

RBA: Part I, Quality of Life (Population) Result, LI Sound Summary Page

Quality of Life Result:

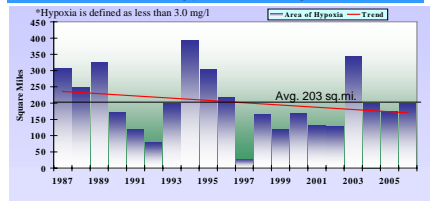
A healthy and productive Long Island Sound for Connecticut residents.

Indicator 1. Overall Water Quality: Percent of LIS that is Swimmable and Fishable

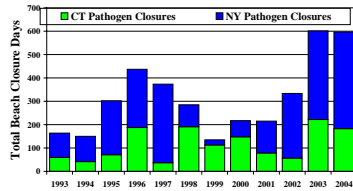


Indicator 2. Water Quality: Square Miles of LIS with Unacceptable Hypoxia Levels

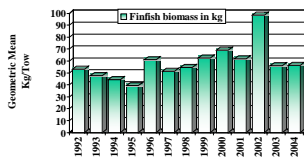
Area and trend of Hypoxia in Long Island Sound



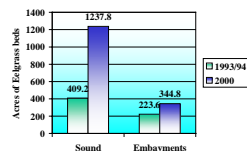
Indicator 3. Water Quality: Number of Beach Closings



Indicator 4. Living Resources: Finfish Biomass



Indicator 5. Habitat Restoration: Acres of Eelgrass Beds



Key Funding Information	
Total Current Funding*	\$78,777,000
Funding Distribution	
Total Federal Funds	6,518,000
Total State Funds	72,259,000
Capital Projects Subtotal	60,343,000
Other Funding	

*Does not reflect all funding sources; see budget detail for more information.

Turning The Curves:

Indicator 1: Overall water quality is affected by many factors, including many not controlled by the State of Connecticut. Water quality particularly in Western LIS continues to be problematic. Water quality can be improved by sustaining and enhancing current CT DEP efforts and through an array of partnerships with EPA, environmental protection agencies in other states (especially New York), and other environmental groups.

Indicator 2: Hypoxia is low dissolved oxygen content. Of primary concern is the reduction in nitrogen load, which comes from sewage treatment plants, non-point, storm water runoff, and atmospheric sources. While the trend shows steady improvement, the speed and extent of reduction in hypoxia could be improved. Turning the curve requires reducing all of these sources through the upgrade of treatment plants, point sources, raising public awareness, and working to identify and reduce other contributing sources of nitrogen.

Indicator 3: Bathing beaches are closed when either 1) the results of water quality monitoring exceed an established safe level; or 2) an administrative closure shuts down a beach after significant rainfall events because of combined sewer overflows. The trendline has shown recent spikes in the number of beach closures although this is heavily impacted by weather from year to year. Turning the curve necessarily involves reduction in bacterial contamination through the application of technology and the elimination of combined sewer overflow systems.

Indicator 4: Finfish biomass is one good indicator of the health of living resources in the sound. The trendline, which can be impacted by migratory fish patterns, has been steadily improving.

Indicator 5: Increases in eelgrass acreage is one good indicator of habitat restoration. While eelgrass acreage has increased in some areas, some areas have shown little progress. Further reducing nitrogen load will have a positive impact on this indicator. Newer data for 2005 will help establish a trend for eelgrass.

Connecticut Appropriations Committee RBA¹ Template
Part I, Quality of Life (Population) Result
Long Island Sound

Quality of Life Result:

A healthy and productive Long Island Sound for Connecticut residents.

Why Is This Result Important?

It would be difficult to overstate the importance of Long Island Sound to Connecticut's environment, economy and quality of life. Over 20 million people live within 50 miles of the Sound, they benefit from the more than \$5.5 billion it contributes to the regional economy from fishing, boating, recreation, seafood, transportation, and, less quantifiable in dollars, geographical and cultural identity. Few other estuaries on this continent rival Long Island Sound's combination of natural resources, environmental significance, recreational and commercial value, and proximity to a vast and diverse population of users.

Sound Facts & Figures

- Area of LIS: 1320 square miles
- Drainage Basin or Watershed: 16,820 square miles
- Average Water Depth: 63 feet (60-120 feet)
- Volume: 18 trillion gallons
- Coastline: 600 miles
- Salinity Ranges: 23 parts per thousand in the western end to 35 parts per thousand at the eastern end
- Source of Fresh Water: 90% of the freshwater comes from three major rivers - the Thames, Housatonic, and Connecticut
- Water Temperature: 32°F in winter and 73°F in summer
- Tides: two high and two low each day with the greatest tides in the west
- Population Living within 50 miles: 20 million people
- Estimated Value to the Local Economy: \$5.5 billion per year
- Fish Populations: more than 120 species of finfish, including 21 tropical species that appear seasonally; at least 50 species spawn in the Sound

¹ Results Based Accountability

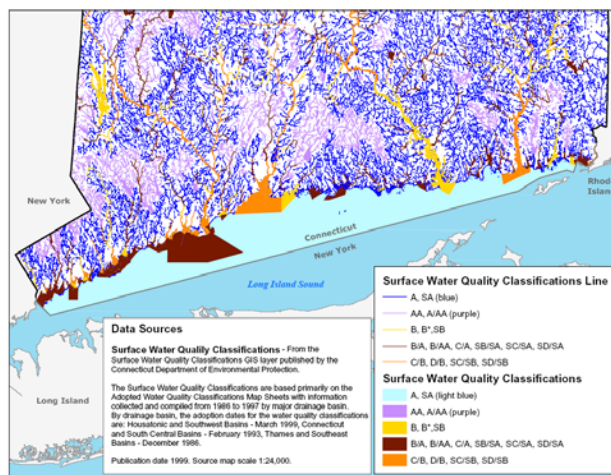
Long Island Sound (Population Level)

Key Funding Information:

Key Funding Information	
Total Current Funding*	\$78,777,000
Funding Distribution	
Total Federal Funds	6,518,000
Total State Funds	72,259,000
Capital Projects Subtotal	60,343,000
Other Funding	

*Does not reflect all funding sources; see budget detail in appendix for more information.

