



# Connecticut Department of Environmental Protection

Gina McCarthy, Commissioner



Stamford Wastewater Treatment Facility

## **Report of the Nitrogen Credit Advisory Board To the Joint Standing Environmental Committee Of the General Assembly**

**December 2004**

79 Elm Street  
Hartford, CT 06106-5127

**REPORT OF THE NITROGEN CREDIT ADVISORY BOARD  
FOR THE CALENDAR YEAR 2003**

**TO THE JOINT STANDING ENVIRONMENT COMMITTEE  
OF THE GENERAL ASSEMBLY**

**Concerning the**

**NITROGEN CREDIT EXCHANGE PROGRAM**

**As required by  
Sections 22a-521 through 527  
Connecticut General Statutes**

**December 15, 2004**

**Report to the Joint Standing Environment Committee of the General Assembly**

**Concerning the Nitrogen Credit Exchange Program**

**As required by  
Sections 22a-521 through 527 of the Connecticut General Statutes**

This report has been prepared by the Nitrogen Credit Advisory Board and is respectfully submitted to the Joint Standing Environment Committee of the General Assembly pursuant to the requirements of Sections 22a-521 through 527 CGS. This statute requires that the Nitrogen Credit Advisory Board submit to the Joint Standing Environment Committee of the General Assembly a report that addresses issues associated with the implementation of the Nitrogen Credit Exchange Program authorized by the statute.

\*Cover photograph courtesy of Carlin Contracting

## Executive Summary

This report covers the progress of the Nitrogen Credit Exchange for the calendar year 2003 and the activities of the Nitrogen Credit Advisory Board. The Nitrogen Credit Advisory Board achieved a number of important milestones in 2003, the third full year of the nitrogen credit exchange program. The most significant accomplishment was the successful execution of exchanges in the second year of the program as authorized by sections 22a-521 through 527 of the Connecticut General Statutes. This report provides a summary of the major actions of the Board and identifies important issues. Highlights of the report are as follows:

- The single most critical factor relative to the continued success of the program is the availability of Clean Water Fund financing to support nitrogen removal projects. Requests from municipalities for nitrogen removal construction projects in the next fiscal year (2006) are expected to exceed \$340 million dollars. This is the result of a large number of nitrogen removal projects moving into construction in fiscal year 2006. The nitrogen removal projects will need to be constructed in a timely manner in order to insure compliance with the general permit.
- 79 municipalities are regulated under the General Permit for Nitrogen Discharges and all 79 municipalities cooperated fully in implementing the Nitrogen Credit Exchange program.
- In 2003 the nitrogen general permit limit was 16,955 equalized pounds per day. Connecticut sewage treatment facilities discharged an average of 16,554 equalized pounds of nitrogen per day during 2003 or 401 equalized pounds per day less than the permit limit.
- Three facilities completed nitrogen removal upgrades in 2003 (the towns of Branford, Fairfield and Windsor Locks) and five additional sewage treatment facilities (Bridgeport East, Bridgeport West, Bristol, Enfield and Litchfield) are scheduled to complete upgrades by the end of 2004.
- The 25 project facilities have removed 2,742,081 equalized pounds of nitrogen in 2003 at a combined capital and operation and maintenance cost of \$5,869,569. Project facilities are nitrogen removal projects that have been financed by the Clean Water Fund.
- The Nitrogen Credit Advisory Board's recommended value of \$2.14 per equalized pound of nitrogen in 2003 was accepted by the Commissioner of Department of Environmental Protection (DEP).

- There were 40 municipalities that purchased credits to remain in compliance with the General Permit that were valued at a total cost of \$2,116,875. The municipalities selling credits when they removed more nitrogen than required to comply with the General Permit numbered 37 for a total value of \$2,428,636. The State purchased all excess nitrogen credits generated during 2003 at a cost of \$311,761.
- The first anniversary of the nitrogen trading program was marked with a recognition celebration held by then Lieutenant Governor M. Jodi Rell on October 24, 2003.
- Department staff spoke at several national conferences in 2003 and presented papers on the Connecticut Nitrogen Trading program. The Connecticut nitrogen removal program is considered a national model of a creative approach to watershed based nutrient credit trading.
- The Department of Environmental Protection inspected 96% of the 79 sewage treatment facilities covered under the general permit at least once during 2003. Only minor discrepancies or problems affecting monitoring data quality were discovered during the inspections. The discrepancies were resolved in cooperation with the municipal officials responsible for operation of the facilities.
- Distressed communities have received priority for additional funding provided by the federal Long Island Sound Restoration Act of 2000 for planning and design of nitrogen removal treatment upgrades.
- Two Board positions are unfilled pending appointments.
- Statutory changes to the program were made in Public Act 04-151 to facilitate payments made by municipalities for the purchase of nitrogen credits.

### **Background**

Long Island Sound's (LIS) most pressing water quality problem is the over enrichment of nutrients resulting from municipal wastewater treatment plant discharges, atmospheric deposition and runoff from urban, suburbs and agricultural areas resulting in the depletion of dissolved oxygen in the bottom waters of LIS during the summer months called "hypoxia." Oxygen levels during the July through September period are inadequate to support healthy populations of fish and shellfish disrupting the feeding, growth and reproduction of aquatic life. The key factor that promotes the development of hypoxia is the presence of excessive nutrients especially nitrogen. Too much nitrogen fuels the excessive growth of algae which eventually dies, sinks to the bottom and decays. During

decay, oxygen is consumed driving dissolved oxygen downward to unhealthy levels, well below state water quality standards.

In April 2001 the Federal EPA approved Connecticut and New York's joint plan to address this water quality problem. The joint plan called a Total Maximum Daily Load or TMDL identified nitrogen as the pollutant responsible for the hypoxic condition. Discharges from sewage treatment plants (STPs), storm water runoff and atmospheric deposition are the primary sources of nitrogen enrichment to LIS. The TMDL requires the two states to attain, by 2014, a 58.5% collective reduction of nitrogen loading from all sources to LIS from an established baseline. A 64% reduction goal was set for Connecticut STPs, a major source of nitrogen loading, through a wasteload allocation process. Nitrogen "trading" was identified as a mechanism for cost-effectively attaining the aggregate goal for Connecticut STPs, which led to the development and passage of Public Act 01-180, codified in the Connecticut General Statutes in Sections 22a-521 through 527. The statute established a Nitrogen Credit Exchange (NCE) overseen by a Nitrogen Credit Advisory Board (NCAB), and authorized issuance of a Nitrogen General Permit (NGP). Collectively, the NGP, the NCE and the NCAB form the foundation for the successful nitrogen-trading program instituted by Connecticut in 2002 for 79 publicly owned STPs.

***A summary of the nitrogen credit exchange program's progress in achieving the total maximum daily load. (Sec 22a-523(c)(1))***

**Appointment of Board Members**

The statute provides for a Nitrogen Credit Advisory Board comprised of 12 members. The General Assembly and Governor are responsible for appointing seven of the members. Two positions on the Board are currently vacant pending appointments by the majority leader of the Senate and the Speaker of the House. Both vacancies need to be refilled. A list of appointees identifying the appointing authority and length of term is provided as Attachment A.

**The General Permit for Nitrogen Discharges**

The Department of Environmental Protection issued a General Permit on January 1, 2002 that regulates the discharge of total nitrogen from each of 79 publicly owned STP's in Connecticut. The General Permit includes requirements that will insure compliance with the Total Maximum Daily Load (TMDL) for nitrogen discharged into Long Island Sound.

The General Permit establishes annual nitrogen limits for each facility based on the expectation that the cumulative amount of nitrogen discharged from all of Connecticut's publicly owned STPs will decrease annually as nitrogen treatment projects are completed. The Nitrogen Credit Exchange Program provides an incentive to facilities that complete nitrogen treatment projects while allowing facilities that elect to defer construction of nitrogen treatment to remain in compliance with the General Permit by purchasing nitrogen credits. The General Permit includes provisions regarding monitoring and

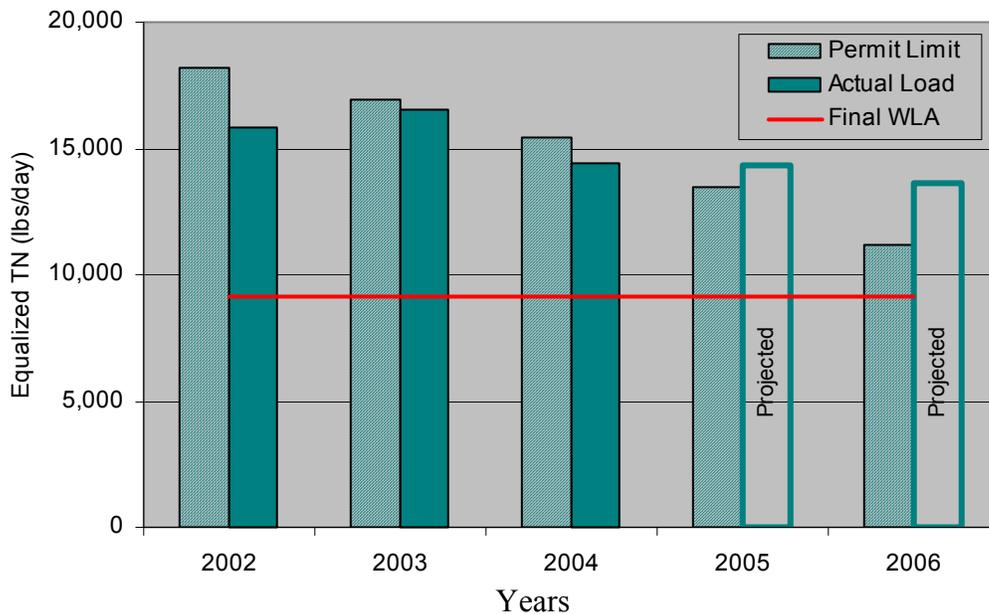
reporting protocols to insure proper accounting of nitrogen credits and debits among STPs. For each participating facility, the General Permit also establishes an “equalization factor” that accounts for each facility’s geographic location relative to the impact of nitrogen discharged at that location to the area in western Long Island Sound where the impact of excess nitrogen is most severe. The equalization factor is used to convert nitrogen loadings that are measured “end-of-pipe” to “equalized pounds” on which compliance with the TMDL is determined.

