Response to Public Comments On the Draft Nitrogen Wasteload Allocation for Point Source Discharges in Connecticut

December 2000

Prepared by
Connecticut Department of Environmental Protection
Bureau of Water Management
79 Elm Street
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RESPONSE TO PUBLIC COMMENTS ON THE DRAFT NITROGEN WASTELOAD ALLOCATION FOR POINT SOURCE DISCHARGES IN CONNECTICUT

Introduction

Connecticut issued a public notice on August 30, 2000 soliciting comments on the Nitrogen Wasteload Allocation (WLA) for Point Source Discharges Connecticut. The WLA is a key component of the Total Maximum Daily Load (TMDL) Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound. The TMDL formalizes plans to address hypoxia in LIS, specifying nitrogen control goals over the next 15 years. Nitrogen is the primary pollutant causing low dissolved oxygen (DO), or hypoxia, in the bottom waters of the Sound.

The TMDL proposes a phased approach to hypoxia management to meet existing water quality standards for oxygen in both Connecticut and New York. The TMDL emphasizes nitrogen control in its Phase III strategy, calling for a 58.5% reduction below baseline levels by the year 2014. Sewage treatment plants are a major source of the nitrogen enrichment and public comments on the WLA for nitrogen were solicited in response to a requirement by the EPA for completing the TMDL. The Connecticut Department of Environmental Protection's (CTDEP) response to comments on the TMDL has also been completed and is a companion report to this document (*See* "Response to Public Comments on the Long Island Sound Draft Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound").

Public Informational Meetings

A series of public informational meetings on the WLA were held in Connecticut to present the proposed plan and to answer questions on the WLA. The meetings were for informational purposes only and no formal comments were taken at the meetings, unless submitted in writing. All comments on the WLA included in this report were formally submitted in writing. Public information sessions were held at six locations throughout the state. The meetings were held in Danielson and in Groton on September 6, 2000, in Torrington and Norwalk on September 7 and in New Haven and Hartford on September 12. In addition, background information on the WLA was available in fact sheets distributed at the meetings and mailed to municipal chief elected officials, public works directors, sewage treatment plant managers or water pollution control authorities, regional planning organizations, and state and federal legislators. CTDEP also had the WLA and fact sheets available on their website along with the schedule for public meetings at http://dep.state.ct.us. A total of more than 120 people attended the six informational meetings in Connecticut.

Comment Period Extension

The original public notice was published in several newspapers throughout Connecticut and sent to officials and organizations as noted above. The public notice was issued on August 30, 2000 and the comment period held open until September 30, 2000. One request was received to extend the comment period by 60 days but the request was withdrawn prior to September 30.

Comments Received on the WLA

Twenty-four comment letters were received by CTDEP by the September 30, 2000 deadline. The comments were organized into fifteen categories and 105 individual comments that are addressed in the following pages. The submissions are listed in the table below along with the abbreviation or town name used to identify individual comments in the response section of this report.

Submitted by:	Signed by:	Date Submitted:	Identification:
Town of Beacon Falls Beacon Falls, CT	Susan A. Cable First Selectman	September 26, 2000	Beacon Falls
City of Bristol Bristol, CT 06010	Brian W. Fowkes Asst. Director of Public Works/WPC Manager	September 21, 2000	Bristol
Town of Canton 4 Market Street Collinsville, CT 06022	Frederic E. Turkington, Jr. Chief Administrative Officer	September 28, 2000	Canton
Connecticut Conference of Municipalities 900 Chapel St., 9th Floor New Haven, CT 06510-2807	Gian-Carl Casa	September 25, 2000	CCM
Connecticut Water Pollution Abatement Association P.O. Box 765 Vernon, CT 06066-0765	Carl Almquist President	September 26, 2000	CWPAA
Cytec Industries, Inc. P.O. Box 425 South Cherry Street Wallingford, CT 06492	Charles J. Cappannari	September 29, 2000	Cytec
City of Danbury Department of Public Utilities 155 Deer Hill Avenue Danbury, CT 06810	Mario Ricozzi Superintendent of Public Utilities	September 28, 2000	Danbury
The Town of Farmington Town Hall 1 Monteith Drive Farmington, CT 60632-1053	James A. Grappone Town Engineer James Foote Water Pollution Control Authority	September 27, 2000	Farmington
Town of Groton Department of Public Works Town Hall Annex 134 Groton Long Point Road Groton, CT 06340-4873	Cameron Cutler Chairman Water Pollution Control Authority	September 22, 2000	Town of Groton
Town of Manchester 41 Center Street P.O. Box 191 Manchester, CT 06045-0191	Richard Sartor General Manager	September 27, 2000	Manchester
The Metropolitan District 555 Main Street P.O. Box 800 Hartford, CT 06142-0800	Richard J. Ludwig Manager of Water Pollution Control	September 29, 2000	MDC
Alternative Resources, Inc. 9 Pond Lane Concord, MA 01742	Thomas B. Nicholson Principal Engineer	September 29, 2000	Naugatuck
New Milford Sewer Commission Water Pollution Control Authority 123 West Street New Milford, CT 06776	Kenneth L. Bailey Superintendent	September 12, 2000	New Milford
Town of Newtown Water Pollution Control Authority 4 Turkey Hill Road Newtown, CT 06470	Richard Zang Chairman, Newtown WPCA Fred Hurley Director of Public Works	September 29, 2000	Newtown
Town of Salisbury Water Pollution Control Authority Salisbury Town Hall Salisbury, CT 06068	John Whalen Wastewater Superintendent	September 27, 2000	Salisbury
Town of Simsbury Sewer Department Drake Hill Road Simsbury, CT 06070	James Clifton Superintendent	September 28, 2000	Simsbury
Town of Southington Water Pollution Control 12 Maxwell Noble Drive Plantsville, CT 06479	John Weichsel Town Manager John De Gioia Superintendent Water Pollution Control	September 28, 2000	Southington