Indicator 1. Overall Water Quality



Story Behind the Baseline:

Through a legally defined public process, the State establishes water quality classifications for all the State's waters. Classifications for Long Island Sound may range from SA (excellent) to SD (severely impaired). The water quality classification is based on designated uses that include the protection and propagation of fish, shellfish and wildlife and recreational use in and on the water. When designated uses are not met, e.g., shellfish harvesting for direct human consumption is not supported, a lower classification may be assigned with a goal of meeting all designated uses. On the map, current LIS classifications range from SA to SC/SB (currently classified SC with a goal of supporting SB uses). For all waters, the current classification or goal is SA or SB.

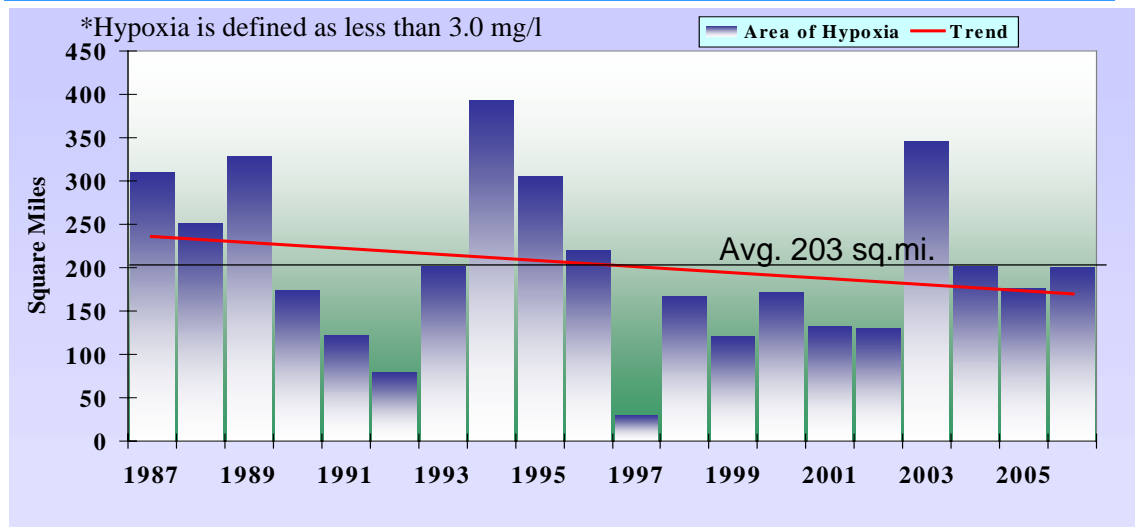
On a biennial basis, DEP assesses all waters and reports to EPA on whether designated uses are being met based on defined numeric criteria. While a water may be classified as SA, for example, it may still have identified impairments, which are not shown on the map. Assessments of Marine Aquatic Life Use and Recreation are among the use categories used to generally quantify condition of Long Island Sound relative to meeting designated uses. Because evaluation procedures and segmentation are often revised or adjusted, and procedural changes were made between 2004 and 2006, trend analysis is

Long Island Sound (Population Level)

not straightforward and not necessarily representative of a trend. Marine Aquatic Life Use support, based on water quality condition such as dissolved oxygen concentration, was not attained in 39% of the 613 mi² of waters and rose to 47% in 2006, primarily because of adjustments in segmentation of the Sound. Recreational Use non-support was 4% in 2004 and 3% in 2006 for 613 mi² of waters, although only 154 mi² of waters are assessed for recreational use (swimming), i.e., beach areas.

Indicator 2. Water Quality: Square Miles of LIS with Unacceptable Hypoxia Levels

Area and trend of Hypoxia in Long Island Sound



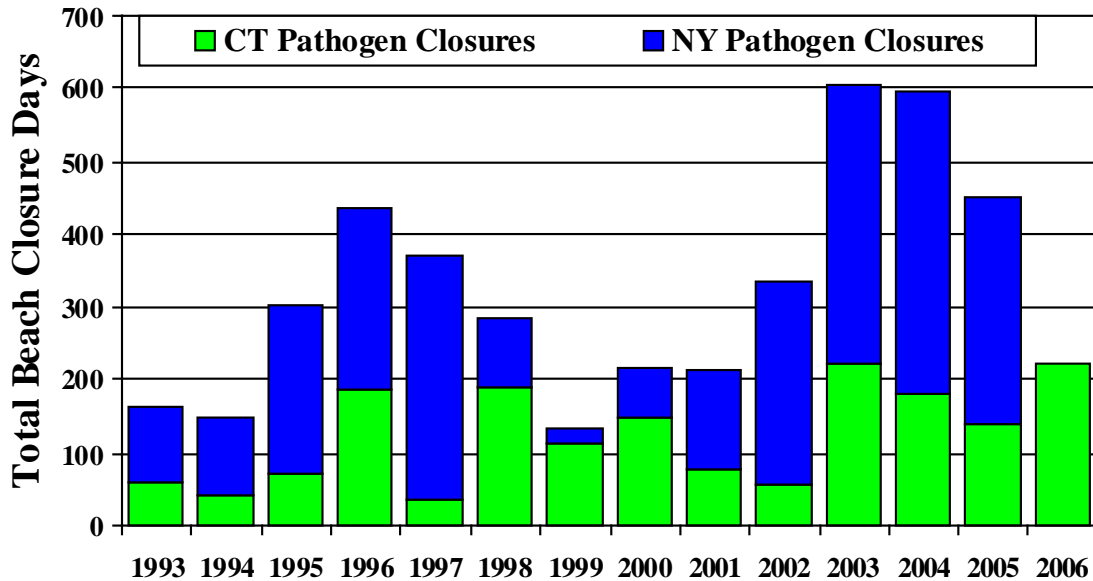
Story Behind the Baseline: Hypoxia, the condition of low levels of dissolved oxygen, impacts up to half of the Sound's bottom waters each summer. The primary cause is excess nitrogen, which enters the sound through a variety of sources. Primary sources include sewage treatment plants, nonpoint sources (e.g., from lawns, septic systems and farms), atmospheric deposition (e.g., from Midwestern power plant emissions of nitrogen oxides) and stormwater runoff (e.g., urban area runoff). Both the categorical and geographic boundaries among these sources may be blurred, as they integrate in rivers that deliver the nitrogen to Long Island Sound from throughout the watershed. Nitrogen is also found as a natural component of the Sound's physical environment, but these human sources have greatly enriched the load of nitrogen to the Sound.

