

**NOAA Response to the SAB-ESMWG
 Recommendations on NOAA’s Restoration of Coastal Habitats
 April 2015**

NOAA thanks the Science Advisory Board (Board) for its thoughtful review of, and comments on, NOAA’s Coastal Restoration efforts. The group’s interest in, and support of, NOAA’s restoration programs is appreciated and welcomed. This report summarizes NOAA’s response, to date, on the recommendations of the Board. NOAA has identified three themes in the Board’s recommendations and has grouped the recommendations, and our responses, by these themes:

- 1) Restoration for Fisheries and Non-Fisheries Objectives;
- 2) Availability of monitoring and evaluation information to the public; and
- 3) Leveraging our capabilities to maximize our impact on the field of coastal restoration.

Restoration for Fisheries & Non-Fisheries Objectives

Report Recommendation #	Recommendation
2	NOAA should more clearly recognize that its restoration mandates extend well beyond fisheries.
3	NOAA should undertake a Return on Investment analysis on a small, random subsample of projects that cover multiple objectives.
4	NOAA should scale its restoration projects to more clearly fit the desired objectives.
5	There should be center(s) of excellence in restoration at NOAA that focus on fisheries and non-fisheries benefits.
6	NOAA restoration efforts should more clearly measure additional benefits beyond fisheries.

NOAA agrees that our restoration mandates extend beyond fisheries mandates and that NOAA should focus on demonstrating the broad outcomes associated with restoration for fisheries and non-fisheries benefits. NOAA Administrator, Dr. Sullivan, has emphasized that NOAA conservation efforts focus on resilience writ large – including community, economic and ecological resilience – and she has emphasized the interconnected nature of these goals.

With the broad outcome of resilience in mind, NOAA’s restoration work contributes to multiple outcomes and we work to measure and evaluate our results as much as possible. For example, most of the agency’s recent efforts on natural infrastructure are focused on determining the efficacy of natural infrastructure to reduce flooding (primary objective) while also estimating ancillary benefits and working to have them incorporated into decision-making prior to major infrastructure project funding. However, NOAA maintains that focusing monitoring to demonstrate how we contribute to

and advance the primary objectives of a particular program is presently the highest priority given limited budgets.

NOAA scales projects, and conducts monitoring at commensurate scales, to evaluate project outcomes, or how well we have achieved the objectives. For example, the Damage Assessment Remediation and Restoration Program (DARRP) explicitly scales its restoration to the damage from an oil spill or chemical release through its restoration planning process, which identifies proposed restoration to compensate the public fully for natural resource damages. Settlement funds are used to implement restoration projects. Monitoring for these cases focuses on demonstrating that the public has been compensated for the loss of trust resources. Other programs may not have a mandate to scale their projects to objectives, however the broader NOAA goals drive us to ensure that projects are put in the context of the surrounding landscape to ensure that projects help us achieve our restoration objectives.

Efforts are underway as part of NOAA's Habitat Blueprint to identify habitat conservation projects that can achieve multiple objectives and leverage resources from across NOAA and its partners. For example, the Northeast Reserves and Culebra Island in Puerto Rico were selected as a Habitat Focus Area in the Caribbean. Protection and restoration of ESA-listed *Acroporid* corals are the focal point because of their status under the ESA as well as their value to providing habitat for commercially and recreationally important fisheries. Projects are being scaled, to the degree possible, to match objectives within this geographic area.

This year, NOAA is leveraging our position as experts in coastal and marine restoration to demonstrate how restoration can be used to increase the economic, ecologic, and built environment resilience of coastal communities. Congressionally-appropriated funding for the Coastal Ecosystem Resilience Grants will be used to fund projects explicitly designed to improve ecosystem *and* community resilience in a project area. NOAA will work with partners to ensure that project outcomes are clearly identified, projects are scaled to those objectives, and results can be achieved. NOAA is also beginning to look more broadly than the measurement of the Return on Investment for a project or program, working rather to identify the "Impact of Investment." Given the role of government in implementing our mandates and providing science, service and stewardship to society, using traditional ROI can be ineffective in making investment or allocation decisions. Broadening the role of ROI to include the indirect and long-term benefits of a decision, that is understanding the *impact*, can be more useful in the evaluation of restoration and other stewardship activities.

