



## CHARTING THE COURSE:

A BLUEPRINT FOR THE FUTURE OF AQUATIC HABITAT RESTORATION IN MASSACHUSETTS

### AN OVERVIEW OF THE AQUATIC HABITAT RESTORATION TASK FORCE REPORT - JANUARY 2008

MASSACHUSETTS IS A LEADER—THE FIRST STATE IN THE COUNTRY TO DEVELOP WETLANDS PROTECTION LAWS, AND A LITERAL TRAILBLAZER IN PRESERVING OPEN SPACE. Our economic leadership has resulted in tremendous industrial, commercial, agricultural, and residential growth, but with the unintended cost of widespread habitat loss and degradation. In response, Massachusetts has also become a national leader in aquatic habitat restoration—working to support the recovery of salt marshes, eelgrass beds, rivers, streams, lakes, ponds, freshwater wetlands, and other aquatic habitats that have been degraded, damaged, or destroyed. But while significant success has been achieved, tremendous opportunities remain.

#### THE TASK FORCE

To seize these opportunities, Energy and Environmental Affairs Secretary Ian Bowles formed the Aquatic Habitat Restoration Task Force in May 2007, with broad and balanced membership and equal representation from government and non-government entities. The Task Force held six meetings from August to November 2007 and—through discussions and deliberations at the meetings and additional conversations and correspondence—achieved consensus on a course to ensure the Commonwealth's position as a national leader for aquatic habitat restoration in the decades ahead.

#### VALUE OF MASSACHUSETTS AQUATIC HABITATS

Aquatic habitats provide important environmental, social, and economic benefits for the Bay State. One study found that 32% of New England's commercial fish and shellfish directly depend on estuaries and salt marshes.<sup>1</sup> For 2001 landings from New Bedford and Gloucester alone, this translates to more than \$57.5 million.<sup>2</sup> Other research found that conserving wetlands is a natural, less expensive flood control solution for the Charles River—with potential economic benefits of nearly \$40 million per year.<sup>3</sup> Another report conservatively estimated that the overall value of Massachusetts wetlands is more than \$2.3 billion per year.<sup>4</sup>



Photo: Stephen Gersh

<sup>1</sup>Stedman, S. and J. Hanson. 1997. Wetlands, Fisheries and Economics in the New England Coastal States. Habitat Connections. National Oceanic and Atmospheric Administration, NOAA Fisheries Service.

<sup>2</sup>Holliday, M.C. and B.K. O'Bannon. 2002. Fisheries of the United States. National Oceanic and Atmospheric Administration; NOAA Fisheries Service; Office of Science and Technology; Fisheries Statistics and Economics Division.

<sup>3</sup>Schuyt, K. and L. Brander. 2004. Living Waters: The Economic Values of the World's Wetlands. World Wildlife Fund. Gland/Amsterdam.

<sup>4</sup>Mass Audubon. 2003. Losing Ground: Changes in Land Use and Their Impact on Habitat, Biodiversity, and Ecosystem Service in Massachusetts.

*While significant successes have been achieved in aquatic habitat restoration in Massachusetts, tremendous opportunities remain.*

## A TEAM APPROACH TO RESTORATION

Habitat restoration is often complex and long-term, typically requiring the resources and expertise of many partners. In Massachusetts, restoration operates on a proven partnership model that draws support and participation from government, business, non-profits, and citizens. State government provides a range of services, including developing regional restoration plans, providing technical assistance, helping to leverage funding, and managing projects from concept to completion; federal agencies provide technical support and millions of dollars in grants; non-government groups actively support restoration efforts, many assuming key roles on projects—and at the heart of the team approach are the citizens and landowners who have sought restoration in efforts to improve their communities.

## THE POTENTIAL FOR HABITAT RESTORATION

While Massachusetts has made important strides in aquatic habitat restoration, tremendous opportunities remain, providing the unparalleled potential to:

- **UNDO PAST DAMAGE:** Restoration reverses the legacy of aquatic habitat alteration and destruction. Current restoration efforts only scratch the surface of the challenge, however. Hundreds of viable sites have already been clearly identified and await restoration action, and hundreds more lie ahead.
- **LEVERAGE FUNDS:** On average, every state dollar spent on restoration leverages three non-state dollars. However, millions in federal funds remain unmatched and unused. For example, \$20 million of U.S. Army Corps of Engineers and \$24 million of Natural Resources Conservation Service funds for Massachusetts projects await match.
- **EMPOWER LOCAL INVOLVEMENT:** State efforts in habitat restoration catalyze local action. The Commonwealth's proven team approach builds long-term and sustainable local capacity for future restoration efforts.
- **PROMOTE CLIMATE CHANGE RESILIENCY:** Climate change adds urgency to the need to undo past damage through habitat restoration. Strategically coordinated efforts can identify climate change impacts on natural systems, integrate restoration plans into adaptation strategies, and help ensure that infrastructure is designed and maintained to address these impacts.
- **DEMONSTRATE NATIONAL LEADERSHIP:** Habitat restoration is an important and growing element of national and global efforts to protect the essential services these habitats provide. Massachusetts maintains a stellar reputation as a national leader in habitat restoration, which will be enhanced by further state leadership and investment.