All 79 municipal STPs regulated under the general permit have been complying with the discharge monitoring requirements of the permit. A copy of the General Permit is attached (Attachment B).

Progress in removing nitrogen by STPs during 2003 was hampered by weather conditions that were adverse to nitrogen removal. Rainfall totals for the year were approximately 25% higher than average. The higher rainfall occurred in the winter and spring of 2003. This in combination with a colder winter and spring resulted in higher levels of nitrogen being discharged during the first half of 2003 than the same period in 2002. The previous year 2002 was a warmer and dryer year that resulted in higher nitrogen removal levels than expected. In the second half of 2003 rainfall totals and temperatures returned to normal levels and nitrogen removal treatment improved significantly during this period.

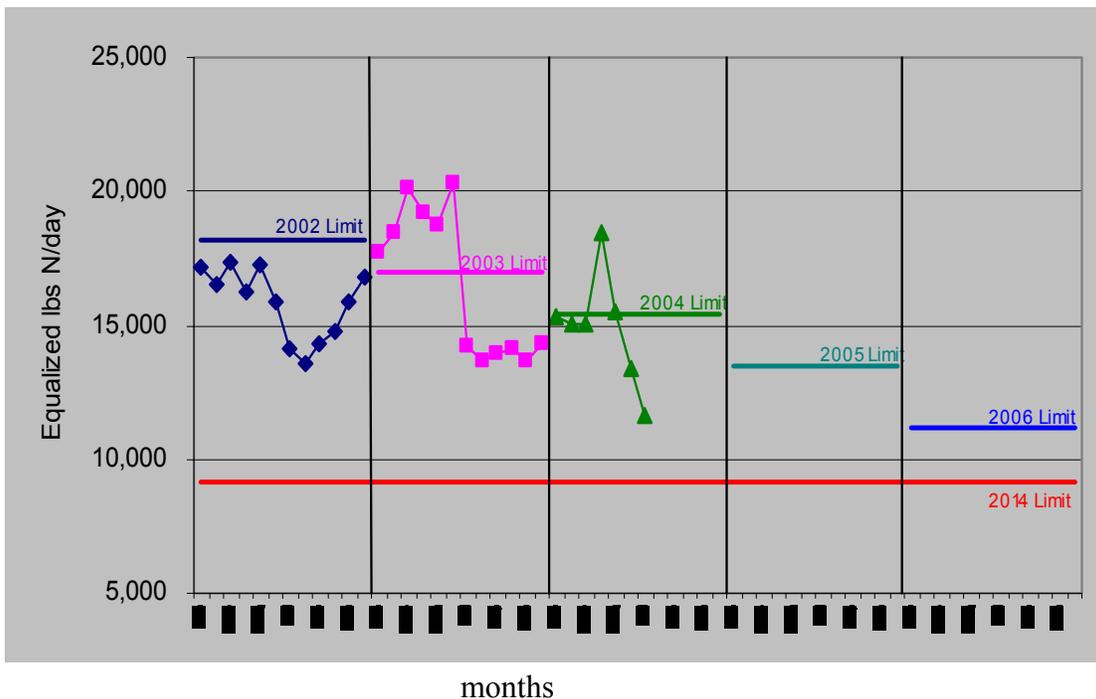
The aggregate permit limit for 2003 was 16,955 equalized pounds per day. Connecticut STPs discharged only 16,554 equalized pounds per day to western Long Island Sound during 2003, thereby meeting the permit limit. Figure1 shows the overall equalized nitrogen discharged over the last two years and the projected loads for future years.

Figure 1 -- Projected Progress Relative to Meeting Final WLA



Data reported for the first seven months of 2004 indicates that performance for 2004 will be closer to the 2004 permit limit of 14,913 equalized pounds per day. It is important to note that the permit was based on the anticipated increase in the ability of Connecticut STPs to remove additional nitrogen as nitrogen removal upgrade projects become operational. Note that projected loads in Figure 1 for 2005 and 2006 exceed the annual permit limit. This is because nitrogen removal upgrade projects have not been completed at the rate originally assumed, partly due to limited availability of funding.

Figure 2  
 Monthly Average Total Nitrogen Loading to Western Long Island Sound



In Figure 2 above the final wasteload allocation (WLA) limit for nitrogen is 9,166 equalized pounds per day to be achieved by 2014 (red baseline Fig. 2 above). The General Permit established aggregate limits for the years 2002-2006 in equalized pounds per day in yearly limits. Figure 2 shows the month-to-month variability of nitrogen loads discharged. The variability shown is the result of cold winter temperatures and months with higher than normal rainfall.

The performance of individual facilities during 2003 and the first 7 months of 2004 are provided as Attachments C and D, *Total Nitrogen Balance Sheet – Monthly Averages by Plant, 2003 and January- July 2004*. The data for 2003 was audited by the Department of Environmental Protection and served as the basis for determining the number of equalized nitrogen credits for sale and the number of equalized nitrogen credits to be purchased for 2003. The 2004 data will be audited at the end of the calendar year.

In order to achieve the future limits in the general permit it is necessary that wastewater nitrogen removal projects in Connecticut be completed every year. Five facilities completed nitrogen treatment upgrades in 2004 (Bridgeport East, Bridgeport West, Bristol, Enfield, and Litchfield). By the end of 2004, a total of 30 facilities will be providing either full or partial nitrogen treatment with 25 facilities projected to complete upgrades over the next 5 years. The effect of the additional nitrogen removal at these facilities on the aggregate loading to Long Island Sound is reflected in Figure 1. Figure 1 also shows the projected aggregate removal for the years 2005 and 2006 as required in the general permit. The projections indicate that the existing nitrogen removal projects will not meet the requirements in 2005 and 2006 due to a limited number of nitrogen removal projects completing construction and operational in those years. This trend can be reversed if projects are funded and completed in future years to reach the necessary removal required by the general permit.

### Nitrogen Trading

A major task of the Nitrogen Credit Advisory Board each year is establishing the value of an Equalized Nitrogen Credit. The Nitrogen Credit Advisory Board proposes an annual value for equalized nitrogen credits to the Commissioner of DEP. The Board is directed to derive this value by dividing the total annual project cost by the reduction in equalized pounds of nitrogen. The statute further identifies the total project cost as: 1) capital expenditures for construction of nitrogen removal facilities and 2) ongoing operation and maintenance costs for nitrogen removal treatment.

Cost of an equalized credit is derived by the following formula:

$$\text{Capital Costs} + \text{Operational Costs} / \text{Total amount of nitrogen reduced from project facilities} = \text{The value of an equalized credit}$$

A “Nitrogen Removal Project” is any alteration of the physical structure of a wastewater treatment facility specifically to remove nitrogen that was financed by the Clean Water Fund. A “Project Facility” is further defined as any facility that was fully operational on January 1 of the trading year. Under this definition, 25 facilities were considered to be Project Facilities during 2003 (see attachment E). “Capital Cost” was established by the Board as the annual Clean Water Fund repayment amount associated with construction of nitrogen treatment facilities as set forth in the loan agreement between the municipality and DEP. Financing derived from grants to municipalities was not considered to be a capital cost. Using this procedure, the Board established the annual capital cost for nitrogen treatment in 2003 at \$2,437,020. This figure represents the annual interest and repayment of principal on the 2% loans for nitrogen removal processes. “Operation and Costs” were estimated by means of a survey sent to all Project Facilities. Department staff reviewed all survey data for consistency and reasonableness and an estimate of \$3,432,549 was adopted by the Board as the annual operation and maintenance costs for nitrogen removal in 2003. Combining capital and operation and maintenance cost yielded a total cost for nitrogen removal in 2003 of \$5,869,569 (see Attachment E).

### Reduction in equalized credits

The reduction in equalized pounds of nitrogen was calculated by subtracting the actual end-of-pipe pounds of nitrogen discharged by each of the Project Facilities from the “baseline” loading established for the facility in the TMDL for Long Island Sound. The baseline loading represents the loading of nitrogen each facility would have discharged if no nitrogen treatment were provided. Load reductions for each facility were multiplied by the equalization factor for that facility (converting the pounds reduced to equalized pounds reduced) and the statewide reduction calculated by summing the equalized pounds reduced for all Project Facilities. Using this procedure, a total of 2,742,117 equalized pounds of nitrogen were reduced by Project Facilities in 2003.

The Board provided an estimated balance sheet to all 79 municipalities covered under the General Permit in December 2003. The balance sheet was based on and included a summary of performance data for each facility through the first nine months of the year and the estimated dollar amount each municipality would be required to submit or would likely receive as a result of credit exchanges in 2003. This information was provided to assist municipalities in Water Pollution Control Authority budget deliberations.

In January 2004, the Board formally submitted a recommendation to the Commissioner that he establish the value of an equalized nitrogen credit at \$2.14 for trading in 2003 based on dividing the Total Project Cost of \$5,869,569 by 2,742,117 pounds of equalized nitrogen removed. The Commissioner accepted this recommendation and issued a draft ruling pursuant to section 22a-527. No municipality petitioned for a review of the Commissioner’s draft ruling during the statutory 15-day review period and the draft ruling became final establishing the value of an equalized nitrogen credit at \$2.14 for 2003.

Final Invoices based on the audited monitoring data for the period January through December 2003 and the established value of a credit were mailed to all municipalities on March 24, 2004. A total of 40 facilities were required to purchase credits in order to remain in compliance with the General Permit. Municipalities purchasing credits contributed a total of \$2,116,875 with individual municipal payment ranging between \$378,709 and \$1,172. Thirty-seven facilities received payments totaling \$2,428,636 from the sale of Nitrogen Credits. Two facilities discharged an amount exactly equal to their permit limit and were not required to purchase or sell credits. As the performance of Connecticut facilities in 2003 was slightly under the general permit limit the State was required to purchase those nitrogen credits in excess of the total amount received from municipalities purchasing credits.

The Bond Commission approved \$311,761 for the purchasing of excess credits on July 30, 2004. Checks to the sellers were issued on August 7, 2004 ahead of the August 14 deadline. (An itemized accounting of the final balances for individual municipalities is provided in Attachment F.)