Similarly, our proactive restoration programs have taken steps to more explicitly develop restoration objectives based on our goals and mandates and fund projects scaled to those objectives. For example, through the 2013 Community-based Restoration Program Federal Funding Opportunity, we partnered with The Nature Conservancy to oversee a cooperative agreement "Accelerating Puget Sound Habitat Restoration through Coordinated Investment" which is implementing and developing multiple projects in a targeted geographic area to benefit Endangered Species Act (ESA) listed salmonid species. The projects will have multiple benefits (e.g., flood risk reduction, strengthening agricultural viability, infrastructure updates), engage relevant stakeholders, and are coordinated with other federal, state, and NGO programs working in that same landscape. We will continue to set clear objectives and scale projects to these objectives in the next funding cycle (FY16) for the Community-based Restoration Program.

We appreciate the Board's interest in determining how to get the best value out of our monitoring. NOAA continues to work with partners, both internal and external, to further operationalize our Monitoring and Evaluation Framework that was presented to the Board, and leverage on-going evaluation efforts in the broader conservation community. For example, NOAA helped The Nature Conservancy and partners develop standardized monitoring metrics for oyster restoration. The handbook addresses both basic performance and broader goal based metrics (e.g., fish and other species enhancement, oyster broodstock, shoreline protection, water quality). The broad application of this standardized monitoring will significantly advance the science of oyster restoration by deepening our understanding of restoration technique performance, as well as enable the community to better convey the outcomes and value of oyster restoration. Socio-economic evaluation is also an important focus and we are currently engaged in socio-economic studies on a sub-set of projects. Since the release of the Board report, we have expanded our investments in the Habitat Focus Areas as part of NOAA's Habitat Blueprint. For example, in the Choptank Habitat Focus Area in Maryland, we are evaluating the benefits of oyster reef ecosystem services and assessing community resilience based on a suite of integrated metrics. The Coastal Ecosystem Resilience Grants and the FY16 Community-based Restoration Program Funding Opportunity are also opportunities for NOAA to operationalize our framework and identify fisheries and non-fisheries outcomes.

The benefits NOAA monitors and measures extend far beyond its trust resources. NOAA has a history of conducting and funding valuations of ecosystem services relevant to its mandates, which largely focus on coastal and marine species. However, NOAA also has been advancing research to adopt an ecosystem services approach which necessarily measures broader societal outcomes (e.g., quantify damages of a spill as well as restoration options to ensure that they deliver an equivalent quantity and quality of ecosystem services and valuing the benefits of restoration and coastal green infrastructure following Hurricane Sandy). NOAA also is advancing its work needed to support environmental markets by developing values for the carbon sequestration capacity of coastal wetlands and working towards approval for oyster reefs to earn credits in a water quality trading system in the Chesapeake. NOAA also is near completing a Strategic Approach for Ecosystem Services, which is intended to provide high-level, strategic guidance on how NOAA should carry out work on advancing the valuation of ecosystem services and how to apply this information to management decisions.

NOAA also believes that we have an appropriate structure to foster the collaboration needed to ensure that habitat restoration is implemented with NOAA's broader goals in mind. NOAA maintains technical expertise in habitat restoration and ecosystem services in both the National Marine Fisheries Service and the National Ocean Service. These entities provide the leadership, outreach, support and development of best practices needed in the field of coastal and marine habitat restoration. The Office of Oceanic and Atmospheric Research and Science Centers in the National Marine Fisheries Service provide scientific support that influences the management and implementation of habitat conservation programs. These groups have been formally brought together through the formation of the NOAA Habitat Conservation Team. This executive level, cross-Line Office team is intended to ensure that NOAA is identifying and collaborating on habitat conservation issues. A major focus of this team is building priorities and support for the Habitat Blueprint, which is expressly aimed at leveraging our capabilities to achieve multiple objectives in a targeted area. This team will help provide the visibility the Board suggests is warranted for the work NOAA does to influence coastal restoration work.