The nitrogen stimulates the growth of phytoplankton, microscopic plants that grow in the Sound. Eventually, the phytoplankton ends up as organic enrichment of the Sound's bottom waters, where it decays and consumes enough dissolved oxygen to create unhealthy low dissolved oxygen, or hypoxia. Of special concern are the 105 sewage treatment plants (STPs) in CT and NY that discharge the largest amount of nitrogen into the Sound or its tributaries, although other nonpoint, stormwater and atmospheric sources will need to be reduced to completely remedy the problem. Biological nutrient removal (BNR), which uses a biological process to remove nitrogen, is being implemented at

Long Island Sound (Population Level)

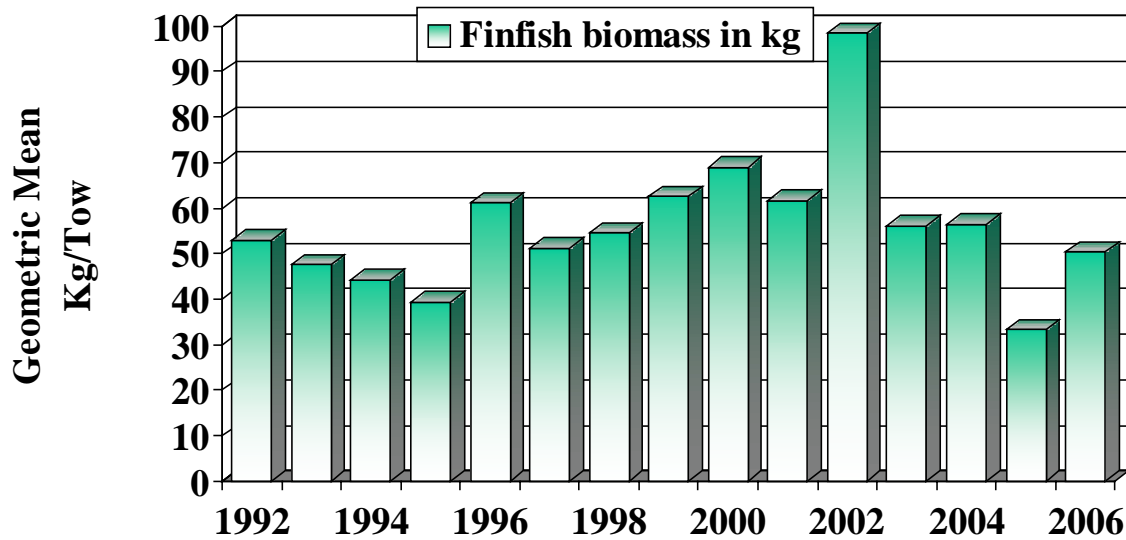
many STPs. in both states. Since 1990, 25 percent of the STPs have been upgraded to include BNR and the trend towards decreasing nitrogen discharges from both point and nonpoint sources is evident.

Indicator 3. Water Quality: Number of Beach Closings



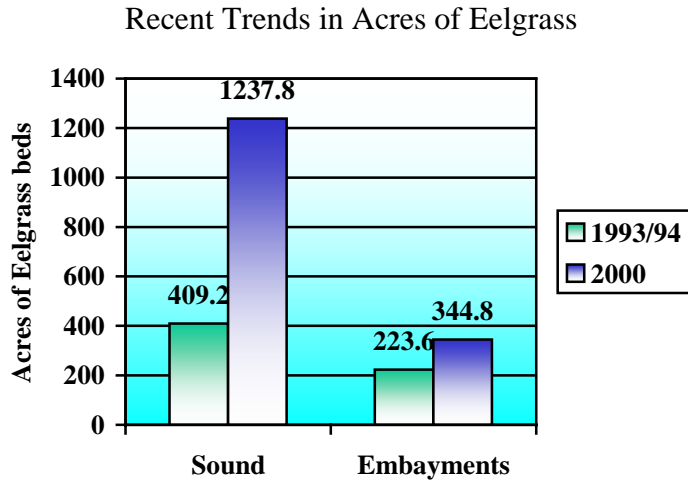
Story Behind the Baseline: There are 240 monitored bathing beaches along Long Island Sound, 131 in Connecticut and 109 in New York, that provide valued recreational opportunities. Bathing beaches are closed when either 1) the results of water quality monitoring exceed an established safe level; or 2) an administrative closure shuts down a beach after significant rainfall events because of combined sewer overflows. Yearly variations in closures are a product of rainfall patterns and incidents such as sewer-line ruptures. Closures for 2004 in Suffolk County NY can be attributed to the Suffolk County Health Department's adoption of new enterococcus standards. In 2006 CT experienced 222 closure days, equaling the high for the period of record observed in 2003. This represents less than 2 % of the total available user days in CT (14,400 user days are available for CT's 131 public beaches). NY has not yet reported on 2006 closures.