### 2004 Outlook

The Board is currently preparing recommendations regarding the value of an equalized nitrogen credit for trading in 2004. Although the cost of nitrogen treatment has not increased dramatically this year, less nitrogen may be removed than would be expected based on a colder wetter late winter and spring in 2004. As a result, early projections for 2004 suggest that the value of a nitrogen credit may increase slightly. The higher value of a credit, plus the lower permit limit in 2004, is expected to result in a greater cost to purchase credits for municipalities that do not provide nitrogen treatment. Municipal facilities that are successful in removing more nitrogen than is required to comply with permit limits will likely receive higher payments for the credits generated. Overall, in 2004 payments to credit sellers are expected to more closely approximate monies received from credit purchasers than in 2003.

### Outreach and Training

Staff members presented papers on the Connecticut nitrogen trading program at several national conferences in 2003 including the following: 1. The Water Environment Federation Technical Conference (WEFTEC); and 2. The National Forum on Water Quality Trading and the Water Environment Federation Watershed conference. The nitrogen trading program has been of interest to a number of other states that have invited Connecticut Department Environmental Protection staff to speak in their states.

The University of Connecticut, City of Stamford Water pollution Control Authority, and Manhattan College completed an assessment of the causes of nitrification and denitrification failure at sewage treatment plants. The study identified operational, process and toxic chemical causes of treatment failure and proposed assays that would help diagnose problems. The final report was completed in 2003 and the report is available to wastewater treatment facilities in Connecticut. Funding for this effort was provided by the Water Resource Institute at the University of Connecticut and by the Long Island Sound Study.

On October 24, 2003 then Lieutenant Governor M. Jodi Rell, marked the first anniversary of Connecticut's water quality trading program at a celebration event held at the greenway access to the Naugatuck River in Beacon Falls. US EPA Region 1 Administrator Robert W. Varney and Department of Environmental Protection Commissioner Arthur J. Rocque, Jr. and several members of the Nitrogen Credit Advisory Board joined the Lieutenant Governor in honoring the program's success to date. US EPA also presented Connecticut with \$1.78 million dollars to assist distressed communities with nitrogen removal projects from the Long Island Sound Restoration Act.

Data Quality: DEP staff inspected 76 of the 79 municipal facilities regulated under the General Permit at least once during 2003. Inspections consisted of a comprehensive evaluation of all aspects of the facility's operation and monitoring procedures and included:

Inspection at the site included: verification of calibration of flow meters, inspection of the proper functioning of flow proportional samplers, sample location points and equipment that is used to remove nitrogen.

Inspection documentation: An inspection check list was filled out with the superintendent of the facility in order to determine if there were any problems encountered.

Review of analytical results and Nutrient Analysis Reports (NAR): The analytical results were reviewed to determine consistency with data reported on the NAR's. The bench sheets provided by the labs were examined to determine if they were consistent with methodology and preservation under EPA regulations.

Collection and analysis of split samples: Composite samples of the final effluent were split between the Department of Public Health (DPH) lab and labs used by the municipalities. If the results were not similar, another composite sample was taken and samples were split between DPH, Stamford Regional lab and the lab used by the municipality.

Any discrepancies or problems that might affect the quality of the data used to support the Trading Program were investigated and resolved in cooperation with municipal officials responsible for the facilities operation and maintenance.

***The adequacy of the Clean Water Fund financing pursuant to section 22a-477 of the general statutes, as amended by this act, to support the nitrogen credit exchange program and the total maximum daily load (Sec 22a-523(c)(2)).***

The Connecticut Clean Water Fund was created in July 1986 and is set forth in sections 22a-475 through 22a-483 of the Connecticut General Statutes. The Clean Water Fund program provides financial aid through grants and low interest loans to municipalities for the planning, design and construction of municipal wastewater treatment facilities. Nitrogen removal process improvements at municipal treatment facilities are eligible for a 30% Clean Water Fund grant and a low interest loan for the remainder of the cost. The Clean Water Fund, administered through the Department of Environmental Protection and the Office of the Treasurer, and is financed through a combination State of Connecticut general obligation bonds and US EPA federal grant funding for the grant portion of the financing and State of Connecticut Clean Water Fund revenue bonds for the low interest loan portion. This combination of state revolving loans and grants is the basis of a financial program that municipalities rely on in order to construct nitrogen removal projects and is vital to continued improvement in reducing nitrogen loadings.

**Nitrogen Removal Projects**

Since 1993, a total of 37 nitrogen removal construction projects at municipal wastewater treatment plants have been completed. 12 projects involved major construction of facilities designed to achieve maximum nitrogen removal to meet the long-term nitrogen reduction goal of 4 mg/l for the facility. The remaining 25 projects

involved retrofits of existing facilities that are designed to achieve at least 8 mg/l for total nitrogen discharged. There are four nitrogen removal projects currently under construction. A complete list of nitrogen removal projects that have been completed or currently approved for funding by the Clean Water Fund is provided as Attachment G.

Year-to-year variation in the aggregate statewide nitrogen loading to Long Island Sound is expected to be significant due to the influence of weather conditions on treatment efficiency. Variability may be particularly high in the early years of the trading program as STP operators gain experience in operating the more sophisticated treatment technologies needed for nitrogen removal under a variety of conditions. However, as additional facilities install nitrogen removal treatment technology, the potential to remove greater amounts of nitrogen is achieved and a long-term downward trend in loading to Long Island Sound is anticipated.

The availability of Clean Water Funds is the most critical factor controlling the number of facilities that move forward to upgrade treatment to remove nitrogen. Presently, the projected demand for Clean Water Fund financing to support construction projects is significantly more than the amount projected to be available.

There are 42 municipal treatment facilities in Connecticut covered under the general permit that have not completed or presently have a nitrogen removal project under construction and funded by the Clean Water Fund. As illustrated by attachment F, the total project cost for completed nitrogen removal projects has ranged from several hundred thousand for small facilities to over 100 million dollars for large municipal plants. The fiscal year 2005 priority list has identified over 200 million dollars in future nitrogen removal construction projects proceeding to design for Connecticut during the 2005 fiscal year. The estimated nitrogen removal construction costs for the remaining 42 facilities are in excess of five hundred million dollars as based on a 2000 report, "Nitrogen Credit Trading in the Long Island Sound Watershed" published by the Water Environment Research Foundation. It is anticipated that by the end of 2004 all municipal treatment facilities covered under the general permit will have completed a detailed nitrogen removal engineering study. The studies will result in the evaluation of each facility's potential to cost effectively remove nitrogen. They will also provide detailed construction cost estimates for each facility which will be used to forecast the level of Clean Water Fund financing necessary over the next ten years in order to reach the limits in the general permit.

The fiscal year 2005 capital budget was significantly reduced by a rescission of \$60 million dollars of Clean Water Fund general obligation (grant) funds. The funds reduced by the rescission in the capital budget could have been available for nitrogen removal projects ready for construction in fiscal year 2005. This has resulted in projects being delayed due to limited funding approval by the State Bond Commission. Upgrades to municipal pollution control infrastructure typically require multi-year, stable funding to progress from initial planning and design phases to completion of construction activity. Maintaining a steady flow of capital into nitrogen removal infrastructure projects is critical to the success of this program.

**Recommendations for changes to the program including but not limited to: (A) Exchanging nitrogen credits with entities outside the state; (B) expanding the general permit for nitrogen discharges and the nitrogen credit exchange program to include additional point and non-point sources; and (C) exchange transactions executed outside of the nitrogen credit exchange program (Section 22a-523(c)(3)).**

The Board believes it is premature to expand or alter the program. There is a potential out-of-state market for excess Connecticut credits for New York treatment plants. However, as of September 2004 no facilities in New York have requested to buy excess credits. The Nitrogen Credit Advisory Board is exploring potential expansion of the credit exchange program to include other sectors of point and non-point sources.

**Identification of any other issues that need to be resolved (Sec 22a-523(c)(4)).**

Ensuring proper funding levels is critical to continuing our commitment to water infrastructure needs. Funding shortfalls will result in individual projects being stalled or scrapped as well as threatening the effectiveness and progress of our efforts to improve the water quality of Long Island Sound.

**Recommendations relating to the use of federal funding to assist distressed municipalities in the planning, design and construction of nitrogen removal facilities in implementing the provisions of this act (Sec 22a-523(c)(5)).**

The Long Island Sound Restoration Act of 2000 created an authorization of additional federal funds for upgrading of wastewater treatment facilities to protect Long Island Sound. While the original FY 01 appropriation was the only one specifically targeted to distressed municipalities, the Department of Environmental Protection has chosen to use additional appropriations exclusively for distressed communities. U.S. EPA through the Long Island Sound Restoration Act awarded Connecticut \$1.58 million in FY 01, \$2 million in FY 02, \$1.71 million in FY03 and an additional \$2.48 million for FY 2004. A total of 18 distressed municipalities have been awarded planning grants and 8 design grants have been provided to date. A total of \$7.84 million dollars to date has been awarded to Connecticut to assist distressed municipalities with planning and design of nitrogen removal projects. Attachment H provides a list of distressed city grants awarded.

The planning projects provide an important first step in evaluating a wastewater treatment facility's ability to remove nitrogen and identify options to a municipality for complying with the General Permit. The federal funds will be used to augment the existing state Clean Water Fund grant such that 100% of the cost of planning is funded. Priority will be given to any distressed community, as defined by the Commissioner of Economic and Community Development. The increased design grants will be available on first come first served bases to facilitate the movement of treatment plant projects in distressed municipalities from the planning to the design phase of improvements. The Nitrogen Credit Advisory Board has endorsed the Department of Environmental Protection's targeting of funding to assist distressed communities for planning and design of upgraded

nitrogen treatment as both necessary and effective in helping the State achieve it's long-term water quality goals for Long Island Sound through the Nitrogen Credit Exchange Program.

This is a summary of the major actions of the Board and the progress the exchange program has made in reducing nitrogen loads to LIS and continuing through innovative techniques to meet the ambitious nutrient goals. Detailed minutes of the meetings are available to outline all of actions of the Board.

