Protecting the Sound from the Adverse Effects of Toxic Substances

Toxic substances can cause adverse human and ecosystem health effects, and can result in significant negative economic impacts on the value of the natural resources of the Sound.

OVERALL CCMP STRATEGY:

The CCMP strategy to address toxic contamination in LIS has five principal elements: 1) controlling and preventing toxic contamination from all sources; 2) addressing sediment contamination; 3) improving human health risk management; 4) monitoring and assessing toxic contaminants; and 5) conducting research to investigate toxic contamination.

LIS 2003 AGREEMENT GOAL:

N/A

ENVIRONMENTAL INDICATORS/RESULTS/TRENDS:

Final data on fish tissues analyzed for toxics show a significant decline in polychlorinated bi-phenyls (PCBs) and mercury in fish species sampled. Toxic emissions in the region and to the Sound have declined due to increased environmental regulation and relocation or closing of manufacturing facilities in the watershed. Historical contaminant levels, as measured in sediments and in living marine resources, continue to show a downward trend, which is particularly evident for banned or controlled chemicals such as DDT and chlordane. Today, the remaining sources of toxic chemicals to the Sound come from sewage treatment plants and industrial discharges, which are regulated; and from urban storm water and atmospheric deposition, which are more difficult to control. Regulatory programs strive to reduce chemical discharges and minimize toxicity of effluents. However, the contaminants released in the past remain in the sediments of Long Island Sound long after the discharges cease. Emerging contaminants such as the unregulated discharge of chemicals from pharmaceuticals and personal care products represent a potential but as yet undefined risk.

2015 HIGHLIGHTS:

- The U.S. Army Corps of Engineers (USACE) has completed a Final Dredged Material Management Plan (DMMP) and Final Programmatic Environmental Impact Statement (PEIS) for Long Island Sound.
-The DOH released a new booklet for Long Island and New York City on eating fish you catch: http://www.health.ny.gov/publications/6532.pdf

SUMMARY OF CCMP MANAGEMENT ACTIONS:

PROTECTING THE SOUND FROM THE ADVERSE EFFECTS OF TOXIC SUBSTANCES

T-5. Research to Investigate Toxic Contamination (CCMP Table 25, P. 73)

Key Elements: Toxic contaminants identified in Long Island Sound are numerous; their pathways to the sound are varied, and their effects on the environment, marine life, and human health are not fully understood. These factors must be understood if effective management is to be accomplished. The CCMP identified these needs as recommendations, though continuation of work begun by LISS through the LISS research program and other parties recognizes these recommendations as priority LISS research topics.

	2015 Description	2016 Planned Action
1	EPA publishes on the web annual Toxic Release Inventory data; see: https://www.epa.gov/toxics-release-inventory-tri-program	

T-1. Toxic Contaminant Source Controls and Pollution Prevention (CCMP Table 21, P. 65)

Key Elements: Permit programs and enforcement activity for both direct and indirect discharges, including toxicity testing of those discharges, are responsible for greatly reducing toxic substance loads over the past 25 years. The LISS's priority management recommendation for toxic substances is to continue these successful activities, all of which are funded under current programs. Other programs designed to prevent pollution and reduce pollutant loads must also be supported as part of a comprehensive program to manage toxic contamination in the Sound.

	2015 Description	2016 Planned Action
1	The 8 facilities that were required to conduct WET testing in 2015 were Mamaroneck, Port Chester, Blind Brook, New Rochelle, Hunts Point, Bowery Bay, Glen Cove and Great Neck. All of the facilities passed the required acute and/or chronic WET testing, with no additional testing required until the next 5 year cycle for the majority of facilities (i.e. 2020), with the exception of Glen Cove which is required to test annually. Additionally, the Reasonable Potential Determination (RPD) assessing the need for enforceable toxicity-based limits due to the statistical potential for effluent variability to cause and exceedance of the WET action levels was also performed. Neither acute nor chronic WET limits are required at Mamaroneck, Port Chester or Blind Brook. Both acute and chronic WET limits are required at Great Neck, while only chronic WET limits are required at New Rochelle. Chronic WET limits were deferred at Hunts Point, Bowery Bay and Newtown Creek due to the November 2015 issuance of all 14 NYC permits, which did not previously contain WET action levels. These facilities will continue to be evaluated as required, and their permits possibly re-opened at a later date to incorporate WET limits if warranted.	Facilities that are required to test in 2016 include Wards Island, Newtown Creek and Glen Cove. The remainder of LISS facilities including Red Hook, Port Washington and Huntington are required to test in 2019. The WET schedule for Tallman Island was also recently changed, in which they are required to test again in 2020.
2	All New York SPDES Permits for WWTPs discharging to surface waters in the LIS watershed have disinfection requirements to ensure the applicable water quality standard will be met. These requirements are met through either chlorine limits or disinfection via ultra violet systems.	