## THE BLUEPRINT FOR SUCCESS: RECOMMENDATIONS OF THE AQUATIC HABITAT RESTORATION TASK FORCE

These six recommendations represent the big-picture steps that collectively form the blueprint for success in aquatic habitat restoration for the Commonwealth. They are intended to guide the efforts of the Executive Office of Energy and Environmental Affairs (EOEEA) and its partners to achieve greater restoration results for the next several years and into the next decade.

### RECOMMENDATION #1 - ENHANCE STATE LEADERSHIP FOR AQUATIC HABITAT RESTORATION:

Massachusetts should increase formal coordination, address broad policy issues, and elevate habitat restoration as the third component of sound environmental resource management (together with protection and conservation). Important policy issues requiring attention include the need to: coordinate with “infrastructure” agencies (such as MassHighways), promote habitat restoration on state land, develop strategies for climate change adaptation, streamline regulatory requirements, and address issues concerning the intersection of restoration and mosquito control.

**ACTION #1A** - Endorse and advance aquatic habitat restoration as an integral priority for environmental management in Massachusetts

**ACTION #1B** - Establish a new EOEEA Interagency Restoration Committee

**ACTION #1C** - Create a new staff position within EOEEA responsible for coordinating state habitat restoration efforts

### RECOMMENDATION #2 - INVEST STRATEGICALLY TO MAXIMIZE RESTORATION RESULTS:

Large areas of aquatic habitat in the Commonwealth have been lost or degraded. While the economic value of restoring these resources has not been fully quantified in Massachusetts, it has in other areas. In the Great Lakes region, a recent study found that restoration provides a 200% return on investment.<sup>5</sup> Since each state dollar leverages more than three non-state dollars—expanding existing resources and identifying new sources of support will maximize results.

**ACTION #2A** - Define restoration objectives, identify key projects, and allocate appropriate resources

**ACTION #2B** - Engage in strategic planning and coordination to ensure that state, federal, local, non-profit, and private investments leverage each other’s resources

**ACTION #2C** - Actively seek new resources and build new partnerships

<sup>5</sup>Austin, J.C., S. Anderson, P.N. Courant, and R.E. Litan. 2007. Healthy Waters, Strong Economy: The Benefits of Restoring the Great Lakes Ecosystem. The Brookings Institute.



Through a coordinated and reasoned approach to aquatic habitat restoration, Massachusetts can maximize today's opportunities and address tomorrow's threats.

**RECOMMENDATION #3 - CREATE AN INFORMED CONSTITUENCY:** The restoration of lost and degraded aquatic habitats presents significant opportunities to recover damaged natural resources, stimulate the state's economy, and improve quality of life. An outreach and education strategy that promotes the benefits of aquatic habitat restoration can build a constituency that supports increased investment and builds local capacity.

**ACTION #3** - Develop and implement an outreach and education strategy targeted to specific audiences

**RECOMMENDATION #4 - BUILD LOCAL AND REGIONAL CAPACITY TO SUPPORT AND IMPLEMENT RESTORATION:** While a strong restoration partnership exists in Massachusetts, it has not reached its full potential. Numerous non-profit organizations and local governments could provide significant contributions—but these efforts are restricted by tight budgets, full agendas, and lack of technical and project management expertise.

**ACTION #4** - Increase technical and financial support directly to cities and towns, non-governmental groups, and interested landowners

**RECOMMENDATION #5 - ENSURE EFFICIENCY IN REGULATING RESTORATION PROJECTS:** Opportunities exist to reduce permitting costs and regulatory time frames, increase regulatory support and efficiency for restoration projects, and remove regulatory requirements that act as disincentives to pursuing restoration as part of infrastructure repair or replacement projects.

**ACTION #5** - Conduct a comprehensive review of regulatory requirements for restoration projects to identify options for reducing time and cost while ensuring adequate protections

**RECOMMENDATION #6 - MAXIMIZE THE ROLE OF SCIENCE AND TECHNOLOGY IN RESTORATION:**

Science and technology provide the basis for key habitat restoration decisions, from identifying sites to designing successful restoration projects. Opportunities exist to enhance the use of science and technology in aquatic habitat restoration, particularly with monitoring and evaluating restoration success.

**ACTION #6A** - Increase support for data collection and integration to facilitate restoration site identification and inventory development, as well as integrated planning, design, and engineering

**ACTION #6B** - Expand relationships with academic institutions and volunteer-based monitoring groups to generate more monitoring and research

## CONCLUSION

These recommendations will promote a successful long-term strategy that establishes aquatic habitat restoration as a top priority environmental issue for the Commonwealth. While maintaining the proven partnership model of government, non-profits, businesses, and individuals is essential for future success—state government can and should take the lead in moving forward. Following this blueprint for success, Massachusetts will strategically position itself to maximize the opportunities of today and address the threats of tomorrow, through a coordinated and reasoned approach to aquatic habitat restoration for the next several years and into the next decade.

FOR A FULL COPY OF THE REPORT OF THE AQUATIC HABITAT RESTORATION TASK FORCE, SEE: [www.mass.gov/czm/docs/pdf/AHRTF\\_report](http://www.mass.gov/czm/docs/pdf/AHRTF_report).



## AQUATIC HABITAT RESTORATION TASK FORCE

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