

# RESTORING THE URBAN SEA

## INVESTING IN THE FUTURE

Human habitation and use is part of the character of Long Island Sound. It was with that spirit that the American statesman Daniel Webster, in the 1800s, called it the “American Mediterranean.” Long Island Sound has proved resilient to the changes human development has wrought to its lands and waters. In the 400 years since Adriaen Block’s exploration of its shores, the lands and communities around Long Island Sound have changed from forest to field, from agriculture to town and city, and from a manufacturing-based to service-dominated economy. Active efforts to protect and restore the Sound have succeeded to the point of considering a return to abundance—not to a pristine past, but to an “Urban Sea” (Koppelman et al. 1976), where humans enjoy both a healthy environment and a thriving economy.

In fact, the health of the Sound and the waters that drain into it is inextricably tied to the health of an economy that directly supports the people living in the watershed. Natural, functioning habitats provide a variety of goods and services such as flood and storm protection, water filtration, recreation, commercially and recreationally-important fish and bird populations, carbon sequestration, and other functions. Investing in these natural assets can bring real returns—clean water, healthy habitats, and sustainable and resilient communities. The result? Beaches open for summer fun, increased opportunities for recreational boating and fishing, increased areas for shellfish harvesting, rivers open for ocean-going fish to return to spawn, and wetlands and eelgrass that nurse living resources and protect coastal communities from storms. These are just a few of the tangible benefits of the social, recreational, and commercial uses of the Sound.

◀ **VOLUNTEERS PLANT DUNE GRASS SHOOTS and native shrubs at Rocky Neck State Park, East Lyme, CT, a Long Island Sound Stewardship Area.**  
(Photo by Bob Lorenz for Save the Sound)

## THE LONG ISLAND SOUND STUDY

Federal legislation enacted in the 1970s created the nation’s core environmental protection and conservation programs, such as the Clean Water Act, Coastal Zone Management Act, and Endangered Species Act. This legislation and corresponding programs led to measurable improvements in pollution control and water and habitat protection, despite an ever-increasing use of the Sound and an ever-growing population within its watershed. These programs, however, were not tailored to the specific conditions of Long Island Sound as an ecosystem, nor did they address the cumulative impacts from regulated and unregulated activities on its health.

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In recognition of the need to improve management, Congress appropriated funds in 1985 for the US Environmental Protection Agency (EPA) to research, monitor, and assess the health of Long Island Sound. Congress formally strengthened the Clean Water Act in 1987 to protect the nation’s coastal waters by creating the National Estuary Program (Section 320). The Act authorized the EPA, in cooperation with the states of Connecticut and New York, to develop a Comprehensive Conservation and Management Plan (CCMP) for protecting and improving the health of Long Island Sound. In 1990, Congress amended the Clean Water Act again, passing the Long Island Sound Improvement Act (Section 119), which established a Long Island Sound

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program office and further strengthened EPA's role in coordinating implementation strategies through cross-jurisdictional partnerships.