Town of South Windsor 1540 Sullivan Avenue South Windsor, CT 60674	C.F. Shaw Superintendent Bureau of Pollution Control	September 28, 2000	South Windsor
Town of Stonington Selectman's Office 152 Elm Street P.O. Box 352 Stonington, CT 06378-0352	James Sisk Chairman Water Pollution Control Authority Donald R. Maranell First Selectman	September 27, 2000	Stonington
Town of Vernon Office of the Water Pollution Control Department 8 Park Place Vernon, CT 06066	David R. Ignatowicz Director Water Pollution Control	September 29, 2000	Vernon
Windham Region Council of Governments 968 Main Street Willimantic, CT 06226	Barbara C. Buddington Executive Director	September 26, 2000	WRCOG
Windham Water Pollution Control Authority Windham, CT	Henry Roos Chairman Windham WPCA	September 18, 2000	Windham
Town of Windsor Locks Public Works Department 6 Stanton Road Windsor Locks, CT 06096	James Klase Director of Public Works Edward A. Ferrari First Selectman/Sewer Commission Chair	September 28, 2000	Windsor Locks
Windsor Locks W.P.C.F. Windsor Locks, CT	E. Arthur Enderle III Chief Operator	September 28, 2000	Windsor Locks

Abbreviations

In addition to the abbreviations used in the above table to identify comment sources, the following abbreviations and acronyms are used in the response section.

BNR	Biological Nitrogen (or Nutrient) Removal
CCMP	Comprehensive Conservation and Management Plan (of the LISS)
CSO	Combined Sewer Overflow
CT	Connecticut
CTDEP	Connecticut Department of Environmental Protection
CWF	Clean Water Fund
DO	Dissolved Oxygen
EPA	Environmental Protection Agency (U.S.)
LA	Load Allocation
LIS	Long Island Sound
LISS	Long Island Sound Study
MGD	Million Gallons per Day
NPDES	National Pollutant Discharge Elimination System
NY	New York
NYC	New York City
NYSDEC	New York State Department of Environmental Conservation
POTW	Publicly-Owned Treatment Works
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
WERF	Water Environment Research Foundation
WLA	WasteLoad Allocation
WPCF	Water Pollution Control Facility
WQS	Water Quality Standards

Response to Comments

Below are the 105 comments in 15 categories received by CTDEP on the TMDL. The summary responses are used when the questions or comments are of a similar nature to avoid repetition. When appropriate, individual responses to comments provide additional detail.

I. Comment: ***The 1997-99 base flow or WLA is set too low:***

SUMMARY RESPONSE:

A number of comments suggested that an alternative method should be used to develop the individual baseline and final WLAs. In developing the current proposal, CTDEP considered many alternatives.

The original "1990" WLAs were estimated using two distinctly different kinds of data. For a few facilities, loading estimates based on effluent monitoring data was used. Data was not available for the majority of facilities however, and gross estimates of loading were made based on discharge flow and estimated treatment system performance. Use of the 1990 WLA s was ultimately rejected because monitoring data collected after 1990 indicated that the nitrogen loading information was not reliable, and equivalent data was not available for all facilities. This approach would penalize monitored facilities that provided nitrogen treatment in 1990 since the percent reduction would be calculated from an already reduced baseline. Facilities that performed poorly in 1990 would receive an unintended benefit since their 64% reduction would be calculated from a baseline allocation inflated as a result of their poor performance during 1990.

CTDEP also considered basing the WLAs on an "equal percent reduction" calculated from influent nitrogen loads at each facility. This approach was rejected because influent nitrogen loading data was not available for all facilities and data that was available was often of poor quality and not representative of actual nitrogen influent loads. Further, influent nitrogen loading (i.e. dilute or concentrated influent) is believed to have minimal impact on total treatment costs to meet an equivalent end-of-pipe concentration. Influent nitrogen loads were also viewed as being too variable and subject to changes in municipal practices regarding acceptance of high nitrogen wastes that would necessitate constant readjustment of the WLAs.

Several allocation methods based on discharge flow rates were evaluated. Use of design flow was rejected because not all facilities had updated facilities plans covering the same design horizon. Further, all municipalities project growth in developing these plans albeit at different levels. Projecting future growth is highly subjective and municipalities that projected rapid expansion would be rewarded with higher allocations while municipalities making more realistic projections would be penalized. Statewide, flow records indicate that no growth has occurred between 1990 and 1999 yet all facilities plans reviewed projected growth during this period. CTDEP finally concluded that allocation based on growth forecasts could not be done equitably.