Respectfully submitted,

YVONNE BOLTON

Yvonne Bolton, Chairman  
Nitrogen Credit Advisory Board

December 15, 2004

Attachments:

- A List of Appointees to Nitrogen Credit Advisory Board
- B General Permit for Nitrogen Discharges
- C Total Nitrogen Balance Sheet – Monthly Averages by Plant 2003
- D Nitrogen Balance Sheet- Monthly Averages through July 2004
- E LIS Total annual project cost 2003
- F Nitrogen Credit Exchange Final Balance – 2003
- G Projects Funded by CWF
- H Distressed communities' grants awarded

## APPENDIX A

### **LIST OF APPOINTEES**

	Name	Appointing Authority	Term	Term Expires
1.	Jeanette Brown WPCF Harbor View Ave. Stamford, CT 06902 Phone: 203-977-5809	Sen. Jepsen Majority Leader of the Senate	3 years	November 2004
2.	John Mengacci Under Secretary Office of Policy Management 450 Capitol Avenue Hartford, CT 06106 Phone: (860) 418-6374	Marc Ryan, Secretary OPM	No specific term	
3.	Robert Moore The MDC. PO Box 800 555 Main St. Hartford, CT 06142-0800 Phone: 278-7850	Sen. Sullivan President of Senate	3 year	November 2005
4.	Yvonne Bolton Acting Bureau Chief Betsey Wingfield (Alternate) Acting Director DEP 79 Elm Street Hartford, CT 06016 Phone: (860) 424-3704	Commissioner Environment Protection	No specific term	
5.	Brenda V. Fraser Office of the Treasurer 55 Elm Street Hartford, CT 06106 Phone: 860-702-3134	Denise Nappier Treasurer's Office	No specific term	
6.	Astrid T. Hanzalek 31 Abraham Terrace Suffield, CT 06078 Phone: 860-668-2739	Rep. Ward, House Minority Leader	3 years	November 2006

	Name	Appointing Authority	Term	Term Expires
7.	Brian Armet Executive Director Mattabassett District 245 Main Street Cromwell, CT 06416 Phone: 860-635-5550	Rep. Pudlin Majority Leader of the House	3 years	November 2005
8.	Richard Cellar 83 Lawrence Road Fairfield, CT 06824-3039 Phone: 203-255-5017	Sen. DeLucca Minority Leader of the Senate	3 year	November 2005
9.	Carl Almquist Town of Groton WPCA 134 Groton Long Point Road Groton, CT 06340-4873 Phone: 860-448-4083	Governor Rell	3 years	November 2007
10.	Bruce Joslin AnoxKaldnes, Inc. 58 Weybosset Street 4 <sup>th</sup> Floor Providence, RI 02903 Phone: 401-270-3898	Rep James Amen Majority Leader of the House	3 years	November 2006
11.	VACANT Towns less than 20,000 Population	Sen. Martin Looney Majority Leader of the Senate	3 years	
12.	VACANT	Speaker of the House	3 years	

## Attachment B

# General Permit for Nitrogen Discharges

### Table of Contents

<b>Section 1.</b>	<b>Authority</b> .....	1
<b>Section 2.</b>	<b>Definitions</b> .....	1
<b>Section 3.</b>	<b>Authorization Under This General Permit</b> .....	3
	(a) Eligible Activities or Discharges.....	3
	(b) Geographic Area.....	3
	(c) Effective Date and Expiration Date.....	3
	(d) Effective Date of Authorization.....	3
<b>Section 4.</b>	<b>Conditions of this General Permit</b> .....	3
	(a) Discharge Limits.....	3
	(b) Compliance During Term of Permit.....	4
	(c) Operation of Nitrogen Removal Process Equipment.....	4
	(d) Monitoring Requirements.....	4
	(e) Reporting Requirements.....	5
	(f) Record Keeping Requirements.....	5
	(g) Duty to Correct and Report Violations.....	6
	(h) Duty to Provide Information.....	6
	(i) Certification of Documents.....	6
	(j) Date of Filing.....	6
	(k) False Statements.....	7
	(l) Correction of Inaccuracies.....	7
	(m) Other Applicable Law.....	7
	(n) Other Rights.....	7
<b>Section 5.</b>	<b>Commissioner's Powers</b> .....	7
	(a) Abatement of Violations.....	7
	(b) General Permit Revocation, Suspension, or Modification....	8
<b>Appendix 1</b>	<b>Annual Discharge Limits</b> .....	9

## General Permit for Nitrogen Discharges

### Section 1. Authority

This general permit is issued under the authority of Public Act 01-180 and Chapter 446k of the Connecticut General Statutes.

### Section 2. Definitions

As used in this general permit, and as defined or modified from Section 1 of P.A. 01-180:

*“Annual mass loading of total nitrogen”* (expressed in pounds per day) means the sum of monthly mass loading of total nitrogen for each month from January through December divided by 12 and rounded to the nearest whole number.

*“Authorized activity”* means any activity authorized by this general permit.

*“CFR”* means Code of Federal Regulations.

*“Commissioner”* means Commissioner as defined by Section 22a-2(b) of the General Statutes.

*“Daily composite”* means a composite sample taken over a full operating day consisting of grab samples collected at equal intervals of no more than sixty (60) minutes and combined proportionally to flow; or, a composite sample continuously collected over a full operating day proportional to flow.

***“Daily mass loading of total nitrogen” (expressed in pounds per day) means the total nitrogen concentration (expressed in mg/L to the nearest 0.1 mg/L) multiplied by the daily flow volume (expressed as MGD, to the nearest 0.1 MGD for facilities with a design capacity of 1.0 MGD or greater and to the nearest 0.01 MGD for facilities with a design capacity of less than 1.0 MGD) multiplied by 8.34 and rounded to the nearest whole number to convert to pounds per day units.***

*“Department”* means the Department of Environmental Protection.

*“Discharge Monitoring Report”* or *“DMR”* means a report form provided or approved by the Commissioner for use by a permittee to submit discharge monitoring data to the Department relating to compliance with limits and conditions established in the individual permit for a facility.

*“Equivalency factor”* means a ratio of the unit response of dissolved oxygen to nitrogen in Long Island Sound for each POTW based on the geographic location of the specific POTW's discharge point divided by the unit response of the geographic area with the highest impact.

*“Equivalent nitrogen credit”* means a nitrogen credit multiplied by the equivalency factor.

*“Individual permit”* means a permit issued to a named permittee under Section 22a-430-4 of the Regulations of Connecticut State Agencies.

*“Monthly mass loading of total nitrogen”* (expressed in pounds per day) means the sum of the daily mass loading of total nitrogen for each monitored day during the month divided by the number of monitoring days during the month and rounded to the nearest whole number.

*“Monthly Operating Report”* or *“MOR”* means a report form provided or approved by the Commissioner for use by a permittee in submitting data to the Department related to the operation of a facility.

*“Municipality”* means municipality as defined by Section 22a-423 of the Connecticut General Statutes.

*“Nitrogen Analysis Report”* or *“NAR”* means a report form provided or approved by the Commissioner for use by a permittee in submitting monitoring data to the Department related to the discharge of nitrogen from a facility.

*“Nitrogen credit”* means the difference between the annual mass loading of total nitrogen specified for a POTW in the general permit for treated nitrogen discharges and the monitored annual mass loading of total nitrogen discharged by that POTW expressed as pounds of nitrogen per day.

*“Nitrogen credit exchange program”* means the program within the Department established pursuant to Section 4 of P.A. 01-180.

*“Nitrogen Wasteload Allocation”* means a total load of nitrogen assigned to a discharger expressed in pounds per day of total nitrogen discharged.

*“Permittee”* means a municipality or person discharging nitrogen as authorized by the general permit.

*“Person”* means person as defined by Section 22a-423 of the Connecticut General Statutes.

*“Publicly Owned Treatment Works”* or *“POTW”* means a system used for the collection, treatment or disposal of sewage from one or more parcels of land and that discharges to the waters of the state and is owned by a municipality of the state.

*“TMDL”* means the Total Maximum Daily Load analysis to achieve water quality standards for dissolved oxygen in Long Island Sound as established by the Department and as approved by the United States Environmental Protection Agency on April 3, 2001.

*“Total nitrogen”* means the total of the concentrations of ammonia nitrogen, organic nitrogen, nitrite nitrogen, and nitrate nitrogen expressed as milligrams of nitrogen per liter.

### **Section 3. Authorization Under This General Permit**

(a) *Eligible Activities or Discharges*

This general permit authorizes the discharge of total nitrogen from the POTWs listed in Appendix 1, provided the activities are conducted in accordance with this general permit.

This general permit does not authorize any discharge of water, substance or material into the waters of the state other than the one specified in this section. Any person or municipality which initiates, creates, originates or maintains such a discharge must first apply for and obtain authorization under Section 22a-430 of the General Statutes.

(b) *Geographic Area*

This general permit applies throughout the State of Connecticut.

(c) *Effective Date and Expiration Date of this General Permit*

This general permit is effective on January 1, 2002, and expires on December 31, 2006.

(d) *Effective Date of Authorization*

An activity is authorized by this general permit on the date the general permit is issued.

**Section 4. Conditions of this General Permit**

A permittee shall conduct activities authorized by this general permit in accordance with the following conditions:

(a) *Discharge Limits*

- (1) Annual discharge limits applicable to each POTW are set forth in Appendix 1, which is incorporated herein in its entirety, as part of this general permit.
- (2) Each permittee shall limit the discharge of nitrogen to the annual discharge limits set forth in Appendix 1, except as set forth in paragraph (b)(1)(b) of this Section.

(b) *Compliance During Term of Permit*

- (1) A permittee shall be in compliance with its annual discharge limits of this general permit if:

- (a) the POTW's annual mass loading of total nitrogen is less than or equal to the discharge limit set forth in Appendix 1; or,
  - (b) the permittee has secured state-owned equivalent nitrogen credits equal to the amount the POTW exceeded the annual discharge limit set forth in Appendix 1 in accordance with the Nitrogen Credit Exchange Program and P.A. 01-180.
- (2) A permittee shall be out of compliance with the annual discharge limits of the general permit and subject to the enforcement provisions of chapter 446k of the Connecticut General Statutes if:
- (a) the POTW's annual mass loading of total nitrogen is greater than the discharge limit set forth in Appendix 1; and
  - (b) the permittee fails to secure sufficient state-owned equivalent nitrogen credits in a timely manner in accordance with the Nitrogen Credit Exchange Program and P.A. 01-180.