	2015 Description	2016 Planned Action
3	In 2012, 80 of 82 Connecticut STPs (or 97%) passed toxicity testing. Facilities are reported as not passing toxicity test when there are two consecutive failures or three failures during a one-year period for the past year. The two facilities that did not pass testing were Bridgeport East WPCF and Stafford Springs WPCF.	CTDEEP will continue working with STPs to stay in compliance with toxicity tests.
4	In Connecticut, facilities registered under the General Permit for Storm Water Associated with Industrial Activities are required to test their storm water discharges annually for oil & grease, pH, chemical oxygen demand, total suspended solids, total phosphorous, Total Kjeldahl Nitrogen, Nitrate as Nitrogen, Copper, Zinc, Lead, hardness, conductivity and aquatic toxicity. Over 1500 facilities are registered under the Industrial Storm Water General Permit. On April 14, 2009 Connecticut reissued its General Permit for the Discharge of Stormwater Associated with Industrial Activity. 86.3 percent of facilities that monitored in 2009 met the target goal for aquatic toxicity (LC50>50%) compared to 83.2 percent of facilities meeting goal in 2008. Facilities that fail to submit monitoring under this permit receive Notices of Violation and facilities that discharge high levels of monitored pollutants in their storm water receive correspondence from CTDEP and are targeted for inspection.	The General Permit will expire on September 30, 2010 and be reissued as is through October 2011 at which time a new modified permit will be issued.
5	Connecticut's efforts to reduce the introduction of hazardous substances into the environment from non-point sources are seen in its state-wide household hazardous waste collection program. In 2011 & 2012 residents took part in household hazardous waste collections in Connecticut. This participation is indicative of a strong commitment from Connecticut residents to properly dispose of their hazardous waste. This commitment extends to Connecticut's municipalities. Of the 169 municipalities, 156 had access to at least one household hazardous waste collection. Information on Connecticut household hazardous waste centers and events is posted on the web at: http://www.ct.gov/dep/cwp/view.asp?a=2718&q=325448&depNav_GID=1646 Prescription medicine collection days are held by individual towns.	CTDEEP will continue working to reduce the amount of toxic substances released to the environment. CTDEEP will continue to work with regional and national associations to reduce waste toxicity. CTDEEP will encourage the development of programs for the separation and recycling or proper disposal of wastes that contribute to toxicity, such as consumer electronics, paint, and, mercury-containing lamps (including fluorescent light bulbs), and thermostats.

T-2. Addressing Sediment Contamination (CCMP Table 22, P. 67)

Key Elements: To begin the process of remediating sediments, LISS will conduct further assessments of toxic contaminant distribution in sediments of western Long Island Sound and embayments identified as having elevated toxic contaminant burdens. Based on these assessments, it will be possible to determine the feasibility, value, and cost of remediating contaminated sediments, where remediation may be necessary.

	2015 Description	2016 Planned Action
1	The National Marine Fisheries Service (NMFS), the New England District Army Corps of Engineers (ACOE) and CTDEP are developing guidelines for siting and operating contained aquatic disposal sites (CADS). The guidance will be used to address the growing interest in use of the CADS technology for non-federal dredging projects where sediments are deemed unsuitable for unrestricted open water disposal.	Finalize guidelines.