CTDEP rejected the use of any single year's flow, including 1990, because inequities would result to some municipalities if any single "wet" or "dry" year was used to proportion the statewide allocation. Ultimately, CTDEP proposed to use the most recent 3-year average flow as the most equitable approach for which reliable data was available for all facilities.

1. Beacon Falls: Base flow set at .26 mgd. We have recently completed a major sewer project which has added virtually the entire west side of town to our collection/treatment system (plus we are currently in the process of constructing a new regional high school which by itself will add a n estimated 50,000 – 75,000 gpd to our flows). Currently our average flows are above .30 mgd and climbing as Beacon Falls is one of the fastest growing communities in the area. We further feel that an end point total of 12 lbs/day nitrogen discharge in the year 2014 based on this questionable base flow number is far too restrictive for us to meet and be able to accommodate future growth.

Response: *Establishing Individual WLAs using the methodology employed by CTDEP required calculating the relative proportion each individual facility contributed to the statewide total flow over a consistent time period for all facilities. The period 1997-1999 was selected for this purpose as representative of the current situation and starting point for implementing the TMDL/WLA for LIS. (See also summary response to growth issues in Section III)*

2. Cytec: The assumption [cited Phase III strategy and draft TMDL, which states this] that industrial facilities may technically and economically achieve a level of nitrogen removal identical to sewage treatment plants is without basis, and with specific regard to Cytec Wallingford, simply untrue. Cytec has conducted treatability studies of its plant effluent. These studies demonstrate that a significant portion of the nitrogen content of the effluent is in the form of organic nitrogen compounds not easily biodegradable due to size or lack of reactive sites, and so recalcitrant to conventional biological treatment. As a result, the rate of disposition is fundamentally different than that of nitrogen compounds treated in municipal systems. It is therefore inappropriate and wholly arbitrary to project for purposes of implementation a percent reduction for industrial sources such as Cytec Wallingford premised on nothing more than technical and economic analysis for sewage treatment plants.

   Response: *CTDEP is aware of the uncertainty surrounding the ultimate fate of nitrogen discharged from Cytec and will continue to discuss this issue in the future. The initial and final WLA for Cytec reflect the same percent reduction required of all other sources of nitrogen to LIS as a equitable means of addressing this uncertainty at this time. The apparent resilience of nitrogen compounds discharged by Cytec to biological treatment is an additional concern since compounds that do not readily biodegrade have too often been responsible for unforeseen environmental problems, unrelated to the nitrogen WLA. Implementing the WLA for Cytec will be accomplished at the time the NPDES discharge permit for this facility is reissued. The current permit is scheduled to expire in 2003. In the event that future studies support allowing for a greater loading of non-biodegradable nitrogen from Cytec, the WLA may be modified as part of planned review of the TMDL scheduled for five years post-adoption.*

3. Farmington: The 1997-1999 flow used in the WLA by the CTDEP is lower than the actual average daily flow monitored at the Farmington WPCF for that time period. The recent good economy has created a building boom in the Town of Farmington and our flows have gone up considerably, with the year to date flow averaging 4.41 mgd or 16.4% over the baseline flow used by DEP. As stated in the public informational meeting by DEP, the WLAs were supposedly allowing for a 20% growth factor. Today's flow already consumes almost all of the growth factor with considering the work already under construction or approved for construction within the Town of Farmington. We request that an upward adjustment in the baseline flow be made.

   Response: *CTDEP has confirmed that the 1997-1999 flow data used in calculating the WLA for Farmington was accurately transcribed from Monthly Operating Reports certified as accurate by the Town and submitted to CTDEP as required by the terms of the NPDES permit for the Farmington facility. CTDEP must assume this information is correct pending submission of an explanation as to why erroneous permit compliance information has been submitted to CTDEP and resubmission of revised monitoring reports for the period in question. (See also summary response to comments on growth issues in Section III).*

4. Town of Groton: The proposed base load, if a Nitrogen Credit Trading Program is in place, should be based on one of the following, not on what has been proposed by the DEP. The WLA should then be a reduction of 63.5% from this base load. The WLA should be significantly higher if the trading program is not in place. A) The Town of Groton is making a significant capital investment to reduce the nitrogen discharge. This reduction should be the Town of Groton's fair share of nitrogen removal to Long Island Sound. Working backwards, first stage nitrogen removal at the design flow would calculate the baseline load to be 963 pounds per day (and a WLA of 351 pounds per day). B) The Town of Groton should be assigned the 1990 baseline load that the Long Island Sound nitrogen reduction program was based on instead of the currently proposed baseline load of 545. The 1990 base

load has been used by the CTDEP to define the cost benefit of implementing the denitrification treatment facility of the Town. In this case, the Town of Groton's baseline load would be 545 pounds per day (and a WLA of 199 pounds per day). C) If the load is determined by the 1997-99 average daily flow, it should include an additional 1.08 million gallons per day flow contracted by the United States Navy for submarine base and housing areas, but not used during that period. In addition, septic systems that are not connected to the sewer but have sewer system capacity allocated for them should also be included. The Town of Groton's baseline would be 606 pounds per day (and a WLA of 221 pounds per day).