(c) *Operation of Nitrogen Removal Process Equipment*

The permittee shall not bypass or fail to operate any of the approved nitrogen removal equipment or processes without the written approval of the Commissioner. The permittee shall operate all necessary equipment to optimize nitrogen removal so as to reduce nitrogen discharges to the maximum extent practicable. This includes but is not limited to all recycle pumping systems, aeration equipment, aeration tank cycling, mixing equipment, anoxic basins, chemical feed systems or any other process equipment necessary for the optimal removal of nitrogen.

(d) *Monitoring Requirements*

- (1) Effective upon issuance of this general permit, the permittee shall monitor total nitrogen in the final effluent in accordance with the following frequency:
  - (a) POTWs with a design flow rate specified in the individual permit for the facility of less than 10,000,000 gallons per day shall monitor the final effluent at a minimum frequency of weekly.
  - (b) POTWs with a design flow rate specified in the individual permit for the facility equal to or greater than 10,000,000 gallons per day shall monitor the final effluent at a minimum frequency of twice per week.
- (3) Monitoring requirements shall commence on January 1, 2002.
- (4) Final effluent and monitoring location shall be identical to that used to determine compliance with final effluent limitations and

monitoring conditions established in the individual permit for the facility.

- (5) All samples analyzed to determine compliance with limits on total nitrogen shall be daily composite samples unless otherwise approved in writing by the Commissioner.
- (6) Chemical analyses to determine compliance with effluent limits and conditions established in this general permit shall be performed using the methods approved in or pursuant to 40 CFR 136 unless an alternative method has been approved in writing pursuant to 40 CFR 136.4.
- (7) The permittee shall measure average daily volume of flow of wastewater received by the facility at the main flow meter as set forth in the individual permit for the facility.
- (8) In the event of a flow meter malfunction on a day when a sample for total nitrogen analysis is collected, the permittee shall utilize the arithmetic average of the 7 highest daily flows measured during the previous 30-day period to calculate the total daily nitrogen loading unless an alternative procedure has been agreed to by the Commissioner.

(e) *Reporting Requirements*

The results of chemical analyses for the total nitrogen in all samples collected during the month and the average daily flow volume of effluent for each day during the month shall be entered on the Monthly Operating Reports (MOR) and Nitrogen Analysis Reports (NAR) and reported to the Department. Results must also be entered in Discharge Monitoring Reports (DMR) as a calculated monthly mass loading of total nitrogen. The MOR, NAR and DMR must be received at the following address by the 15<sup>th</sup> day of the month following the month samples are collected.

ATTN: Municipal Wastewater Monitoring Coordinator  
Connecticut Department of Environmental Protection  
Bureau of Water Management, Planning and Standards Division  
79 Elm Street  
Hartford, CT 06106-5127

(f) *Record Keeping Requirements*

The permittee shall retain copies of all reports required by this general permit, and records of all data used to compile these reports for a period of at least five years from the date of the report submission to the Department.

(g) *Duty to Correct and Report Violations*

Upon learning of a violation of a condition of this general permit, including any failure of flow monitoring equipment, the permittee shall immediately take all reasonable action to determine the cause of such violation, correct such violation and mitigate its results, prevent further such violation, and report in writing such violation and such corrective action to the Commissioner within five (5) days of the permittee learning of such violation. Such report shall be certified in accordance with subsection 4(i) of this general permit.

(h) *Duty to Provide Information*

If the Commissioner requests any information pertinent to the authorized activity or to compliance with this general permit, the permittee shall provide such information in writing within thirty (30) days of such request. Such information shall be certified in accordance with subsection 4(i) of this general permit.

(i) *Certification of Documents*

Any document, including but not limited to any notice, which is submitted to the Commissioner under this general permit shall be signed by, as applicable, the permittee in accordance with Section 22a-430-3(b)(2) of the Regulations of Connecticut State Agencies, and by the individual or individuals responsible for actually preparing such document, each of whom shall certify in writing as follows:

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in the submitted information may be punishable as a criminal offense, in accordance with Section 22a-6 of the General Statutes, pursuant to Section 53a-157b of the General Statutes, and in accordance with any other applicable statute.”

(j) *Date of Filing*

For purposes of this general permit, the date of filing with the Commissioner of any document is the date such document is received by the Commissioner. The word “day” as used in this general permit means the calendar day; if any date specified in the general permit falls on a Saturday, Sunday, or legal holiday, such deadline shall be the next business day thereafter.

(k) *False Statements*

Any false statement in any information submitted pursuant to this general permit may be punishable as a criminal offense, in accordance with Section 22a-6, under Section 53a-157b of the General Statutes.

(l) *Correction of Inaccuracies*

Within fifteen days after the date a permittee becomes aware of a change in any information in any material submitted pursuant to this general permit, or becomes aware that any such information is inaccurate or misleading or that any relevant information has been omitted, such permittee shall correct the inaccurate or misleading information or supply the omitted information in writing to the Commissioner. Such information shall be certified in accordance with subsection 4(i) of this general permit.

(m) *Other Applicable Law*

Nothing in this general permit shall relieve the permittee of the obligation to comply with any applicable federal, state and local law, including but not limited to the obligation to obtain and comply with any authorizations required by such law. In the event a POTW is subject to a more stringent nitrogen limitation than set forth in this general permit, the Permittee shall comply with that more stringent limitation and may not purchase or transfer nitrogen credits to comply with that additional limitation.

(n) *Other Rights*

This general permit is subject to and does not derogate any present or future rights or powers of the State of Connecticut and conveys no rights in real or personal property nor any exclusive privileges, and is subject to all public and private rights and to any federal, state, and local laws pertinent to the property or activity affected by such general permit. In conducting any discharge authorized hereunder, the permittee may not cause pollution, impairment, or destruction of the air, water, or other natural resources of this state.

**Section 5. Commissioner's Powers**

(a) *Abatement of Violations*

The Commissioner may take any action provided by law to abate a violation of this general permit, including the commencement of proceedings to collect penalties for such violation. The Commissioner may, by summary proceedings or otherwise and for any reason provided by law, including violation of this general permit, revoke a permittee's authorization hereunder in accordance with Sections 22a-3a-2 through 22a-

3a-6, inclusive, of the Regulations of Connecticut State Agencies. Nothing herein shall be construed to affect any remedy available to the Commissioner by law.

(b) *General Permit Revocation, Suspension, or Modification*

The Commissioner may, for any reason provided by law, by summary proceedings or otherwise, revoke or suspend this general permit or modify it to establish any appropriate conditions, schedules of compliance, or other provisions which may be necessary to protect human health or the environment or to implement the 15 year TMDL.

Issued: January 2, 2002

ARTHUR J. ROCQUE, JR.

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Arthur J. Rocque, Jr.

***Commissioner***

## APPENDIX 1

### ANNUAL DISCHARGE LIMITS FOR TOTAL NITROGEN

Zone	Publicly Owned Treatment Works	Equivalency Factor	TOTAL NITROGEN (POUNDS/DAY)					
			2002	2003	2004	2005	2006	2014
1	JEWETT CITY WPCF	0.17	31	28	26	23	19	15
1	GROTON CITY WPCF	0.18	198	184	168	146	121	99
1	GROTON TOWN WPCF	0.18	306	285	259	226	187	153
1	KILLINGLY WPCF	0.14	262	243	222	193	160	131
1	LEDYARD WPC	0.18	15	14	12	11	9	7
1	MONTVILLE WPCF	0.18	235	219	199	174	144	118
1	NEW LONDON WPCF	0.18	770	717	653	568	472	386
1	NORWICH WPCF	0.18	401	373	340	295	245	201
1	STONINGTON PAWCATUCK WPCF	0.17	48	45	41	35	29	24
1	PLAINFIELD NORTH WPCF	0.14	68	64	58	50	42	34
1	PLAINFIELD VILLAGE WPCF	0.14	47	44	40	35	29	24
1	PUTNAM WPCF	0.14	106	98	90	78	65	53
1	SPRAGUE WPCF	0.16	15	14	12	11	9	7
1	STAFFORD SPRINGS WPCF	0.15	119	111	101	88	73	60
1	STONINGTON BOROUGH WPCF	0.18	27	25	23	20	17	14
1	STONINGTON MYSTIC WPCF	0.18	54	50	46	40	33	27
1	THOMPSON WPCF	0.18	20	19	17	15	12	10
1	UCONN WPCF	0.15	87	81	74	64	54	44
1	WINDHAM WPCF	0.15	251	233	212	185	153	125
2	BRISTOL WPCF	0.18	795	740	674	586	487	398
2	CANTON WPCF	0.18	48	45	41	35	29	24
2	EAST HAMPTON WPCF	0.20	108	100	91	80	66	54
2	EAST HARTFORD WPCF	0.19	584	543	495	430	357	292
2	EAST WINDSOR WPCF	0.19	119	110	101	88	73	59
2	ENFIELD WPCF	0.19	556	517	471	410	340	278
2	FARMINGTON WPCF	0.18	354	329	300	261	217	178
2	GLASTONBURY WPCF	0.20	195	182	165	144	120	98
2	HARTFORD WPCF	0.20	4744	4414	4021	3498	2906	2377
2	MANCHESTER WPCF	0.19	623	580	528	459	381	312
2	MATTABASSET WPCF	0.20	1665	1549	1411	1227	1020	834
2	MIDDLETOWN WPCF	0.20	415	386	351	306	254	208
2	PLAINVILLE WPCF	0.18	202	188	171	149	124	101
2	PLYMOUTH WPCF	0.18	83	77	70	61	51	42
2	WINDSOR POQUONOCK WPCF	0.19	195	182	165	144	120	98
2	PORTLAND WPCF	0.20	63	58	53	46	38	31
2	ROCKY HILL WPCF	0.20	575	535	487	424	352	288
2	SIMSBURY WPCF	0.18	213	199	181	157	131	107