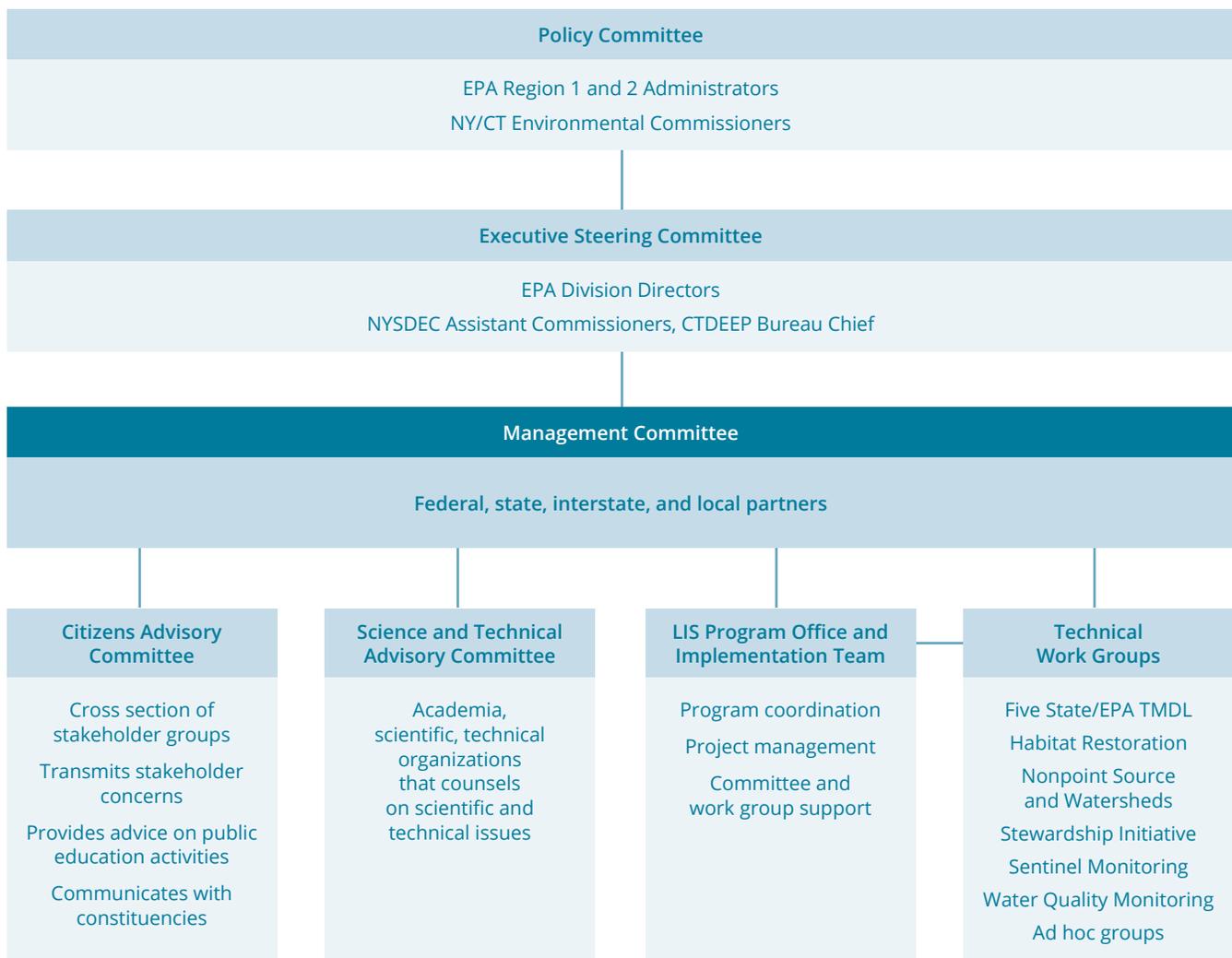
To support development of the plan, EPA and the states of Connecticut and New York in March 1988 established the Long Island Sound Study (LISS), a Management Conference involving federal, state, interstate, and local agencies, universities, environmental groups, industry, and the public. The Long Island Sound Management Conference is organized around several committees and work groups, and is coordinated by a program office. The current structure of the Management Conference is shown in Figure 1. The Policy Committee, comprised of the administrators of the EPA Region 1 and Region 2 offices and the commissioners of the Connecticut Department of Energy and Environmental Protection (CTDEEP) and the New York State Department of Environmental Conservation (NYSDEC), approves major policy initiatives and plans such as the CCMP. An Executive Steering Committee, at the Assistant Commissioner, Bureau Chief, or Division Director level within those same agencies, provides direction to the Management Committee on programs and budgets and recommends items for Policy Committee consideration

and approval. The Management Committee meets quarterly to develop annual work plans and budgets, plan and oversee projects, and assess progress and challenges. The annual work plans that are approved by the committee provide an overview of the program, highlight specific CCMP goals, reflect implementation of current and past priorities, and highlight the federal, state, local, and regional partners' significant accomplishments to restore and protect the Sound. This Management Committee is comprised of representatives of the major federal, state, and interstate agencies, and the co-chairs of the two advisory committees. Staff-level representatives of the Management Committee participate on an Implementation Team that coordinates and carries out program activities, developing annual work plans and budgets.