***Response**: It is unclear why the method of implementing the WLA provides a defensible basis for increasing the WLA. The WLA is ultimately determined by the total nitrogen loading from all facilities combined that can be assimilated by LIS, allowing for attenuation between point of discharge and transport to LIS. Under Federal law, the cost to achieve the necessary reductions at municipal facilities can be considered only in the context of comparing the economic and technical feasibility of achieving the necessary decrease in loading from point discharges as opposed to non-point sources such as stormwater runoff. This analysis has been done and identified municipal discharges as the largest, manageable source of nitrogen to LIS and established a maximum load of 20,577 pounds per day from municipal sources as the final WLA (end-of-pipe load after accounting for transport losses and attenuation). CTDEP has proposed a nitrogen credit-trading program to reduce the financial impacts of implementing the WLA but has no defensible means to raise the WLA should it become necessary to implement the WLA by some other means. (See also summary response regarding growth issues in Section III and alternative approaches to developing the individual WLAs in the summary response for this Section)*

5. Manchester: We believe that the proposed program unduly penalizes Manchester who has a long history of taking the lead in implementing environmentally responsible actions. The methodology utilized to establish the TMDL for Long Island Sound is flawed. These flaws are further exacerbated by the generic methodology utilized by the Department of Environmental Protection to establish Waste Load Allocations (WLA's). The proposed WLA does not give Manchester with any credit for operating an advanced wastewater treatment plant which has been helping to remove Nitrogen from the Long Island Sound since 1992. The proposed WLA for Manchester is nearly synonymous with the loading currently emanating from our upgrading plant not the 1990 Nitrogen loading form our previous plant. The WLAs were originally intended to be based upon the loading emanating from our treatment plant in 1990. This loading is well-documented, as Manchester has been required to continuously monitor Nitrogen and flow from its wastewater treatment plant as part of its NPDES permit. Based upon data that is contained in our Monthly Discharge Monitoring Reports, Manchester's 1990 loading was 1100 pounds per day. The proposed WLA for Manchester is approximately 22% lower as a result of the generic formula being used by the CTDEP to determine the WLA. In 1997 the issues of WLA associated with the Long Island Sound Program was introduced. Manchester submitted comments at that time (letter attached) which clearly documented Manchester's 1990 Nitrogen loading. We were advised that our loading would be adjusted to the documented value. The Town is extremely dismayed that the CTDEP has significantly revised the methodology utilized to derive the current WLAs and has not used Manchester's actual 1990 loadings.

***Response:** Manchester is not in any way penalized by the flow proportioning approach proposed by CTDEP to establish the individual WLAs. The baseline WLA was calculated for Manchester under the assumption that the municipality currently provides an average level of nitrogen treatment at current discharge flow rates. Facilities like Manchester that have acted pro-actively to enhance nitrogen treatment currently discharge a lower concentration of nitrogen and will therefor require a smaller investment in additional treatment technology to achieve compliance with the final WLA than would be required if no prior action was taken. Further, if the nitrogen credit-trading program is implemented as proposed by DEP, Manchester will be able to accomplish the necessary treatment enhancements needed to achieve compliance with the final WLA in a more cost-effective manner due to their pro-active approach. (See also summary response relating to alternative methods for derivation of WLAs for this Section).*

6. MDC: The WLA for our East Hartford WPCF is extremely low. We understand that flows for the years 1997 through 1999 were used to calculate this value, however, for the 1997 and 1999 values, the next most recent average annual flow below these values occurred in 1974. The design flow for East Hartford is 12.5 mgd. The WLA used a flow of 6.24 mgd. For the years from 1976 to 1996 the average, of the average annual flows is 8.9 mgd. We request that the WLA for East Hartford be increased.

   Response: *CTDEP believes that the period 1997-1999 is representative of typical conditions statewide as currently exists. No explanation is provided as to why flows were higher in past years that would justify modification of the base flow for the East Hartford facility. (See also summary response regarding use of design flow to derive WLAs for this Section)*

7. MDC: Under DEP's scenario using the 1990 flows, MDC's Poquonock WPCF had a WLA of 487 lbs/day. Under the current scenario, the WLA is 269 lbs/day. We request that the WLA for the Poquonock WPCF be increased.

   Response: *CTDEP has determined that use of a single year's flow data to establish WLAs may not be representative of typical conditions statewide due to normal variability in year-to year climatic conditions (wet year v. dry year). Use of a single year's data could provide an unintended benefit to municipalities with significant infiltration and inflow and penalize municipalities that have aggressively addressed this problem. Further, CTDEP has determined that flow data for 1990 includes numerous errors associated with poor maintenance and calibration of flow monitoring devices at a number of facilities, a situation that has been subsequently corrected.*