Zone	Publicly Owned Treatment Works	Equivalency Factor	TOTAL NITROGEN (POUNDS/DAY)					
			2002	2003	2004	2005	2006	2014
2	SOUTH WINDSOR WPCF	0.19	211	196	178	155	129	106
2	SUFFIELD WPCF	0.19	89	83	75	66	54	45
2	VERNON WPCF	0.19	367	342	311	271	225	184
2	WINDSOR LOCKS WPCF	0.19	131	122	111	97	80	66
2	WINSTED WPCF	0.18	127	119	108	94	78	64
3	BRANFORD WPCF	0.60	383	357	325	283	235	192
3	CHESHIRE WPCF	0.49	205	190	174	151	125	103
3	MERIDEN WPCF	0.49	896	834	760	661	549	449
3	NEW HAVEN EAST WPCF	0.60	3128	2911	2652	2307	1916	1568
3	NORTH HAVEN WPCF	0.60	315	294	267	233	193	158
3	SOUTHINGTON WPCF	0.49	406	378	344	299	249	204
3	WALLINGFORD WPCF	0.60	537	500	455	396	329	269
3	WEST HAVEN WPCF	0.60	705	655	597	519	431	353
4	ANSONIA WPCF	0.67	229	213	194	169	140	115
4	BEACON FALLS WPCF	0.67	24	22	20	18	15	12
4	DANBURY WPCF	0.46	882	821	748	651	540	442
4	DERBY WPCF	0.67	142	132	120	105	87	71
4	LITCHFIELD WPCF	0.35	47	43	40	34	29	24
4	MILFORD BEAVER BROOK WPCF	0.67	188	175	159	139	115	94
4	MILFORD HOUSATONIC WPCF	0.67	615	572	521	453	377	307
4	NAUGATUCK TREATMENT Co.	0.60	492	458	417	363	301	246
4	NEW MILFORD WPCF	0.46	55	52	47	41	34	28
4	NEWTOWN WPCF	0.46	33	31	28	24	20	42
4	NORFOLK WPCF	0.35	22	20	19	16	13	11
4	NORTH CANAAN WPCF	0.35	26	24	22	19	16	13
4	SALISBURY WPCF	0.35	42	39	36	31	26	21
4	SEYMOUR WPCF	0.67	122	113	103	90	75	61
4	SHELTON WPCF	0.67	211	197	179	156	129	106
4	SOUTHBURY TR. SCHOOL WPCF	0.46	30	28	25	22	18	15
4	STRATFORD WPCF	0.67	710	660	601	523	435	356
4	THOMASTON WPCF	0.60	83	77	70	61	51	42
4	TORRINGTON WPCF	0.60	495	461	420	365	303	248
4	WATERBURY WPCF	0.60	2015	1875	1708	1486	1234	1049
5	BRIDGEPORT EAST WPCF	0.85	722	672	612	532	442	362
5	BRIDGEPORT WEST WPCF	0.85	2078	1933	1761	1532	1273	1041
5	FAIRFIELD WPCF	0.85	811	754	687	598	497	406
5	WESTPORT WPCF	0.85	173	161	147	128	106	87
6	GREENWICH WPCF	1.00	957	890	811	705	586	479
6	NEW CANAAN WPCF	1.00	127	119	108	94	78	64
6	NORWALK WPCF	1.00	1433	1333	1215	1057	878	718
6	RIDGEFIELD SOUTH ST. WPCF	1.00	58	54	49	43	36	29
6	STAMFORD WPCF	1.00	1848	1719	1566	1362	1132	926

## ATTACHMENT C

**Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2003**

	<u>Limit '03</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
<b>ZONE: 1</b>													
GROTON CITY WPCF	184	266	133	171	212	116	176	219	149	76	109	149	152
GROTON TOWN WPCF	285	520	529	545	608	557	643	570	439	339	278	265	290
JEWETT CITY WPCF	28	60	60	69	56	30	36	27	27	16	31	30	35
KILLINGLY WPCF	243	204	184	181	216	143	145	123	131	111	104	98	122
LEDYARD WPC	14	4	2	5	4	3	4	2	2	2	3	2	7
MONTVILLE WPCF	219	267	312	227	219	76	69	95	102	99	144	138	85
NEW LONDON WPCF	717	473	375	444	605	569	376	276	324	283	332	400	407
NORWICH WPCF	373	698	897	912	817	1093	1092	937	1013	1079	1240	1108	943
PLAINFIELD NORTH WPCF	64	78	123	118	141	121	69	39	54	68	72	80	85
PLAINFIELD VILLAGE WPCF	44	61	74	61	76	38	39	23	25	32	34	38	32
PUTNAM WPCF	98	209	171	202	214	162	176	145	203	142	149	141	131
SPRAGUE WPCF	14	7	7	10	10	8	9	4	4	3	8	9	6
STAFFORD SPRINGS WPCF	111	126	120	144	143	143	127	138	123	159	141	108	103
STONINGTON BOROUGH	25	57	42	63	79	47	44	57	66	67	60	32	40
STONINGTON MYSTIC WPCF	50	29	23	27	38	39	55	66	88	53	36	26	36
STONINGTON PAWCATUCK	45	37	23	25	29	58	40	28	25	36	29	32	43
THOMPSON WPCF	19	41	45	53	44	55	48	15	20	24	24	19	36
UCONN WPCF	81	104	68	128	133	99	56	13	39	26	34	33	108
WINDHAM WPCF	233	282	281	287	274	229	221	168	95	203	353	334	185
<b>ZONE: 2</b>													
BRISTOL WPCF	740	1136	1139	1230	971	1205	1229	1040	1000	1116	1208	976	1207
CANTON WPCF	45	76	66	81	90	87	101	74	83	79	91	100	113
EAST HAMPTON WPCF	100	140	103	144	111	173	166	73	108	82	87	112	131
EAST HARTFORD WPCF	543	901	737	833	907	744	762	691	676	753	642	645	697
EAST WINDSOR WPCF	110	35	39	41	35	37	43	27	25	26	31	33	40
ENFIELD WPCF	517	914	1075	1201	1200	1001	1056	952	860	539	489	351	435
FARMINGTON WPCF	329	272	406	391	398	394	310	236	356	337	344	351	449
GLASTONBURY WPCF	182	241	295	273	269	304	404	276	263	386	296	312	363
HARTFORD WPCF	4414	5169	6389	6910	6428	5241	6303	5540	5474	5074	5517	6466	6285
MANCHESTER WPCF	580	816	722	863	796	750	857	705	713	717	733	669	797
MATTABASSET WPCF	1549	2180	2282	2393	2350	2270	2221	1347	1227	1455	1426	1070	1316
MIDDLETOWN WPCF	386	349	441	571	489	411	427	226	290	385	341	304	389

Report Date: 1/4/2005

ATTACHMENT C

## Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2003

	<u>Limit '03</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
PLAINVILLE WPCF	188	338	305	327	342	323	333	260	239	255	291	322	317
PLYMOUTH WPCF	77	72	59	70	76	60	75	45	40	93	75	88	75
PORTLAND WPCF	58	34	29	37	39	21	42	19	13	22	20	24	33
ROCKY HILL WPCF	535	825	675	1133	882	752	742	632	627	900	790	600	640
SIMSBURY WPCF	199	381	382	351	307	308	258	252	287	368	291	287	316
SOUTH WINDSOR WPCF	196	317	279	336	349	388	383	325	275	300	297	339	300
SUFFIELD WPCF	83	46	47	62	17	43	55	59	16	23	15	15	47
VERNON WPCF	342	528	583	770	747	458	638	483	450	556	784	836	1119
WINDSOR LOCKS WPCF	122	177	173	219	129	122	108	79	85	70	81	76	69
WINDSOR POQUONOCK	182	429	498	417	349	396	373	434	415	445	413	502	388
WINSTED WPCF	119	216	153	179	162	142	171	166	208	204	222	217	207

**ZONE: 3**

BRANFORD WPCF	357	85	59	85	81	71	84	105	61	56	136	63	57
CHESHIRE WPCF	190	636	518	681	521	424	482	424	379	383	459	465	533
MERIDEN WPCF	834	936	756	1032	1180	1018	1246	741	554	716	956	716	1155
NEW HAVEN EAST WPCF	2911	1669	1349	1801	1421	1723	1996	1388	1831	1977	1823	1356	1224
NORTH HAVEN WPCF	294	659	561	586	420	422	581	413	401	407	508	507	556
SOUTHINGTON WPCF	378	786	889	836	804	816	879	791	795	742	727	720	790
WALLINGFORD WPCF	500	488	532	677	711	635	606	479	501	576	597	632	783
WEST HAVEN WPCF	655	756	593	700	624	601	1222	829	414	443	779	566	492

**ZONE: 4**

ANSONIA WPCF	213	353	395	332	333	293	390	324	277	175	290	258	267
BEACON FALLS WPCF	22	52	51	47	41	45	51	50	57	42	34	38	32
DANBURY WPCF	821	1718	1316	1869	1913	2021	1945	1951	1847	2313	2038	1829	1742
DERBY WPCF	132	52	48	51	56	64	82	65	69	69	70	69	75
LITCHFIELD WPCF	43	52	46	61	50	50	66	47	36	52	52	60	73
MILFORD BEAVER BROOK	175	202	179	279	192	201	243	157	137	138	128	135	165
MILFORD HOUSATONIC	572	509	362	484	657	700	569	299	316	264	242	365	378
NAUGATUCK TREATMENT	458	525	526	741	770	411	317	163	184	213	528	474	425
NEW MILFORD WPCF	52	56	85	87	39	42	46	45	46	54	45	46	37
NEWTOWN WPCF	31	48	37	58	46	62	55	57	29	65	66	35	36
NORFOLK WPCF	20	12	8	16	14	10	18	13	8	9	14	16	20
NORTH CANAAN WPCF	24	29	35	28	24	30	26	15	9	14	14	19	19