There are two advisory committees to the Management Conference. The Citizens Advisory Committee (CAC) communicates citizen concerns about the Sound and its management, provides advice on public education activities, and builds a constituency to support the implementation of the CCMP. Members represent a cross section of groups and organizations that use, or have concerns about, Long Island Sound, including: environmental, conservation, and watershed associations; the user community, including business, industry, real estate, sport and commercial fisheries, recreation, and boating; regional and local government; and environmental education. The Science and Technical Advisory Committee (STAC) provides objective scientific and technical guidance to the Management Committee, working to synthesize research results, identify priority science needs, and support collaboration among the region's scientists. Its members are engineers and scientists from government agencies, academia, industry, and private organizations, who represent a cross section of backgrounds and areas of expertise that are important to understanding and managing Long Island Sound.

The Management Conference includes technical work groups of regional experts to collaborate and coordinate on specific issues. The Management Committee may form and disband work groups as needed to address specific issues or challenges.

In 1994, the states of Connecticut and New York and EPA approved a *Long Island Sound Comprehensive Conservation and Management Plan* (Long Island Sound



**FIGURE 1. Management Conference Structure (under the 1994 CCMP)**

Study 1994) to protect and restore the health of Long Island Sound. This plan, developed under the bi-state LISS partnership, outlined actions to improve the quality and health of the waters and habitats of Long Island Sound.

**The 1994 plan addressed six priority problems:**

1. Low dissolved oxygen (hypoxia).
2. Toxic contamination.
3. Pathogen contamination.
4. Floatable debris.
5. The impact of these water quality problems and habitat degradation and loss on the health of living resources.
6. Land use and development resulting in habitat loss and degradation of water quality.

From its inception, the LISS decided not to involve itself organizationally with fishery management, recognizing that there are existing multijurisdictional planning programs (the New England and Mid-Atlantic fishery management councils and the Atlantic States Marine Fisheries Commission) that operate at the appropriate regional scale. Instead, the LISS focused on water and habitat quality within the Sound, which can affect species abundance and diversity, thus avoiding duplication of effort.

Using the 1994 CCMP as a blueprint for restoration and protection, the LISS refined environmental commitments and management priorities as part of action agreements in 1996, 2003, 2006, and 2011. Cooperating LISS partners have translated the plan, year-by-year, into actions that have resulted in a Long

Island Sound with cleaner water, healthier habitats, and a more aware and engaged public. Coordinated action at multiple levels of government, the private sector, and the public has accomplished much in the 20 years since the original CCMP. A detailed list of accomplishments is included in Appendix A. Documentation on the CCMP, its implementation, environmental issues, and conditions in the Sound are extensively documented in print and on line from the LISS. Readers interested in more detail on any particular issue are encouraged to visit the Long Island Sound Study website at [www.longislandsoundstudy.net](http://www.longislandsoundstudy.net).

But despite the progress, many challenges remain and new challenges have emerged such as the impacts of climate change. Recognizing that no action plan, no matter how good, can remain static over time, the LISS agreed to revise the CCMP to respond to the changing needs of communities, incorporate scientific and technological advances, and address new environmental challenges. To update the science of the Sound, the LISS STAC synthesized environmental data gathered on the Sound and its ecosystems over many prior years. Published in 2014, with the help of 55 contributing authors, *Long Island Sound: Prospects for the Urban Sea* (Latimer et al. 2014) synthesizes the advances

in science made over the past decades in understanding Long Island Sound. To create a community vision of a restored Long Island Sound, the LISS CAC developed *Sound Vision: An Action Plan for Long Island Sound 2011–2020*. The *Sound Vision* document was the product of a collaborative process conducted by the CAC that included an extensive review of the 1994 CCMP, an assessment of LISS program expenditures and outcomes, and input from a wide range of stakeholders through facilitated workshops.

Now, 20 years after the approval of the original, the 2015 CCMP sets a course for the next 20 years, formally incorporating new approaches to:

- re-energize and broaden the current Management Conference around updated shared goals and cross-jurisdictional management;
- set measurable ecosystem targets and management outcomes;
- use strong science, ecosystem service concepts, and environmental indicators to adapt and refine management;
- incorporate new areas such as sustainability, climate change resiliency, and environmental justice; and
- expand public engagement and collaboration.