8. Naugatuck: The Borough does not believe that the reported nitrogen baseline for Naugatuck accurately represents the historic concentrations of total nitrogen discharged by the Borough's wastewater treatment facility. [A table of data was attached and is available for review.] As can be seen, the average concentration for total nitrogen for the study year of 1990 was approximately 911 lbs/day. The average nitrogen concentration for the last ten years is 740 lbs/day. It is unclear what basis was used by CTDEP to establish the presented baseline for the Borough of 678 lbs/day. If the purpose of the WLA is as identified, to reduce the 1990 baseload of nitrogen by approximately 64%, actual data supports a WLA for the Borough of 327.7 lbs/day, not the stated 247.4 lbs/day. We do not believe that the current WLA equitably considers the improvements made at the treatment facility to reduce effluent nitrogen in 1996 or the significant reduction of influent nitrogen concentrations resulting from process changes by industrial users of the Borough's system. The Borough is being forced to remove nitrogen to a lower level than appears necessary to achieve the goals of the TMDL program. The Borough therefore requests that a new WLA, that utilizes a baseline based on actual data, be developed for Naugatuck for future WLA compliance.

   Response: *The Borough is correct that the proposed WLA for nitrogen does not consider past performance at individual facilities. The baseline WLA is based on the level of performance that would meet the aggregate baseline WLA if all facilities in the State provided a similar level of treatment (approximately 15 mg/L end-of-pipe) and discharged at 1997-1999 flow rates. This approach avoids penalizing facilities that currently perform better than average or benefiting those that perform below the statewide average. (Please sees also the summary response for this Section for a discussion of this issue).*

9. Naugatuck: Based upon the information provided in Table 1 [available in hard copy] concerning the nitrogen loads from Naugatuck, there doesn't appear to be a basis for establishing these baseline nitrogen concentrations. Table 2 [available in hard copy] demonstrates that each plant in Zone 4 and representative plants from the other zones all have equivalent Baseline and WLA effluent concentrations. This is not a realistic representation of what was occurring in 1990 or current nitrogen loads being discharged to Long Island Sound. If the concentrations used to calculated the Baseline were not based upon the actual nitrogen loads of each community, CTDEP can not be assured that the targeted WLA reductions will achieve the goals of the TMDL study and, in the case of the Borough, a

higher level of treatment may be required, because nitrogen removal efforts through previous capital upgrades are not considered.

Response: *The objective of implementing the WLA is to achieve an overall decrease in the loading of nitrogen delivered to LIS. CTDEP is confident that the estimate of total "1990" baseline nitrogen loading to LIS is reasonably accurate and provides a defensible basis for establishing the baseline load allocations. CTDEP considers past estimates of the proportion of the total load contributed by individual facilities to the total load in 1990 to be unreliable and unsuitable for developing nitrogen reduction targets on a facility-by facility basis. (See also summary response for this Section)*

10. Newtown: The Town of Newtown just started up a new water pollution control facility in September of 1997. The current derivation of allowable 15 year nitrogen loadings is based simply on a baseline flow for the years 1997 through 1999 times an arbitrary total nitrogen concentration (5.64 mg/l). During this baseline period for flows, the Town was in the process of tying in new sewer users, and in fact we have not yet achieved 100% hookup compliance. The draft WLA for Newtown was based on 0.35 mgd. We believe that this baseline flow should reflect the design flow for our sewer service area (0.932 mgd), rather than the early part the "ramp-up" to this flow as sewer hookups were made within the service area between 1997 and 1999. As the CTDEP Municipal Facilities staff will recall, the WPCF design flow was only the flow from replacing the most troublesome septic system areas in Town (0.32 mgd) plus the State's requested 0.6 mgd flow for the Fairfield Hills Hospital and Garner Correctional Institution. Flow from the Fairfield Hills campus has dropped from the levels experienced when the WPCF design was done – and the earlier Long Island Sound nitrogen reduction baseline year of 1990. We believe this drop in flow is temporary, as there are active state and local plans for the Fairfield Hills facility underway. We don't believe it is appropriate to base the Town's long term nitrogen loading limits on the new 1997-1999 baseline window that happened to coincide with a drastic drop from one of our major flow generators.

    Response: *The Town of Newtown presents a unique set of circumstances with respect to the WLA. First, this is a new facility constructed after the statewide baseline WLA was established for LIS. Secondly, a significant percentage of the projected flow is reserved for use by State owned facilities, such as Fairfield Hills Hospital and the Garner Correctional Institute, that provide a benefit to communities outside the sewer service area. For these reasons, the WLA for Newtown will be increased to reflect a flow of 0.9 MGD. This change will require reduction of the WLA for all other facilities by a small amount to accommodate the increase granted to Newtown.*

11. South Windsor: The WLA for South Windsor was developed by CTDEP using "actual" flow figures (average) for the period 1997 through 1999 and a total nitrogen concentration of 15.5 mg/l, however these factors are not representative of the actual flow or nitrogen concentrations for the plant during this period of time. A spreadsheet [available in hard copy] showing the actual flows and effluent nitrogen concentrations for the South Windsor plant for the period 1997 through 1999 was submitted. The average flow was 2.38 mgd and the average total nitrogen concentration was 18.8 mg/l. When these actual figures are used in the computation, total nitrogen value (end of pipe) is 370 lbs/day, not 290 lbs/day as calculated by the DEP. The individual WLA developed for South Windsor by the CTDEP will require that the Town remove 82% nitrogen in order to meet the States nitrogen removal goal of 63.5%. The South Windsor facility, like many others throughout the State, was funded by State and Federal grants and was not designed for nitrogen removal. The Town requests that the State CTDEP use actual data in development of individual WLA.