Report Date: 1/4/2005

ATTACHMENT C

## Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2003

	<u>Limit '03</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
SALISBURY WPCF	39	30	31	30	31	31	24	17	15	26	27	31	31
SEYMOUR WPCF	113	54	63	39	39	60	64	45	55	43	83	72	57
SHELTON WPCF	197	469	504	524	515	529	560	593	555	590	671	557	468
SOUTHBURY TR. SCHOOL	28	20	20	18	21	16	20	11	11	12	16	20	29
STRATFORD WPCF	660	625	466	916	970	689	1351	497	498	360	407	392	583
THOMASTON WPCF	77	83	47	66	55	31	51	30	35	43	62	53	59
TORRINGTON WPCF	461	350	298	400	408	269	283	288	253	314	320	176	228
WATERBURY WPCF	1875	2458	2667	2055	1019	1035	1256	857	1136	875	843	1059	765
<b>ZONE: 5</b>													
BRIDGEPORT EAST WPCF	672	656	873	854	924	930	1006	384	407	379	258	295	416
BRIDGEPORT WEST WPCF	1933	2767	3412	3444	3569	3621	2713	2372	1502	1453	1014	814	996
FAIRFIELD WPCF	754	346	386	549	544	550	607	333	380	369	362	501	510
WESTPORT WPCF	161	102	88	148	151	131	275	177	123	97	91	99	112
<b>ZONE: 6</b>													
GREENWICH WPCF	890	471	473	494	492	576	642	350	357	336	338	497	482
NEW CANAAN WPCF	119	28	21	33	29	21	41	16	13	14	26	24	22
NORWALK WPCF	1333	781	1105	1082	1183	1310	1629	546	520	554	581	693	672
RIDGEFIELD SOUTH ST.	54	10	15	49	31	37	34	19	15	24	40	23	32
STAMFORD WPCF	1719	1683	1834	1662	1587	1740	1834	1292	1621	1717	1613	1533	1627
<b>End-Of-Pipe Total</b>		39,667	40,988	45,308	42,821	40,426	43,770	33,066	32,098	32,913	33,922	32,937	34,523
<b>Equalized Total</b>		17,726	18,500	20,137	19,169	18,758	20,324	14,245	13,708	13,962	14,147	13,654	14,323

**End-Of-Pipe Permit = 34,210**  
**End-Of-Pipe Avg. = 37,703**

**Equalized Permit = 16,955**  
**Equalized Avg. = 16,554**

Report Date: 1/4/2005

APPENDIX D

## Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2004

	<u>Limit '04</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
<b>ZONE: 1</b>													
GROTON CITY WPCF	168	157	156	197	348	236	170	150					
GROTON TOWN WPCF	259	433	467	470	623	589	529	433					
JEWETT CITY WPCF	26	51	59	65	62	29	38	25					
KILLINGLY WPCF	222	112	141	136	270	226	202	123					
LEDYARD WPC	12	5	7	4	5	3	4	3					
MONTVILLE WPCF	199	135	489	489	253	179	178	109					
NEW LONDON WPCF	653	456	406	411	437	325	274	213					
NORWICH WPCF	340	630	802	669	785	948	980	738					
PLAINFIELD NORTH WPCF	58	98	76	84	128	91	56	73					
PLAINFIELD VILLAGE WPCF	40	59	54	47	45	52	18	17					
PUTNAM WPCF	90	194	201	178	188	168	174	154					
SPRAGUE WPCF	12	6	5	6	15	9	9	13					
STAFFORD SPRINGS WPCF	101	120	113	133	144	145	140	99					
STONINGTON BOROUGH	23	41	40	44	65	43	41	32					
STONINGTON MYSTIC WPCF	46	41	43	51	56	46	60	70					
STONINGTON PAWCATUCK	41	52	66	50	53	49	68	108					
THOMPSON WPCF	17	26	41	41	42	37	43	31					
UCONN WPCF	74	84	90	131	144	159	94	57					
WINDHAM WPCF	212	245	318	343	298	293	261	124					
<b>ZONE: 2</b>													
BRISTOL WPCF	674	1222	1104	1058	1213	815	614	584					
CANTON WPCF	41	107	97	108	97	105	104	87					
EAST HAMPTON WPCF	91	99	142	98	82	50	56	80					
EAST HARTFORD WPCF	495	747	657	782	1103	990	936	584					
EAST WINDSOR WPCF	101	37	31	24	40	34	25	27					
ENFIELD WPCF	471	291	283	291	316	200	159	167					
FARMINGTON WPCF	300	477	365	275	320	508	432	365					
GLASTONBURY WPCF	165	390	345	374	436	487	396	339					
HARTFORD WPCF	4021	6503	6321	7209	7834	7768	7161	4989					
MANCHESTER WPCF	528	699	737	752	921	760	794	686					
MATTABASSET WPCF	1411	1317	1577	2059	2403	1615	1178	1165					
MIDDLETOWN WPCF	351	347	579	453	882	494	323	228					

# Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2004

	<u>Limit '04</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
PLAINVILLE WPCF	171	339	317	311	348	356	302	266					
PLYMOUTH WPCF	70	98	68	69	70	52	56	31					
PORTLAND WPCF	53	34	51	64	65	36	21	25					
ROCKY HILL WPCF	487	645	516	614	1290	743	755	674					
SIMSBURY WPCF	181	341	336	352	396	276	346	383					
SOUTH WINDSOR WPCF	178	274	269	322	429	350	288	292					
SUFFIELD WPCF	75	44	80	56	33	18	17	24					
VERNON WPCF	311	1503	1399	1196	526	395	508	460					
WINDSOR LOCKS WPCF	111	67	72	137	168	149	132	85					
WINDSOR POQUONOCK	165	431	401	408	389	516	491	419					
WINSTED WPCF	108	193	194	211	222	209	122	179					
<b>ZONE: 3</b>													
BRANFORD WPCF	325	58	79	77	224	60	191	496					
CHESHIRE WPCF	174	518	574	602	579	545	551	485					
MERIDEN WPCF	760	773	1134	812	1380	993	665	516					
NEW HAVEN EAST WPCF	2652	1907	684	732	1847	1941	1741	1271					
NORTH HAVEN WPCF	267	430	427	475	504	472	478	450					
SOUTHINGTON WPCF	344	713	766	672	838	809	927	859					
WALLINGFORD WPCF	455	665	635	632	810	628	559	576					
WEST HAVEN WPCF	597	663	630	523	905	417	491	302					
<b>ZONE: 4</b>													
ANSONIA WPCF	194	336	317	304	361	286	209	230					
BEACON FALLS WPCF	20	37	38	43	46	52	39	41					
DANBURY WPCF	748	1779	1848	1974	1964	1948	1893	1789					
DERBY WPCF	120	68	45	42	94	83	66	45					
LITCHFIELD WPCF	40	49	40	44	68	33	20	20					
MILFORD BEAVER BROOK	159	149	110	119	173	132	123	104					
MILFORD HOUSATONIC	521	534	321	300	737	518	396	317					
NAUGATUCK TREATMENT	417	292	354	283	342	199	141	151					
NEW MILFORD WPCF	47	56	68	76	55	48	35	51					
NEWTOWN WPCF	28	25	20	34	40	36	30	18					
NORFOLK WPCF	19	14	12	16	15	14	8	9					
NORTH CANAAN WPCF	22	32	31	28	24	25	22	19					

# Total Nitrogen Balance Sheet - Monthly Averages by Plant, 2004

	<u>Limit '04</u>	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
SALISBURY WPCF	36	21	27	24	27	30	23	17					
SEYMOUR WPCF	103	68	56	53	108	79	52	45					
SHELTON WPCF	179	587	600	604	454	545	581	561					
SOUTHBURY TR. SCHOOL	25	21	19	29	25	11	10	10					
STRATFORD WPCF	601	468	364	345	798	450	364	338					
THOMASTON WPCF	70	61	50	46	45	37	25	24					
TORRINGTON WPCF	420	304	325	335	443	338	241	190					
WATERBURY WPCF	1708	727	530	896	1190	1209	1041	708					
<b>ZONE: 5</b>													
BRIDGEPORT EAST WPCF	612	724	749	683	542	664	495	165					
BRIDGEPORT WEST WPCF	1761	1528	1840	1707	1840	902	810	685					
FAIRFIELD WPCF	687	445	448	479	612	587	402	347					
WESTPORT WPCF	147	115	96	163	257	226	152	183					
<b>ZONE: 6</b>													
GREENWICH WPCF	811	443	357	310	516	462	293	374					
NEW CANAAN WPCF	108	13	12	20	30	24	17	15					
NORWALK WPCF	1215	781	1049	1100	1145	691	528	553					
RIDGEFIELD SOUTH ST.	49	43	7	11	54	28	23	20					
STAMFORD WPCF	1566	1547	1627	1413	1466	1617	1249	1288					
<b>End-Of-Pipe Total</b>		36,139	35,800	36,775	44,095	37,684	33,441	27,981					
<b>Equalized Total</b>		15,315	15,039	15,035	18,481	15,502	13,376	11,643					

**End-Of-Pipe Permit = 31,159**

**End-Of-Pipe Avg. = 35,988**

**Equalized Permit = 15,444**

**Equalized Avg. = 14,913**

APPENDIX E

## Total Annual Project Cost - 2003

Project Facilities	Total Annual Capital Cost	Total Annual O&M Cost	Total Annual Project Cost
*BRANFORD WPCF	\$168,661	\$143,409	\$312,070
*FAIRFIELD WPCF	\$514,885	\$287,850	\$802,735
*WINDSOR LOCKS WPCF	\$84,200	\$37,579	\$121,779
EAST HAMPTON WPCF	\$30,144	\$69,468	\$99,612
DERBY WPCF	\$31,785	\$35,770	\$67,555
EAST WINDSOR WPCF	\$61,136	\$25,976	\$87,112
GREENWICH WPCF	\$0	\$177,708	\$177,708
LEDYARD WPC	\$18,062	\$15,231	\$33,293
MILFORD BEAVER BROOK WPCF	\$9,074	\$87,877	\$96,951
MILFORD HOUSATONIC WPCF	\$0	\$262,893	\$262,893
NEW CANAAN WPCF	\$56,656	\$27,522	\$84,178
NEW HAVEN EAST WPCF	\$151,122	\$701,937	\$853,059
NEW LONDON WPCF	\$54,978	<b>\$112,563</b>	\$167,541
NEWTOWN WPCF	\$72,954	<b>\$11,534</b>	\$84,488
NORWALK WPCF	\$276,853	\$158,362	\$435,215
PORTLAND WPCF	\$44,740	\$32,100	\$76,840
RIDGEFIELD SOUTH ST. WPCF	\$0	\$8,000	\$8,000
SEYMOUR WPCF	\$14,654	\$33,655	\$48,309
STAMFORD WPCF	\$52,773	\$228,868	\$281,641
STRATFORD WPCF	\$0	\$249,516	\$249,516
THOMASTON WPCF	\$56,408	\$16,181	\$72,589
UCONN WPCF	\$0	\$45,297	\$45,297
WATERBURY WPCF	\$737,935	\$491,164	\$1,229,099
WEST HAVEN WPCF	\$0	\$160,244	\$160,244
WESTPORT WPCF	\$0	<b>\$11,845</b>	\$11,845
<b>TOTAL</b>	<b>\$2,437,020</b>	<b>\$3,432,549</b>	<b>\$5,869,569</b>

