOP and EEA may also collaborate on additional efforts, such as convening issue-specific, invited-expert workshops as needed. Finally, EEA will continue to work with MOP on communications and

outreach, such as tasks related to informing stakeholders of specific science and research projects.

Science/Data Acquisition Partners

A key aspect of the ocean management plan is that it is based on the best available science, which comes from sources both within and outside Massachusetts state government. EEA intends that this science basis will remain a foundational aspect of the ocean management plan in the future. As in the development of the ocean management plan, EEA will look to existing partners and new collaboration opportunities with other institutions and agencies. However, where possible EEA will provide support to existing programs that provide data and science that will be important to ocean management. The science framework (see Volume Two) provides an overview of some of the partners EEA anticipates working with on specific science/data acquisition priority projects. Other partners include Massachusetts agencies, such as the Natural Heritage and Endangered Species Program for their avifauna expertise, and the Division of Marine Fisheries. EEA will continue to partner with other federal agencies, such as the National Marine Fisheries Service, and other entities such as the Northeast Regional Association of Coastal Ocean Observing Systems for ocean observing/monitoring data. EEA will also look for additional opportunities to collaborate with other entities.

Progress and Performance Assessment

An integrated approach to ocean management is based on an understanding of the ocean ecosystem and the human services provided, such that management decisions incorporate ecosystem and human-use factors. Therefore, it is important that the ocean management plan adapt as better information and science are developed, policy goals evolve, and as experience in applying the ocean management plan framework is gained.

An important part of the science framework is the development and implementation of an assessment/evaluation system using a series of indicators selected for their effectiveness and efficiency in tracking specific environmental and socioeconomic components and processes, and assessing selected management options to provide feedback in an adaptive management approach. The science framework discusses the performance indicators that EEA has selected for use in evaluating the effectiveness of the ocean management plan in meeting its goals, and in evaluating socio-economic and environmental conditions in the planning area. The sections below provide an overview of the approach EEA intends to follow for evaluating the information gained through these indicators and in communicating this evaluation to the public.

Performance Indicators

As described in the science framework, EEA has developed a series of performance indicators (grouped by general subject matter—governance, environmental, and socio-economic) intended to assess the ocean management plan and to identify general trends in the ocean planning area. These indicators are presented in Table 3-1.

Table 3-1 - Performance indicators for the ocean management plan

Category	Indicator
Environmental	Change in location and/or extent of core and important habitat (e.g., feeding, nesting, breeding) of SSU species (whales, birds)
	Change in abundance/population density of species within existing SSUs (whales, birds)
	Change in areal extent of SSU resources (eelgrass, mudflats, hard/complex bottom)
	Change in fish, mollusks, and crustacean species within existing SSUs: 1) change in total biomass/abundance; 2) change in distribution of biomass/abundance across species*
	Expansion of the range of watched invasive species
	Fish Population Assessment (through use of metrics such as biomass of species, volume of fisheries landings, mean length of fish sampled, # individuals)
	Mean sea level rise
	Sea surface, water column, and bottom temperature
Socio-economic	Economic value of fisheries (commercial)
	Economic value and leased area of aquaculture operation
	Economic value of fisheries (recreational)
	Economic value and total production capacity of offshore renewable energy
	Economic value of recreational boating
Governance	Number and areal extent of management areas: SSUs, areas designated for a particular use, and areas designated for multi-use
	Number of projects proposed/permitted in use areas and areal extent, by type
	Number of projects proposed/permitted in SSUs
	Number of actions in science framework initiated/implemented
	% of required state energy produced from renewable energy in planning area
	Resources expended for implementation of plan and science framework
	Mitigation funds paid to the Ocean Use Trust Fund

As discussed in the science framework, other performance indicators (particularly in the socio-economic and environmental categories) were examined for their potential applicability, and in many cases data availability was a limiting factor. As additional

data becomes available, and in response to future policy issues, EEA intends to review periodically the list of performance indicators, and the analyses conducted under the auspices of each, to ensure that they are appropriate and useful. Further refinement of the indicators listed in Table 1 will also be reviewed periodically. In general, the governance indicators are intended to help EEA and other stakeholders identify the success or any issues in implementing the ocean management plan. The socio-economic and environmental indicators are intended to help identify new or emerging issues that may be appropriately addressed in the ocean management plan. If other management approaches are pursued in the ocean management plan, these indicators may be revised.

Process for Reporting Progress

As described above, EEA intends to report annually to the OAC on the progress made in implementing the ocean management plan. This will allow a review of any issues that emerged or were addressed during the previous year, trends that are being seen through the application of the performance indicator framework, or potential identification of new, emerging, or evolving policy issues for the ocean management plan.