    Response: *CTDEP has confirmed that the 1997-1999 flow data used in calculating the WLA for South Windsor was accurately transcribed from Monthly Operating Reports certified as accurate by the Town and submitted to CTDEP as required by the terms of the NPDES permit for this facility. CTDEP must assume this information is correct pending submission of an explanation as to why permit compliance information that is does not represent actual performance has been submitted to CTDEP and resubmission of revised monitoring reports for the period in question. The individual WLAs were calculated assuming that South Windsor provides a similar level of*

treatment to the statewide average needed to meet the baseline WLA at current flow rates (approximately 15 mg/l). If South Windsor is currently discharging at above the statewide average, a slightly greater percentage improvement will be necessary to achieve compliance with the final WLA for this facility. (Please see also the summary response to comments on alternative approaches to deriving WLAs in this Section).

12. Windsor Locks: The proposed WLA differs from the original 1990 Requirements by modifying the baseline TN load due to changes in individual WPCF flows. The baseline TN load for each facility has been revised to account for flow changes experienced at each facility from the original 1990 data to an average of 1997-1999 flow data. While the flow data from 1997-1999 may be more accurate, reallocating the TN baseline in this manner is benefiting facilities whose flow has increased and therefore increased the amount of TN discharged. Communities that have not grown or even decreased flow due to I/I reduction are unfairly penalized by a lower TN baseline.

Response: *Future treatment needs and costs will be determined in part by the volume of wastewater treated. Facilities that have increased flow during the 90's are now faced with the prospect of providing nitrogen removal treatment to this increased flow. The final WLAs for each facility was calculated assuming that all facilities will ultimately provide an equal, high level of nitrogen treatment and that flow will not increase following adoption of the WLA. If future flows increase at a specific facility, additional treatment may be required to achieve compliance the final individual WLA. Alternatively, if the nitrogen credit trading program is implemented as envisioned by CTDEP (See Sections VII and VIII), this facility could maintain compliance with their final WLA by purchasing credits from facilities who do not increase flow or who provide treatment beyond that needed to meet their final WLA. (See also summary response for this section regarding alternative methods of developing the individual WLAs)*

II. Comment: ***Equity of WLA throughout the state:***

SUMMARY RESPONSE:

Comments relating to equity in allocation focussed primarily on two issues, the effect of geographic location on the individual WLAs and the desire to adopt an alternative WLA in the event that the nitrogen credit-trading program proposed by CTDEP is not implemented as proposed.

The individual WLAs presented in DEP's proposal are expressed in "end-of-pipe" pounds per day to allow each facility to more easily understand how adoption of the WLA will impact on their operations. The TMDL expresses the aggregate WLA for Connecticut point source discharges in terms of the loading to the edge of LIS, accounting for the attenuation that occurs during transport from point of discharge to edge of LIS. In developing the WLAs CTDEP also accounted for the losses in nitrogen that occur during transport from the edge of LIS to the critical location in western LIS where Water Quality Standards are not met. The total end-of-pipe loading allocated among the state's municipal facilities therefore exceeds the maximum loading that can be delivered to western LIS by a substantial amount. CTDEP accounted for the geographic location of each facility by inflating the total statewide allocation (in end-of-pipe pounds) prior to dividing up the allocation among individual facilities.

A more difficult issue was the decision to establish final WLAs that would require each facility to provide an equivalent level of nitrogen treatment at current flow rates. Clearly, nitrogen treatment at facilities located close to western LIS will have the most direct impact on reducing the mass of nitrogen reaching the critical area of hypoxia. DEP's analysis shows that, even if all shoreline facilities in southwestern Connecticut provided the highest level of nitrogen treatment achievable and no increase in discharge flow was allowed, the loading of nitrogen reaching the critical area of western LIS would still exceed the aggregate final WLA for Connecticut established in the TMDL. Some reduction in loading from inland plants is necessary to achieve the goal of meeting

Standards in western LIS. Further, establishing individual WLAs in this way would put CTDEP in the position of dictating where in the State development could occur. As explained in more detail in Section III, CTDEP does not wish to intrude into what has historically been a local issue – managing growth. The individual WLAs therefor are designed to provide every municipality with an equal opportunity to accommodate growth. In order to provide this flexibility, the individual WLAs for each municipality includes equivalent capacity to discharge above the loading that would result if a comparable level of treatment (5.6 mg/L end-of-pipe) was provided at the current volume of flow from their facility.

13. Bristol: WLA does not constitute a "fair and equitable manner." Facilities that are geographically more distant from the Sound, having much less impact on the hypoxia condition are required to achieve the same reduction as those that have a major influence on the Sound. This will have a tremendous cost to these municipality, but results in minimal improvements to the situation in the Sound. If each plant is only to be "required to address their own contribution of nitrogen", the more distant plant should have less restrictive limits. The DEPs rational is entirely opposite of the position it took in implementing the recent copper standards. The proposed nitrogen reduction program will impose strict limits on Bristol as it does on Cities discharging directly into the Sound, regardless of our reduced significance to the Sound.