## LIS Total Nitrogen Credit Exchange Final Balance - 2003

### SELLING Credits

#### Facility Name

★ NEW HAVEN EAST WPCF	\$600,353
★ NORWALK WPCF	\$347,590
★ GREENWICH WPCF	\$336,654
★ WATERBURY WPCF	\$253,076
★ FAIRFIELD WPCF	\$199,844
★ BRANFORD WPCF	\$130,287
TORRINGTON WPCF	\$75,923
★ MILFORD HOUSATONIC WPCF	\$74,837
★ NEW CANAAN WPCF	\$74,205
★ STAMFORD WPCF	\$57,801
★ NEW LONDON WPCF	\$43,867
BRIDGEPORT EAST WPCF	\$37,844
★ DERBY WPCF	\$35,587
★ SEYMOUR WPCF	\$29,830
★ RIDGEFIELD SOUTH ST. WPCF	\$21,090
★ WESTPORT WPCF	\$18,590
★ THOMASTON WPCF	\$12,185
★ EAST WINDSOR WPCF	\$11,279
KILLINGLY WPCF	\$10,498
MONTVILLE WPCF	\$9,279
NAUGATUCK TREATMENT Co.	\$8,436
★ STRATFORD WPCF	\$7,327
SUFFIELD WPCF	\$6,827
★ PORTLAND WPCF	\$4,687
SOUTHURY TR. SCHOOL WPCF	\$3,593
SALISBURY WPCF	\$3,281
GROTON CITY WPCF	\$3,234
NORFOLK WPCF	\$1,914
★ LEDYARD WPC	\$1,547
STONINGTON PAWCATUCK WPCF	\$1,461
★ UCONN WPCF	\$1,289
PLYMOUTH WPCF	\$1,125
STONINGTON MYSTIC WPCF	\$984
★ WINDSOR LOCKS WPCF	\$890

### BUYING Credits

#### Facility Name

DANBURY WPCF	\$378,709
BRIDGEPORT WEST WPCF	\$247,648
HARTFORD WPCF	\$232,143
SHELTON WPCF	\$182,121
SOUTHINGTON WPCF	\$160,750
CHESHIRE WPCF	\$115,587
NORTH HAVEN WPCF	\$97,481
NORWICH WPCF	\$86,187
BRISTOL WPCF	\$53,568
ANSONIA WPCF	\$49,194
ENFIELD WPCF	\$47,788
VERNON WPCF	\$47,639
WALLINGFORD WPCF	\$47,335
MATTABASSET WPCF	\$38,430
ROCKY HILL WPCF	\$36,243
WINDSOR POQUONOCK WPCF	\$35,618
MERIDEN WPCF	\$31,767
EAST HARTFORD WPCF	\$30,572
MANCHESTER WPCF	\$27,010
GROTON TOWN WPCF	\$25,308
GLASTONBURY WPCF	\$19,528
SOUTH WINDSOR WPCF	\$18,996
SIMSBURY WPCF	\$16,450
PLAINVILLE WPCF	\$16,309
BEACON FALLS WPCF	\$12,037
WINSTED WPCF	\$9,561
PUTNAM WPCF	\$7,873
★ NEWTOWN WPCF	\$6,827
★ WEST HAVEN WPCF	\$6,093
CANTON WPCF	\$5,905
STONINGTON BOROUGH WPCF	\$4,218
FARMINGTON WPCF	\$3,515
LITCHFIELD WPCF	\$3,007
★ EAST HAMPTON WPCF	\$2,968

APPENDIX G

**Nitrogen Removal Projects Financed by the Clean Water Fund**

<b>City/Town</b>	<b>Total Project Cost</b>	<b>Nitrogen Cost Portion</b>	<b>*Loan Portion to Towns</b>	<b>Year Project Placed in Service</b>	<b>Pounds of TN Reduced by Project</b>
Seymour	\$9,800,000	\$250,000	\$200,000	1993	91
East Windsor	\$10,000,000	\$1,000,000	\$800,000	1996	110
Fairfield (1)	\$4,700,000	\$4,700,000	\$1,605,500	1996	389
Greenwich	\$500,000	\$500,000	\$0	1996	630
Milford Beaver Brook	\$1,000,000	\$1,000,000	\$200,000	1996	124
Milford Housatonic	\$650,000	\$650,000	\$0	1996	297
Norwalk (1)	\$1,100,000	\$1,100,000	\$0	1996	943
Ridgefield South Street	\$200,000	\$200,000	\$0	1996	51
Stratford	\$800,000	\$800,000	\$0	1996	467
UCONN	\$12,000,000	\$1,058,500	\$0	1996	65
West Haven	\$750,000	\$750,000	\$0	1996	338
Westport	\$400,000	\$400,000	\$0	1996	114
Ledyard	\$3,500,000	\$350,000	\$280,000	1997	11
New Haven	\$8,200,000	\$8,200,000	\$3,360,000	1997	2,339
Newtown	\$12,000,000	\$1,058,504	\$846,803	1997	28
Stamford (1)	\$3,500,000	\$3,500,000	\$960,000	1997	556
Derby	\$2,762,275	\$677,150	\$474,005	2000	106
New Canaan	\$14,000,000	\$1,234,921	\$864,445	2000	111
Norwalk (2)	\$56,000,000	\$5,537,645	\$3,876,352	2000	256
Waterbury	\$120,000,000	\$17,359,005	\$12,151,304	2000	1823
East Hampton	\$689,725	\$689,725	\$482,808	2001	62
Thomaston	\$9,313,158	\$1,163,896	\$814,727	2001	69
New London	\$3,068,637	\$2,668,637	\$2,032,981	2002	576
Portland	\$5,200,000	\$1,046,750	\$732,725	2002	47
Branford	\$21,542,414	\$3,157,876	\$2,210,513	2003	390
Fairfield (2)	\$40,550,961	\$12,046,352	\$8,432,446	2003	318
Windsor Locks	\$2,348,678	\$1,841,252	\$1,288,876	2003	100
Bridgeport East	\$2,089,800	\$2,089,800	\$1,462,860	2004	540
Bridgeport West	\$2,375,150	\$2,375,150	\$1,312,605	2004	1544
Bristol	\$583,700	\$583,700	\$408,590	2004	575
Enfield	\$2,390,000	\$1,757,000	\$1,229,900	2004	430
Litchfield	\$4,000,000	\$1,000,000	\$700,000	2004	32
Jewett City	\$10,000,000	\$1,500,000	\$750,000	2005	27
Stamford (2)	\$97,223,000	\$59,500,000	\$42,000,000	2006	1320
North Haven	\$999,800	\$999,800	\$699,860	2006	350
Wallingford	\$2,275,800	\$2,275,800	\$1,593,060	2006	250
Simsbury	\$21,231,000	\$4,181,000	\$2,926,700	2007	275

\*Construction only loan cost, design loan cost is not included

# APPENDIX H

## *Planning Grants provided for Distressed Communities*

<b>GRANTEE</b>	<b>CWF Project #</b>	<b>Total Project Cost</b>	<b>100% Distressed Community Grant Eligible</b>	<b>50% STATE MATCH</b>	<b>50% FEDERAL</b>
PUTNAM	449-PG	\$119,910	\$119,910	\$59,955	\$59,955
PLAINVILLE	542-PG	\$215,000	\$155,000	\$77,500	\$77,500
MDC	508-PG	\$257,812	\$257,812	\$128,906	\$128,906
WINDHAM	557-PG	\$322,939	\$171,050	\$85,525	\$85,525
MERIDEN	382-PG	\$476,113	\$165,994	\$82,997	\$82,997
NEW HAVEN	509-PG	\$159,000	\$159,000	\$79,500	\$79,500
WEST HAVEN	549-PG	\$612,034	\$478,520	\$239,260	\$239,260
KILLINGLY	524-PG	\$355,789	\$192,710	\$96,355	\$96,355
TORRINGTON	546-PG	\$202,344	\$202,344	\$101,172	\$101,172
NORWICH	448-PG	\$376,845	\$235,642	\$117,821	\$117,821
ANSONIA	554-PG	\$318,925	\$240,000	\$120,000	\$120,000
SPRAGUE	564-PG	\$167,492	\$73,144	\$36,572	\$36,572
WINSTED	553-PG	\$46,500	\$46,500	\$23,250	\$23,250
STAFFORD	194-PG	\$114,820	\$114,820	\$57,410	\$57,410
MATTABASSETT	567-PG	\$518,944	\$498,554	\$249,277	\$249,277
PLAINFIELD	191-PG	\$49,000	\$49,000	\$24,500	\$24,500
<b>TOTALS</b>		\$4,313,467	\$3,160,000	\$1,580,000	\$1,580,000

**Design Grants provided for Distressed Communities**

<b>GRANTEE</b>	<b>CWF Project #</b>	<b>Total Project Cost</b>	<b>100% Distressed Community Grant Eligible</b>	<b>50% STATE MATCH</b>	<b>50% FEDERAL</b>
WINDHAM	551-D	\$1,999,000	\$1,979,000	\$989,500	\$989,500
STRATFORD	366-D	\$3,426,972	\$3,426,972	\$1,713,486	\$1,713,486
BRISTOL	464-D	\$58,500	\$58,500	\$29,250	\$29,250
ENFIELD	483-D*	\$25,158	\$25,158	\$3,774	\$12,579
GROTON	386-D	\$109,700	\$109,700	\$54,850	\$54,850
WINSTED	553-D	\$106,900	\$106,900	\$53,450	\$53,450
MDC	508-D	\$55,000	\$55,000	\$27,500	\$27,500
PLAINVILLE	542-D**	\$1,863,650	\$1,216,616	\$608,308	\$608,308
MATTABASSETT	567-PG	\$20,390	\$20,390	\$10,195	\$10,195
WINDSOR LOCKS	393-PG	\$465,400	\$191,600	\$95,800	\$95,800
THOMPSON	570-PG	\$115,700	\$115,700	\$57,850	\$57,850
<b>TOTALS</b>		<b>\$8,246,370</b>	<b>\$7,305,537</b>	<b>\$3,643,964</b>	<b>\$3,652,769</b>