	2015 Description	2016 Planned Action
	The ACOE is leading the effort to establish criteria and provide site guidance for the general public, and reduce the uncertainty associated with such proposals. The effort will cover site identification, characterization of sub-bottom geology, resource impacts, and mitigation measures as well as scheduling and operation. In 2010 ACOE will finalize a draft set of guidelines that were reviewed by EPA and CTDEP in 2008-09. The guidelines will be posted on the ACOE regulatory website.	
2	The U.S. Army Corps of Engineers (USACE) has completed a Final Dredged Material Management Plan (DMMP) and Final Programmatic Environmental Impact Statement (PEIS) for Long Island Sound. The DMMP was requested by the Governors of Connecticut and New York, in their letter of February 8, 2005 to the Chief of Engineers. The need for a DMMP was also identified by the U.S. Environmental Protection Agency's (EPA) June 3, 2005 Rule that designated two of the Sound's historic open-water placement sites, the Central Long Island Sound and Western Long Island Sound Sites (CLDS and WLDS) for continued use. The EPA's rule required preparation of a DMMP to examine alternative placement practices, with the goal of reducing or eliminating open-water placement of dredged material in the waters of Long Island Sound wherever practicable. The draft DMMP and PEIS were released for a 60 day public comment period beginning on Aug. 17, 2015 and ending on Oct. 16, 2015. During that time, USACE held six public hearings: Aug. 24, 2015; in Port Jefferson, NY; Aug. 25, 2015 in Uniondale, NY; Aug. 26, 2015 in Stamford, CT; Aug. 27, 2015 in New London, CT; Sept. 16, 2015 in Riverhead, NY; and Sept.17, 2015 in New Haven, CT. Over 1,800 comment letters and emails were received during the comment period and were addressed in the Final DMMP/PEIS, in addition to comments made at the public hearings. The final DMMP can be found here: http://www.nae.usace.army.mil/portals/74/docs/Topics/LISDMMP/LISDMMP%20Final/01a-LIS-DMMP-Main-Report-Final-Dec15.pdf	

T-3. Improving Human Health Risk Management (CCMP Table 23, P. 68)

Key Elements: The objective of human health risk management is to determine the likelihood that exposure to a toxic substance will have adverse impacts on human health and to estimate the degree of the effects. In the case of Long Island Sound, the states of Connecticut and New York have issued advisories on consumption of selected seafood taken from the sound. By improving communication of consumer advisories, it is anticipated that public health risk will be improved.

	2015 Description	2016 Planned Action
1	A Long Island Sound 2003 Agreement action item for this area is: By 2003, New York and Connecticut will meet to jointly review their approaches for Long Island Sound fish consumption advisories and to discuss a process to achieve the goal of consistent fish consumption advisories for Long Island Sound. The Connecticut Department of Public Health (DPH), in coordination with similar actions in six other East Coast states, updated its fish consumption advisory for striped bass and bluefish, species commonly caught in Long Island Sound.	Continue project through 2010.

	2015 Description	2016 Planned Action
	DPH now advises that striped bass and bluefish over 25 inches can safely be consumed once per month by age 6 or over who is not in the high risk group (see below). Previously, the advise for these species was to limit consumption of striped bass and large bluefish to once per two months. Based on fish tissue testing conducted in 2008 this is good news. Connecticut's current LIS fish consumption advisory is for PCBs in striped bass and bluefish, and lead in Blue Crab in Mill River, Fairfield, CT. The CT fish advisory is posted on the CTDOH website: http://www.ct.gov/dph/cwp/view.asp?a=3140&Q=387460 NYS Department of Health published its 2009-2010 Chemicals in Sportfish and Game Health Advisories. The report can be found on-line at: http://www.nyhealth.gov/environmental/outdoors/fish/docs/fish.pdf There were major changes to the advisories such as: restrictions for the high risk group (infants, children under the age of 15 and women of childbearing age) have gotten stricter. People in this group are advised to eat only one meal per month of bluefish over 20" and one meal per week for smaller bluefish. Additionally, there is no longer an east-west segregation, fish taken from LIS-waters are considered the same whether taken east or west of Wading River. The reasons for the shift are highlighted below.	
2	The New York State Department of Health (DOH) issues an advisory on eating sportfish and wildlife taken in New York State because some of these foods contain potentially harmful levels of chemical contaminants. The health advisories are: (1) general advice on sportfish taken from waters in New York State; (2) advice on sportfish from specific waterbodies; and (3) advice on wildlife. The advisory is developed and updated annually. In 2015, the DOH released a new booklet for Long Island and New York City on eating fish you catch: http://www.health.ny.gov/publications/6532.pdf	

T-4. Monitoring and Assessment of Toxic Contaminants (CCMP Table 24, P. 71)

Key Elements: The LISS toxic contaminant monitoring program will focus on water, sediment and tissue media. The data collected from the monitoring program will be used to answer questions about resource and human health risks and sources of toxic contaminants.

	2015 Description	2016 Planned Action
1	The New York State Department of Environmental Conservation (DEC) routinely monitors contaminant levels in fish and wildlife.	