SECTION 3

VISION, GOALS, AND PRINCIPLES

VISION

"The vision for the Sound is of waters that are clean, clear, safe to swim in, and charged with life. It is a vision of waters nourished and protected by extensive coastal wetlands, by publicly accessible, litter-free beaches and preserves, and of undeveloped islands. It is a vision of abundant and diverse wildlife, of flourishing commercial fisheries, of harbors accessible to the boating community, and of a regional consciousness and a way of life that protects and sustains the ecosystem."

CCMP ORGANIZATION

The CCMP is organized around four themes, each with its own goal. The 1994 CCMP, and the Sound Vision themes developed in 2011, contributed to the development of the four themes of the 2015 CCMP (Figure 6).

- **Clean Waters and Healthy Watersheds:** Improve water quality by reducing contaminant and nutrient loads from the land and the waters impacting Long Island Sound.
- **Thriving Habitats and Abundant Wildlife:** Restore and protect the Sound's ecological balance in a healthy, productive, and resilient state to benefit both people and the natural environment.
- **Sustainable and Resilient Communities:** Support vibrant, informed, and engaged communities that use, appreciate, and help protect Long Island Sound.
- **Sound Science and Inclusive Management:** Manage Long Island Sound using sound science and cross-jurisdictional governance that is inclusive, adaptive, innovative, and accountable.

The 2015 CCMP also sets ambitious, but achievable, long-term targets for the ecosystem. These **ecosystem targets** are intended to drive progress toward attaining CCMP goals. Measuring, tracking, and reporting environmental indicators of each ecosystem target will provide information to assess progress and refine and adapt management as needed. The ecosystem targets are described in their relevant theme sections. To achieve each goal and associated ecosystem targets, the CCMP identifies specific outcomes, objectives, strategies, and implementation actions.

- **Outcomes:** Broad results needed to achieve goals.
- **Objectives:** Desired management accomplishments to support outcomes.
- **Strategies:** Broad, strategic actions needed to achieve an objective.
- **Implementation Actions (IAs):** Specific, tactical actions to measurably carry out the strategies over the next five years (2015–2019). Implementation actions may apply to one or more strategies, but are organized around the main strategy addressed. Review and development of implementation actions every five years will allow for adaptive management and inclusion of emerging scientific and technological advances.

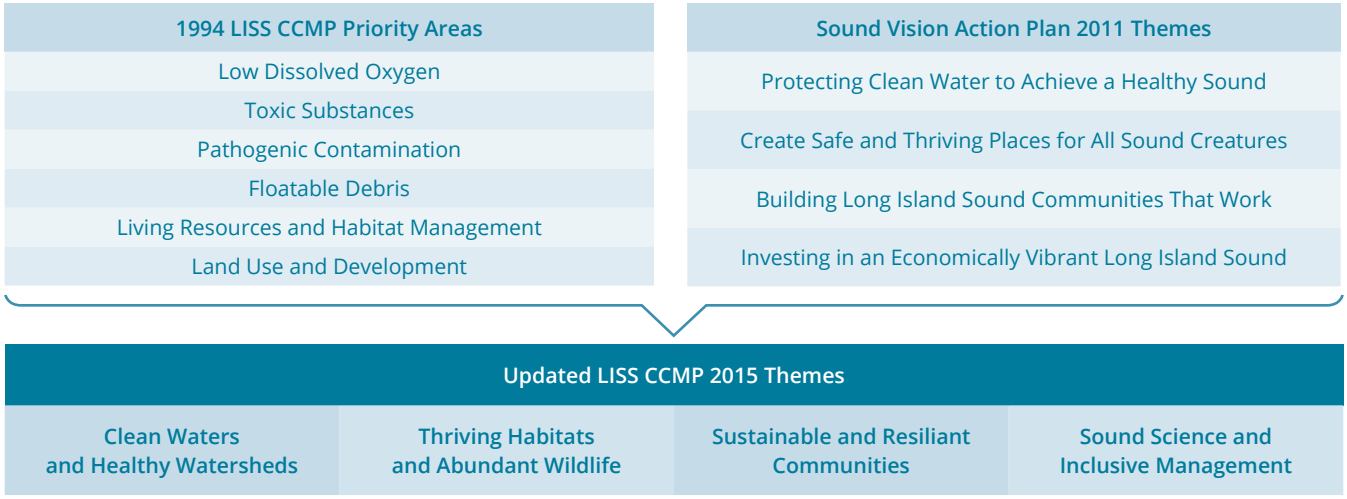

FIGURE 6. Development of Updated LISS CCMP 2015 Themes

UNDERLYING PRINCIPLES

Throughout the four themes, the CCMP incorporates integrative principles that have emerged as key challenges and environmental priorities. These include resiliency to climate change, long-term sustainability, and environmental justice.

RESILIENCY TO CLIMATE CHANGE

On October 29, 2012, Superstorm Sandy made landfall in southern New Jersey. The storm surge in parts of western Long Island Sound rose as much as nine feet above mean sea level. Flooding of industrial, commercial, and residential areas resulted in the release of chemicals and waste by-products (e.g., sludge, contaminated sediments, and hazardous chemicals) detrimental to human and environmental health, and made recovery operations more costly and lengthy.