Indicator 4: Living Resources: Fish Biomass Index



Story Behind the Baseline: Each year CT DEP conducts spring and fall trawl surveys throughout Long Island Sound. These surveys count the number of species and number of fish collected in by a 46-foot otter trawl. The finfish biomass index is the average overall weight of fish caught in a trawl. CT DEP's trawl survey has collected data over the last ten years showing an overall biomass increase in recent years largely due to numbers of scup. Several reasons factor into the mix that certainly includes the role of managed species increasing in abundance in response to fisheries management measures. These include black seabass, scup, summer flounder, striped bass, and weakfish. Reasons behind the increase in some of the other species become more speculative, but most are warm temperates that may be expanding their range northward. They include hickory shad, menhaden, moonfish, northern searobin, smallmouth flounder, spotted hake, and striped searobin. The 50 kg/tow observed in 2006 is slightly below the long-term average, but well above the 30 kg/tow observed in 2005.

Indicator 5: Habitat Restoration



Story Behind the Baseline: Eelgrass is submerged aquatic vegetation that provides nursery habitat for shellfish and finfish and is an indicator of good water quality. The 1993/94 mapping was done via boat and divers and while this survey technique is believed to have underestimated the area of eelgrass, there has nevertheless been a significant increase of bed area particularly in the open waters of the Sounds. While beds were not mapped in the 1980's, it is readily apparent that significant declines occurred in embayments between the 1980's and early 1990's and there has been little or no significant change to the extent of embayment beds by 2002. Examples of embayments with significant long term declines include Clinton Harbor, Niantic River, Poquonnock River, Mystic Harbor, Stonington Harbor and Little Narragansett Bay. An overflight was conducted in 2005, but the data have not yet been analyzed.

Long Island Sound (Population Level)

What will it take to do it better (i.e., all partners, federal, state, non-profits, private sector)?

Protecting, restoring, and enhancing the environmental quality of Long Island Sound involves many partners, including the Connecticut Department of Environmental Protection, the New York State Department of Environmental Conservation, US EPA including the Long Island Sound Study and its partners, US Fish and Wildlife, coastal municipalities, other states in the Connecticut River drainage basin, citizens of the watershed and environmental advocates.

Some of the efforts needed to continue improvements to LIS include:

- Continue to reduce nitrogen loading to the Sound from both point and non-point source (NPS) discharges
- Continue to separate combine sewer overflows (CSOs)
- Reduce NPS bacteria inputs through improved management practices for stormwater and septic systems
- Manage coastal development in a sustainable manner
- Address global warming and prepare for impacts associated with potential sea level rise and adaptation
- Continue to increase public awareness of non-point sources of nitrogen

What is the role of state government?

- Provide incentives and funds to upgrade sewage treatment plants to reduce nitrogen loading.
- Improve management practices to minimize nitrogen input from runoff of fertilizers and consider improved regulatory controls on their use.
- Work with municipalities in urban areas to fully implement the Small Municipal Separate Storm Sewer System (MS4) permitting program to reduce bacteria.
- Implement the Regional Greenhouse Gas Initiative (RGGI) and other measures to help curb global warming.
- Continued participation in the Long Island Sound Study and Long Island Sound Stewardship Initiative

Long Island Sound (Population Level)

Appendix A, Data Development Agenda: Priorities for new or better indicator data

- Refreshed data for Indicator 1 (% swimmable and fishable)
- Better mapping of eelgrass beds

Long Island Sound (Population Level)

Appendix B, Funding Details

Key Funding Information - Population - Healthy Long Island Sound					
Total Current Funding*					unknown
Funding Distribution					
- Total Federal Funds**					6,518,000
- Total State Funds**					1,090,000
- Capital Projects Subtotal**					60,343,000
- Other Funds (Not Federal or State) for DEP = Special Revenue Funds**					1,016,000
Projected Changes in Federal and Non-Governmental Funds for Next Fiscal Year:					
- Federal Clean Water Funds to support wastewater construction are being reduced significantly; estimated EPA CWF reduction for FY'07 = 25% reduction; CT reduction est @ \$4.0M					
*Notes: Total funding from all sources is currently not available to the department.					
Examples - funding from federal government agencies that benefit Long Island Sound, which may include -					
- federal funds supplied to other states (example - New York)					
- federal funds to municipalities					
- federal funds to private industry					
- federal funds spent directly by federal agencies (EPA, Commerce, Interior) related to Long Island Sound					
Other sources of funding that may benefit Long Island Sound include -					
- direct municipal funding					
- direct industrial funding to reduce discharges that impact the Sound					
- various private and academic research projects					
**Notes: Funds represent only those funds managed by DEP					

FY'06 Actuals					
Key Funding Information - Population - Healthy Long Island Sound					
Total Current Funding*					unknown
Funding Distribution					
- Total Federal Funds**					8,041,200
- Total State Funds**					1,085,000
- Capital Projects Subtotal**					90,530,000
- Other Funds (Not Federal or State) for DEP = Special Revenue Funds**					1,007,000
Projected Changes in Federal and Non-Governmental Funds for Next Fiscal Year:					
- Federal Clean Water Funds to support wastewater construction are being reduced significantly; estimated EPA CWF reduction for FY'07 = 25% reduction; CT reduction est @ \$4.0M					
*Notes: Total funding from all sources is currently not available to the department.					
Examples - funding from federal government agencies that benefit Long Island Sound, which may include -					
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Other sources of funding that may benefit Long Island Sound include -					
- direct municipal funding					
- direct industrial funding to reduce discharges that impact the Sound					
- various private and academic research projects					
**Notes: Funds represent only those funds managed by DEP					

Long Island Sound (Population Level)