    Response: *While it is true that a significant portion of the nitrogen discharged by Bristol is attenuated during transport to western LIS, Bristol's loading does contribute to the total nitrogen loading responsible for causing impairment to LIS. The WLA proposed requires Bristol and each other municipality to address their contribution. It is important to note that reducing the Bristol's contribution (that reaches western LIS) by 64% requires reducing the loading discharged by Bristol (end-of-pipe) by 64% because the proportion of the loading discharged that is attenuated during transport remains constant. (Please see also summary response for this Section and CTDEP's "Response to Public Comments on the TMDL").*

14. CWPAA: Since the Nitrogen Trading is not in effect two WLA's should be issued to the Municipalities of Connecticut. One if a Nitrogen Credit Trading program is in place. The other, for implementation if the Nitrogen Credit Trading Program fails to materialize. This WLA should be significantly higher then what the CTDEP has proposed to assign to most municipalities and would be based on the actual proportion of the impact on the water quality of Long Island Sound.

    Response: *The final aggregate WLA for point sources in Connecticut is established in the TMDL. It is unclear how the absence of the trading program is relevant with respect to the individual final WLAs for each facility, since the individual WLAs specify the maximum loading that can be discharged at each facility after taking into account geographic location, to meet the final TMDL/WLA. . (Please see also summary response at for this Section and CTDEP's "Response to Public Comments on the TMDL").*

15. Farmington: We request that the WLAs be modified to account for the location of the WPCF in the State and its impact on LIS. As you have indicated in your proposed nitrogen credit trading program, only a portion of the nitrogen coming from inland WPCFs reaches the area of concern in LIS. Therefore, the WLA for a treatment plant with a normalization factor of 0.2 should be allowed to discharge 5 times that of a plant with a normalization factor of 1.0. This would allow those further away from LIS impact areas the ability to more cost effectively attain the nitrogen limits and provide them with a financial incentive to add further treatment in the credit trading program is implemented.

    Response: *The individual WLA proposed by CTDEP in fact, do take into account the geographic location of each facility relative to LIS. (Please see also summary response for this Section and CTDEP's "Response to Public Comments on the TMDL")*

16. Town of Groton: The WLA assigned to the Town of Groton is too low considering the impact that the nitrogen loading from Groton actually has on the western end of Long Island Sound. Communities on the western end of the Sound are assigned the same nitrogen WLA discharge concentrations as the

Town of Groton even though the Long Island Sound Model indicates only 18% of the Town of Groton's nitrogen discharge influences the western end of the Sound. In addition, even this assumption may be too high for our particular discharge. Past flow studies (drogue and dye) conducted during the studies for the location of the Town's Outfall showed that flows from the east side of the Thames River (where the facility discharges) follows along the east bank and then proceeds in as easterly direction when leaving the mouth of the river. What small amount of nitrogen that may flow west would be greatly diluted by the waters of the Sound before it reached the west end of the Sound.

Response: *The attenuation factors used by CTDEP in developing the individual WLAs represent the most recent information available. (Please see also summary response for this Section and CTDEP's "Response to Public Comments on the TMDL")*

17. Town of Groton: Two WLAs should be issued to the Town of Groton. One if a Nitrogen Credit Trading program is in place. Two, for implementation if the Nitrogen Credit Trading Program fails to materialize. This WLA should be significantly higher than what the CTDEP has proposed to assign to the Town of Groton and would be based on the actual proportion of the impact on the water quality of Long Island Sound.

    Response: *The final WLAs proposed for the Town of Groton are based on the actual proportion of the impact the Town's discharge has on LIS. The method used to implement the WLAs is not relevant to the magnitude of the WLA, although the nitrogen credit-trading program proposed by CTDEP is designed to significantly reduce the cost of achieving the final WLAs. (Please see also summary response for this Section and Sections VII and VIII)*

18. MDC: The shoreline wastewater treatment plants should be required to remove more nitrogen than treatment plants that are miles from the Sound. The shoreline plants have a direct impact on the Sound.

    Response: *The shoreline plants are in fact required to remove a greater proportion of the nitrogen that reaches western LIS. However, even if all shoreline plants provided the highest level of nitrogen treatment, further reductions in loading must occur in order to restore the health of LIS. Inland plants contribute to the impairment and must also remove nitrogen to meet the water quality goals for LIS. (Please see also summary response for this Section and CTDEP's "Response to Public Comments on the TMDL")*

19. Naugatuck: In closer review of the draft WLA provided, it appears that the basis of the development of the WLA's was an attempt to require all the facilities to ultimately remove effluent nitrogen to an equivalent level. The enclosed Table 2 [available in hard copy] utilizes the information from the WLA and presents it in an alternative manner, including an equivalent baseline nitrogen concentration in mg/l and pounds per million gallons, effluent nitrogen concentration at WLA compliance in mg/l, and required percent nitrogen reduction. CTDEP states that the flow used to calculate the WLA was based upon a three-year average (1997, 1998 and 1999). With this being the case, Table 2 indicates that every plant included in the Draft WLA was assigned a equivalent baseline nitrogen concentration (approximately 15.5 mg/l or 128.5 lbs/mg); therefore, the Baseline (in lbs/day) only varies from plant to plant as a function of flow. Similarly, all plants are scheduled for an equivalent percentage nitrogen reduction of approximately 63.5%; therefore, will require equivalent end-of-pipe nitrogen concentration (approximately 5.6 mg/l) for compliance with the draft WLA.