While not directly caused by climate change, Superstorm Sandy dramatized some of the consequences that can be caused or exacerbated by it. To date, the changes to climate affecting the Sound have been subtle relative to the natural year-to-year variability in weather and to the significant consequences of human activity—port and industrial development, development of watersheds, hardening of the shoreline, destruction of wetlands, diversion of water courses, industrial and sewage pollution, and fishing pressure. But the impact of the storm surge, exacerbated by sea level rise, was anything but subtle. The need to understand and adapt to how a changing climate will affect the future state of Long Island Sound is one of the main reasons for updating this management plan.

The region must plan and prepare for increased air and water temperatures, increased water acidity, sea level rise, saltwater intrusion into aquifers, increased storm intensity and frequency, and changes in rainfall patterns associated with climate change. Understanding and adapting to climate change must be integrated across programs and activities to ensure a resilient Long Island Sound coastline and ecosystem. More frequent extreme weather events predicted as a consequence of climate change will increase the vulnerability of infrastructure and facilities to flooding, both from storm surges and watershed sources (e.g., rivers and streams). More intense storm events combined with sea level rise will increase the risk that wastewater treatment facilities, along with on-site septic systems and cesspools, will release large amounts of untreated waste into the Sound when overwhelmed by flood waters.

In addition to the built environment, natural habitats that are vulnerable to climate change impacts, particularly those that protect against flooding and contribute to carbon storage such as wetlands and eelgrass beds, need to be protected and restored to increase their resiliency to these impacts. Research, monitoring, and assessment should be conducted to better understand the impacts climate change has on Long Island Sound water quality and its marine and terrestrial habitats.

State and local governments are beginning to assess their at-risk infrastructure at many levels and develop resiliency plans to cost-effectively upgrade facilities to protect valuable equipment and minimize disruptions to critical services. Climate change adaptation and resiliency strategies need to be integrated into programs for new and existing development, housing, transportation, emissions

control, energy efficiency, and job creation. An important first step is incorporating sustainability and resiliency principles and objectives into municipal comprehensive plans (including hazard mitigation)—then building these concepts into zoning and building regulations.

LONG-TERM SUSTAINABILITY

Despite increases in human population and economic activity over the past 30 to 40 years, there have been slower rates of increase, or an overall decrease, in many air and water pollutants from regulated sources. This has been achieved mainly through the application of pollution control technologies and product bans, often stimulated by regulatory rulings. But environmental problems remain, caused by more diffuse, unregulated sources of pollution, from landscape changes, and from programs that just move pollution from one media such as air to another such as water. Sustainable development, defined as "meeting the needs of the present without compromising environmental quality and the ability of future generations to meet their own needs," can help mitigate these problems. Sustainability planning strives to balance current use and future need for energy and natural resources to maintain a healthy economy and environment over time.

Residential, industrial, and commercial development will remain a desired human use of landscapes; doing so sustainably will reduce energy costs, lessen the impact on water resources, and reduce the need for post-development remediation. Green infrastructure and low impact development (LID) are key components of sustainability planning and implementation, and can contribute to resilient natural and built environments. Green infrastructure uses natural soils, vegetation, and drainage to provide flood control, enhance habitat quality, and filter pollutants to protect or improve water quality. Planning and engineering LID practices reduce runoff and pollutant loading by lessening the area of impervious surfaces and protecting critical natural areas. Likewise, businesses can implement green manufacturing practices to reduce the use of toxic substances and mitigate the risk of spills.

Interestingly, a side effect of improving water, sediment, and habitat quality in the Sound is increased pressure to redevelop areas that previously were not considered desirable locations because of hazardous waste contamination, industrial activities, odors, or debris. Redevelopment of these sites can reduce pressure to develop green sites. Therefore, redevelopment projects must be seen as opportunities to enhance sustainability, with emphasis on climate change adaptation, stormwater management, public access, and habitat protection.

ENVIRONMENTAL JUSTICE

Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. All groups must have access to healthy air and clean water. All communities must benefit from programs to protect and restore the Sound and have equal access to the decision-making process. This requires that special efforts target traditionally underserved communities, and that outreach and involvement programs work with community organizations to address their needs through a culturally aware delivery method. An informed, involved community that reflects the full diversity of the region is needed to ensure the stewardship of the Sound.

Environmental justice must be a priority reflected in how partners implement the CCMP. Federal, state, local government, and NGO partners should incorporate EJ as an integral part of ongoing work using a variety of approaches such as:

- reconnecting urban populations to the Sound and its tributaries, through education, activities, and access improvements (see IA SC-3 and SC-5);
- including EJ as a priority topic in requests for proposals for implementation projects (see IA SC-5);
- involving students from EJ communities into community-based water and habitat improvement projects (see IA HW-13 and HW-21);
- expanding opportunities for engaging traditionally under-represented groups in the LISS (see IA SM-20), and continuing consultation with federally-recognized tribes with ties to Long Island Sound;
- building local partnerships to capitalize on national EJ initiatives such as USFWS's Urban Schoolyard Habitat Program (see IA HW-21) and EPA's Urban Waters Program (see IA WW-13);
- considering the needs and perspectives of underserved communities to build grassroots support for local action (see IA SM-21, SC-6, SC-15, and SC-18); and
- promoting sustainable development such as stormwater management practices (e.g., rain gardens, green roofs, and rainwater harvesting) and natural riverine buffers in these communities (see IA SC-37 and SC-38).