Details			
Key Funding Information - Population - Healthy Long Island Sound			
Total Federal Funds			
- Coastal Management (Commerce/NOAA)		\$ 2,093,000	
- Coastal Monitoring (EPA)		115,000	
- LIS Study (EPA), includes LIS Restoration grant		808,000	
- Lobster Assessment/Monitor/Study (Commerce/Fisheries)		178,000	
- LIS Habitat Restoration (EPA)		8,000	
- Water 106 Program (EPA @ 50%)		1,093,000	
- Non-Point Source Implementation (EPA)		1,225,000	
- Federal Clean Water Fund (EPA), recent annual grant level		see bond funds	
- Marine Fisheries (Interior)		369,000	
- Boat Pumpout Stations/Waste Facilities (Interior)		629,000	
Total Federal Funds		\$ 6,518,000	
Total State Funds			
- General Fund Personal Services (GF staff coding to LIS)		1,041,000	
- General Fund Other Expenses (coded to LIS)		49,000	
Total General Funds		\$ 1,090,000	
Special Revenue Funds			
- EQ Fee Funds (to LIS)		220,000	
- EC Fee Funds (to LIS)		292,000	
- LIS Plate Account		504,000	
Total Special Revenue Funds		\$ 1,016,000	
Bond Funds*			
- Clean Water Bonds (grants, loans, prog admin)*		56,813,000	
- Clean Water Bonds (LIS grants/nitro credits)		3,530,000	
Total Bond Funds**		\$ 60,343,000	
- Total Non-Governmental Funds		unkown	
Grand Total of Identified Funding		\$ 68,967,000	
*Notes: Clean Water Bonds includes federal clean water funds deposited to the State Revolving Fund (SRF)			
Federal CWF annual grants have recently averaged between \$13M - \$16M, but the Presidents FY'07			
Federal Budget calls for a reduction of approximately 25% or about a \$4.0M reduction to \$9.0M.			
Total annual CWF bond fund expenditures between 1989 and 2005 ranged between \$49.9M and \$112.2M.			
All funding sources represent only those funds managed by DEP.			

Long Island Sound (Population Level)

Details - FY'06 Actuals				
Key Funding Information - Population - Healthy Long Island Sound				
Total Federal Funds				
- Coastal Management (Commerce/NOAA)			\$ 2,225,300	
- Coastal Monitoring (EPA)			125,000	
- Beach Monitoring (EPA)			17,000	
- LIS Study (EPA), includes LIS Restoration grant			1,620,000	
- Lobster Assessment/Monitor/Study (Commerce/Fisheries)			136,000	
- LIS Habitat Restoration (EPA)			7,000	
- Water 106 Program (EPA @ 50%)			1,584,300	
- Non-Point Source Implementation (EPA)			1,083,200	
- Federal Clean Water Fund (EPA), recent annual grant level			see bond funds	
- Marine Fisheries (Interior)			389,000	
- Boat Pumpout Stations/Waste Facilities (Interior)			854,400	
Total Federal Funds			\$ 8,041,200	
Total State Funds				
- General Fund Personal Services (GF staff coding to LIS)			1,035,000	
- General Fund Other Expenses (coded to LIS)			50,000	
Total General Funds			\$ 1,085,000	
Special Revenue Funds				
- EQ Fee Funds (to LIS)			220,000	
- EC Fee Funds (to LIS)			292,000	
- LIS Plate Account			495,000	
Total Special Revenue Funds			\$ 1,007,000	
Bond Funds*				
- Clean Water Bonds (grants, loans, prog admin)*			87,000,000	
- Clean Water Bonds (LIS grants/nitro credits)			3,530,000	
Total Bond Funds**			\$ 90,530,000	
- Total Non-Governmental Funds			unkown	
Grand Total of Identified Funding			\$ 100,663,200	
*Notes: Clean Water Bonds represents the January 2006 lump-sum bond allocation.				
Federal CWF annual grants have recently averaged between \$13M - \$16M, but the Presidents FY'07				
Federal Budget calls for a reduction of approximately 25% or about a \$4.0M reduction to \$9.0M.				
Total annual CWF bond fund expenditures between 1989 and 2005 ranged between \$49.9M and \$112.2M.				
All funding sources represent only those funds managed by DEP.				

Appendix C, Information and Research Agenda

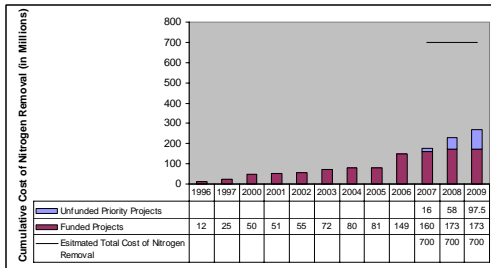
- Research on factors affecting distribution of eelgrass beds
- Develop baseline and trend analysis for capturing the effects of temperature increase and sea level rise
- Research on new methods for nitrogen reduction in the Sound.

RBA: Part II, DEP Clean Water Fund Program Summary Page

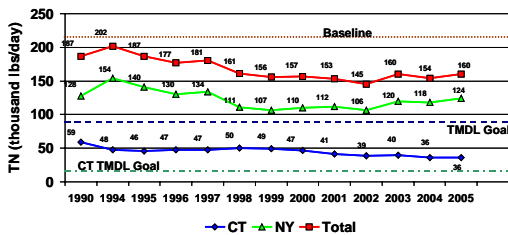
Program Goal: To eliminate the detrimental effects of hypoxia in LI Sound by improving municipal sewage treatment infrastructure as a key component of a comprehensive management strategy

Program: Department of Environmental Protection Clean Water Fund

Program Performance Measure 1. Comparison of Sewage Treatment Need and Actual Funding



Program Performance Measure 2. Point Source Nitrogen Load



The 1990 estimates include 98 municipal, 4 state, and 4 industrial discharges = 109
 CTDEP adjusted its data in 2001 to include reports from plants not previously submitted and changed estimates to actual reported numbers.
 New York numbers are based on numbers reported as of December 2005.

Key Budget Information*	
Total Current Program Funding*	\$7,253,200
Funding Distribution	
Total Program Funding As Percent of Total Agency Budget	3.03%
Total Federal Funds	1,303,600
Total State Funds	5,949,600
Capital Projects Subtotal	5,528,400
Other Funding	0

* See budget detail for more information
Program Performance Measure 1. This indicator is a comparison of the estimated funding required for nitrogen removal and the actual funding that has been provided for sewage treatment upgrades. As can be seen, the gap between needed and actual funding is closing, but substantially more funding is needed to actually close the gap. Since 1993, the CWF has financed more than \$150 million in sewage treatment plant upgrades specific to nitrogen removal. The 31 plants upgraded, many through low-cost retrofit activities as temporary fixes, are now achieving significant nitrogen reductions.