Availability of Monitoring and Evaluation information

<u>Report Recommendation #</u>	<u>Recommendation</u>
1	NOAA should track and make available information regarding its existing measures in the Restoration Atlas or the NERI database, ensuring consistency and accuracy in the data.
7	More of the NERI and NOAA Restoration Atlas' data should be made public.

NOAA is making a concerted effort to show the breadth of habitat restoration efforts and their results on publicly available web pages. For example, NOAA is working through its Damage Assessment Remediation and Restoration Program (DARRP) to develop a case finder that allows the public to search restoration projects by case or by restoration project. This tool will greatly enhance the public's ease of use in gaining information on restoration carried out by the DARRP and will dovetail with our efforts to present restoration project information on the NOAA Restoration Atlas.

NOAA has made a significant investment in the Restoration and Conservation Database (RCDB) that houses information on all habitat restoration projects overseen by the NOAA Restoration Center. The Restoration Atlas is the public facing part of the database. The Board suggests that in addition to general project information, NOAA should make individual project monitoring information available on the public facing Atlas. This is not a practical option for NOAA to consider given the database structure. It is much more difficult to display monitoring information that has been collected at an individual project level and does not necessarily conform to one format than to display general information fields that conform across all projects. Moving forward, as we operationalize the monitoring framework we will determine how to summarize monitoring information and determine how to make it accessible to the public.

In the meantime, and in accordance with the recent NOAA Data Sharing Policy, we now have links from projects on our Restoration Atlas to data sharing agreements, which outline the data being collected and how that data will be shared with the public. Grantees are not required to publish data, but must make the data (part of the public domain) available upon request, at a minimum. Additionally, NOAA's Research Council has delivered an approved Plan, and is working to develop appropriate policies to comply with the Office of Science and Technology Policy (OSTP) Memorandum Increasing Access to the Results of Federally Funded Scientific Research (*commonly referred to as the PARR*)¹. The ultimate goal is to increase the public accessibility of publications and digital data produced by federal researchers or by recipients of federal funds. We strongly encourage and support open sharing of data and analyses with other practitioners and the public to maximize learning and an understanding of the outcomes of public investments (e.g., peer-reviewed publications, websites, conferences, etc.). At any time, stakeholders may contact NOAA Program Officers to request monitoring information. NOAA will continue to evaluate opportunities to enhance the information available on the NOAA Restoration Atlas and other sites.

¹http://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf

Leveraging our Capabilities to Maximize our Impact on Coastal Restoration

<u>Report Recommendation #</u>	<u>Recommendation</u>
8	NOAA's strategic plan and associated implementation plans must have a greater focus leveraging the restoration funds of others to achieve multiple benefits, including those to coastal fisheries.
9	NOAA should formally recognize that its expertise in coastal habitat restoration, developed as part of its core mission, can provide added value to coastal habitats through advising and directing the use of non-appropriated funds.
10	NOAA should highlight the role it plays in working with its agency partners on projects, illustrating the separate skill sets that its staff and those of other agencies bring to the table to ensure the success of complex restoration projects.

NOAA agrees that we are in a strong position to leverage the funds and capabilities of others to achieve the multiple benefits that restoration can provide. We agree with the Board that ensuring that our influence on 'indirect' projects should be valued and highlighted, but we are still determining if there is anything more explicit that we need to do to highlight that influence in strategic plans or implementations plans.

This further evaluation is needed because in many cases our work on 'indirect' projects is highly visible. For example, NOAA is playing a key role in the Gulf of Mexico restoration underway since the Deepwater Horizon explosion and resulting oil spill. We are working across NOAA and with the Department of Commerce to ensure that the RESTORE Act proposals relevant to coastal restoration are highly valuable to long-term outcomes. Similarly, we are working with our partners at the National Fish and Wildlife Foundation to ensure that the Gulf Environmental Benefit Fund projects are coordinated with RESTORE and the Deepwater Horizon NRDA, to the extent possible. These efforts are just a few ways that we are working with partners to maximize our impact.