Program Performance Measure 2: This indicator shows the actual point source nitrogen load reduction from 1994 to 2004. The trend has been steadily improving in CT. Through formal agreement with EPA and NYSDEC, DEP adopted a 64% nitrogen reduction target for sewage treatment plants to be attained by 2014. Sewage treatment plant upgrades have resulted in a steady decline in nitrogen loads. This level of progress at municipal facilities has been possible because of 1) adequate capitalization of the CWF; 2) a strong state-local partnership to provide technical and financial means to attain the required reduction; and 3) an innovative *Nitrogen Credit Exchange Program* that has allowed a cost-reducing mechanism for nitrogen trading that uses market forces to put the most cost effective projects first.

Turning The Curves: What do you propose to do over the next two years and why?

However, to achieve the 64% nitrogen reduction required by the waste load allocation in the binding LIS management analysis, the minimum funding identified above will be required. The management agreement also requires that the projects be completed by 2014, so it is equally essential that the funding be adequate on an annual basis to meet that schedule (see also below). Please note that the cost to remove nitrogen is a relatively small percentage of overall CWF needs. This does not include funding needed for combined sewer overflow projects.

Connecticut Appropriations Committee RBA² Template
Part II, Program Accountability
DEP Clean Water Fund

Program Purpose: To eliminate the detrimental effects of hypoxia in LI Sound by improving municipal sewage treatment infrastructure as a key component of a comprehensive management strategy

Program: Department of Environmental Protection, Clean Water Fund

Key Program Budget Information:

Key Budget Information*	
Total Current Program Funding*	\$7,253,200
Funding Distribution	
Total Program Funding As Percent of Total Agency Budget	3.03%
Total Federal Funds	1,303,600
Total State Funds	5,949,600
Capital Projects Subtotal	5,528,400
Other Funding	0

* See budget detail for more information

Contribution to Quality of Life (Population) Result. Municipalities need financial and technical support to improve sewer and sewage treatment infrastructure and reduce nitrogen loads to LI Sound, the primary cause of hypoxia in LI Sound.

Primary Mechanism. The Connecticut Clean Water Fund (CWF) is the state's primary mechanism for providing financial assistance to municipalities for wastewater collection and treatment projects. It combines state and federal sources to provide loans and grants that ensure timely and effective improvements targeted towards both water quality goals and community needs.

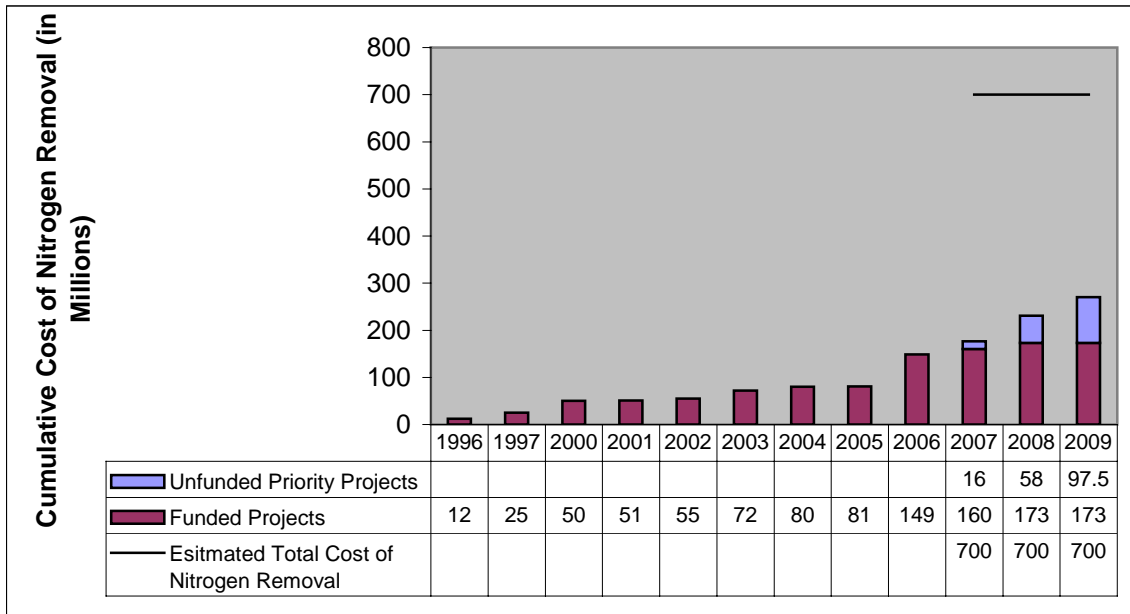
Benefit to Municipalities. The combination of CWF grants and loans is defined by federal and state guidance, and managed by DEP using a priority rating system to ensure equitable distribution of funds to municipalities that undertake water pollution control projects. For standard upgrade projects, municipalities receive a 20% grant and 80% low-interest loan. Combined sewer overflow (CSO) projects, because of their high cost and environmental effect, receive grants of 50% and loans for the remainder of the cost. To promote nitrogen removal projects, the CGA in 1999 passed a provision for 30% grants for the components of a municipal upgrade related to nitrogen treatment. The loans are repaid over 20 years at 2% interest.

² Results Based Accountability

CWF Project Needs. Total funding needs are estimated at \$1.7 billion. Of this, \$400 million is associated with combined sewer overflow projects and more than \$700 million is associated with removing nitrogen to restore Long Island Sound.

Other Potential CWF Needs. A Long Island Sound Account of the CWF once included grants for special purposes including: research to improve science and management of the Sound; ambient monitoring to track improvement and effectiveness of management actions; restoration and preservation of tidal coves and embayments; and nonpoint source pollution (NPS) control projects. These critical activities are largely inactive with respect to CWF resources because of limited funding. The cost of both stormwater and nonpoint source management are enormous, approaching an estimated \$1 billion, while federal programs only provide about \$2 million/year. Municipalities need a large influx of financial resources to meet the demands of both stormwater permits and NPS management for nitrogen control, which could be managed through the CWF structure.

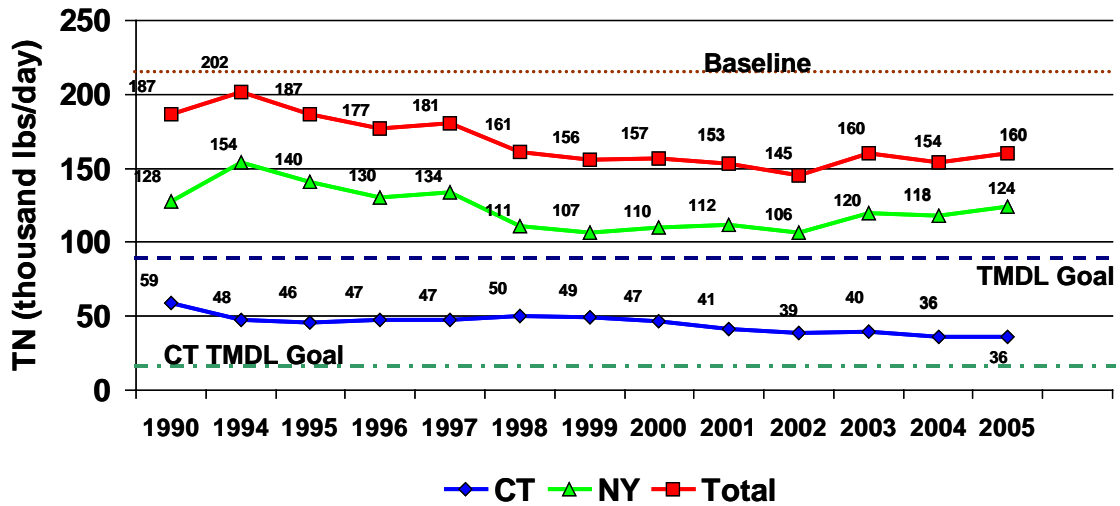
Program Performance Measure 1. Cumulative Cost of Nitrogen Removal



Progress toward Infrastructure Change.

Since 1993, the CWF has financed more than \$150 million in sewage treatment plant upgrades specific to nitrogen removal. The 31 plants upgraded, many through low-cost retrofit activities as temporary fixes, are now achieving significant nitrogen reductions. However, to achieve the 64% nitrogen reduction required by the waste load allocation in the binding LIS management analysis, the minimum funding identified above will be required. The management agreement also requires that the projects be completed by 2014, so it is equally essential that the funding be adequate on an annual basis to meet that schedule (see also below). Please note that the cost to remove nitrogen is a relatively small percentage of overall CWF needs.

Program Performance Measure 2. Point Source Nitrogen Load



Progress toward Point Source Nitrogen Load Goal.

Through formal agreement with EPA and NYSDEC, DEP adopted 64% nitrogen reduction target for sewage treatment plants (and a few industries) to be attained by 2014. Sewage treatment plant upgrades through the CWF and regulation of industry have resulted in a steady decline in nitrogen loads, well ahead of schedule (see chart). This level of progress at municipal facilities has been possible because of 1) adequate capitalization of the CWF; 2) a strong state-local partnership to provide technical and financial means to attain the required reduction; and 3) an innovative *Nitrogen Credit Exchange Program* that has allowed a cost-reducing mechanism for nitrogen trading that uses market forces to put the most cost effective projects first.

Future Performance Considerations.

Steady and consistent progress in nitrogen removal from municipal sewage treatment plants will require attention in the three areas listed above: 1) Adequate capitalization of the CWF from both federal and state sources to meet the nitrogen reduction challenge within the established timeframe; 2) Continuing the state-local partnership to ensure understanding of goals and direction; and 3) administering the Nitrogen Credit Exchange Program to expedite progress at a lower cost. All three needs must operate hand-in-hand if the final nitrogen reduction targets are to be met by 2014.

Briefly, under this complete program, coordinated through the Nitrogen Credit Advisory Board and DEP's CWF, municipalities can decide if they want to upgrade to remove nitrogen, or defer upgrading if purchase of credits is less expensive. Plants that remove more nitrogen than required by permit are able to sell earned credits to the credit exchange, thus receiving a financial benefit for superior performance. The credits are purchased by plants that discharge nitrogen in excess of their permit limit to comply. Market forces determine whether it is less expensive to purchase credits, or upgrade. In some cases, permanent purchase of credits may be the economically sensible choice for facilities located far from the Sound's edge, while those closer to western LIS, where hypoxia is most severe, find it advantageous to upgrade and sell credits from performance below their permit limits.

Appendix A, Data Development Agenda: Priorities for new or better data on performance.

Under development.

Appendix B, Link to Budget: Provide detail on proposed improvement efforts that are included in the current or proposed budget.

Key Funding Information - Program - Healthy Long Island Sound - Nitrogen Program			
Total Current Program Funding (represents total agency program funding)			7,253,200
Total Program Funding as Percent of Agency Total Budget			3.0393%
Program Budget Distribution			
- Federal Funds			1,303,600
- State Funds			
- General Funds			218,000
- Capital Project Funds			5,528,400
- Other State Funding (Special Revenue Funds)			203,200
- Other Funds (Not Federal or State)*			unknown
Projected Changes in Federal and Non-Governmental Funds for Next Fiscal Year:			
- Federal Clean Water Funds to support wastewater construction are being reduced significantly; estimated EPA CWF reduction for FY'07 = 25% reduction; CT reduction est @ \$4.0M			
*Notes: Total funding from all sources is currently not available to the department.			
Examples - funding from federal agencies that benefit Long Island Sound Nitrogen Program may include -			
- federal funds supplied to other states (example - New York)			
- federal funds to municipalities			
- federal funds to private industry			
- federal funds spent directly by federal agencies (EPA, Commerce, Interior) related to Long Island Sound			
Other sources of funding that may benefit Long Island Sound include -			
- direct municipal funding - DEP has an estimate of \$4.5M annually spent on facility Operations & Maint			
- direct industrial funding to reduce Nitrogen discharges that impact the Sound			
- various private and academic research projects related to Nitrogen removal			
Notes: Funds represent only those funds managed by DEP			

FY '06 Actuals			
Key Funding Information - Program - Healthy Long Island Sound - Nitrogen Program			
Total Current Program Funding (represents total agency program funding)			7,555,040
Total Program Funding as Percent of Agency Total Budget			3.1658%
Program Budget Distribution			
- Federal Funds			1,608,240
- State Funds			
- General Funds			217,000
- Capital Project Funds			5,528,400
- Other State Funding (Special Revenue Funds)			201,400
- Other Funds (Not Federal or State)*			unknown
Projected Changes in Federal and Non-Governmental Funds for Next Fiscal Year:			
- Federal Clean Water Funds to support wastewater construction are being reduced significantly; estimated EPA CWF reduction for FY'07 = 25% reduction; CT reduction est @ \$4.0M			
*Notes: Total funding from all sources is currently not available to the department.			
Examples - funding from federal agencies that benefit Long Island Sound Nitrogen Program may include -			
- federal funds supplied to other states (example - New York)			
- federal funds to municipalities			
- federal funds to private industry			
- federal funds spent directly by federal agencies (EPA, Commerce, Interior) related to Long Island Sound			
Other sources of funding that may benefit Long Island Sound include -			
- direct municipal funding - DEP has an estimate of \$4.5M annually spent on facility Operations & Maint			
- direct industrial funding to reduce Nitrogen discharges that impact the Sound			
- various private and academic research projects related to Nitrogen removal			
Notes: Funds represent only those funds managed by DEP			

DEP: LIS CWF

Details					
Key Funding Information - Program - Healthy Long Island Sound -Nitrogen Program					
Total Federal Funds @ 20% of total program					
- Coastal Management (Commerce/NOAA)			\$	418,600	
- Coastal Monitoring (EPA)				23,000	
- LIS Study (EPA), includes LIS Restoration grant				161,600	
- Lobster Assessment/Monitor/Study (Commerce/Fisheries)				35,600	
- LIS Habitat Restoration (EPA)				1,600	
- Water 106 Program (EPA @ 20%)				218,600	
- Non-Point Source Implementation (EPA)				245,000	
- Federal Clean Water Fund (EPA), recent annual grant level			see bond funds		
- Marine Fisheries (Interior)				73,800	
- Boat Pumpout Stations/Waste Facilities (Interior)				125,800	
Total Federal Funds			\$	1,303,600	
Total State Funds @20% of total					
- General Fund Personal Services (GF staff coding to LIS)				208,200	
- General Fund Other Expenses (coded to LIS)				9,800	
Total State Funds			\$	218,000	
Special Revenue Funds @ 20% of total					
- EQ Fee Funds (to LIS) @20%				44,000	
- EC Fee Funds (to LIS) @20%				58,400	
- LIS Plate Account @20%				100,800	
Total Special Revenue Funds			\$	203,200	
Bond Funds					
- Clean Water Bonds (nitrogen cost portion)*				1,500,000	
- Clean Water Fund Program Admin/Eng/Inspections @20%				498,400	
- Clean Water Bonds (LIS grants/nitro credits)				3,530,000	
Total Bond Funds			\$	5,528,400	
- Total Non-Governmental Funds				unkown	
Grand Total of Identified Funding			\$	7,253,200	
*Notes: Clean Water Fund Bonds represents actual FY 2005 costs, annual nitrogen program costs as a part of the Clean Water (Bond) Fund program have ranged between \$0 to \$62.8M.					
*Notes: Funds represent funds managed by DEP					

Details - FY'06 Actuals (except portions of bond funds)			
Key Funding Information - Program - Healthy Long Island Sound -Nitrogen Program			
Total Federal Funds @ 20% of total program			
- Coastal Management (Commerce/NOAA)		\$	445,060
- Coastal Monitoring (EPA)			25,000
- Beach Monitoring (EPA)			3,400
- LIS Study (EPA), includes LIS Restoration grant			324,000
- Lobster Assessment/Monitor/Study (Commerce/Fisheries)			27,200
- LIS Habitat Restoration (EPA)			1,400
- Water 106 Program (EPA @ 20%)			316,860
- Non-Point Source Implementation (EPA)			216,640
- Federal Clean Water Fund (EPA), recent annual grant level		see bond funds	
- Marine Fisheries (Interior)			77,800
- Boat Pumpout Stations/Waste Facilities (Interior)			170,880
Total Federal Funds		\$	1,608,240
Total State Funds @20% of total			
- General Fund Personal Services (GF staff coding to LIS)			207,000
- General Fund Other Expenses (coded to LIS)			10,000
Total State Funds		\$	217,000
Special Revenue Funds @ 20% of total			
- EQ Fee Funds (to LIS) @20%			44,000
- EC Fee Funds (to LIS) @20%			58,400
- LIS Plate Account @20%			99,000
Total Special Revenue Funds		\$	201,400
Bond Funds			
- Clean Water Bonds (nitrogen cost portion)*			1,500,000
- Clean Water Fund Program Admin/Eng/Inspections @20%			498,400
- Clean Water Bonds (LIS grants/nitro credits)			3,530,000
Total Bond Funds		\$	5,528,400
- Total Non-Governmental Funds			unkown
Grand Total of Identified Funding		\$	7,555,040
*Notes: Clean Water Fund Bonds represents actual FY 2005 costs, annual nitrogen program costs as a part of the Clean Water (Bond) Fund program have ranged between \$0 to \$62.8M.			
*Notes: Funds represent funds managed by DEP			

Appendix C, Information and Research Agenda

Under development.