    Response: *This is correct.*

20. Salisbury: Salisbury is located in the extreme northwest corner of Connecticut and we have a very small treatment plant. It is hard to imagine that our limited discharge would have such an impact to Long Island Sound that it would make environmental or economic sense to require us to make major, very costly changes in our operations to reduce nitrogen loadings. Previous CTDEP documents have stated the following: a. The Housatonic River Basin has a normalization factor of 0.671; b. Our basin

attenuation factor is 0.162; c. The estimated cost for adding a low level of nitrogen removal (6-8 mg/l) at the Salisbury WPCF is $1.0 million. Another $1.0 million would be needed to achieve high level nitrogen removal (3-5 mg/l); d. The new statewide average for WLAs is 5.6 mg/l. Regarding the effects of our discharge on Long Island Sound, the combination of our assigned normalization and attenuation factors indicates that only about one-tenth of every pound of nitrogen leaving our WPCF actually reaches the water quality impacted area of the Sound. In fact, we believe these factors overstate that impact! Why would our attenuation factor be the same as Litchfield, which is some 20 miles closer to LIS? Common sense would suggest that our attenuation factor should be lower, especially if you look at the long route our effluent travels in Salmon Creek before it even reaches the Housatonic River. The wetlands just downstream of our WPCF no doubt uptake much of the nitrogen in our effluent before it travels very far. Given the new WLA concentration, it seems CTDEP expects to require that all WPCFs in the state must modify their plants to provide at least the low level of nitrogen removal. We question the wisdom of these requirements for Salisbury. Why require us to spend a million dollars or more to remove a nitrogen loading that we believe anyone would be hard pressed to even be able to measure in Long Island Sound? It just does not appear that these costs even approach the benefits of these actions for Salisbury. We strongly suggest that very small plants such as ours, especially so removed from LIS, be removed from this WLA.

Response: *CTDEP has excluded from consideration plants discharging less than 20 pounds of nitrogen per day. Arguably, the impact of Salisbury's nitrogen load on LIS is negligible and the cost of upgrading this facility to provide a high level of nitrogen treatment may appear excessive relative to the benefit to LIS. However, federal law requires that individual allocations be made to all point sources contributing to the total loading to LIS. CTDEP is hopeful that the proposed nitrogen credit-trading program (See Sections VII and VIII) will be implemented and compliance with the final WLA for small, remote facilities such as Salisbury can be achieved through purchase of nitrogen credits rather than construction of advanced nitrogen treatment facilities.*

21. Southington: The Town of Southington does not support the Nitrogen WLA plan that CTDEP is proposing. It is our belief that all inland municipalities should be allowed to perform minor modifications to their treatment processes to remove nitrogen down to about 7-9 mg/l in their discharges. We believe that this reduction, in addition to full scale nitrogen removal at shoreline treatment plants, reduction of nitrogen coming into the State from Massachusetts and a serous attempt at reducing non-point source discharges of nitrogen, will greatly impact the sound and very possibly solve the problem with a minimal expenditure. If, after these remedies are performed, the Sound were still distressed, then we would feel differently about a large investment into our treatment processes.

    Response: *CTDEP has proposed a nitrogen credit trading program (See Sections VII and VIII) that would allow construction of nitrogen treatment facilities to take place over a number of years with priority given to the shoreline facilities where nitrogen can be most cost-effectively removed. The trading program as proposed would also encourage inland plants to perform the "minor" modifications noted in this comment during the early years of implementing the WLAs. This approach would provide opportunities to adjust the final WLAs as progress in achieving reductions in out-of-state and non-point nitrogen loadings are documented. However, it is a federal requirement that individual WLAs be established for all point sources contributing to the water quality problem in LIS. (Please see also summary response for this Section)*

22. South Windsor: It is our understanding that CTDEP used the same concentration of total nitrogen for all treatment plants throughout the state in order to equally assign loads without bias, resulting from differences in treatment efficiencies. This does not seem to be equitable.

    Response: *No reason is given as to why it is not reasonable to assume that all plants can operate at the same level of efficiency or why certain municipalities should be held to either a higher or lower standard.*

23. Stonington: Why should Stonington be required to treat to the same level as a point source on New York state line given that the impact of nitrogen removal in Stonington is approximately 1/5 of that

along the New York border? Meeting our proposed WLAs could result in a high capital expenditure and a relatively low benefit to the Sound. Although nitrogen reduction in Stonington is less important that the town on the New York border, Stonington may be forced into a high capital expenditure to upgrade its facilities if credits are not available – despite the limited water quality benefit at the east end of the Sound.

Response: *Stonington must provide nitrogen removal because restoring the health of LIS cannot be achieved simply by requiring municipalities closer to western LIS to remove the maximum amount of nitrogen technically feasible. Meeting the total aggregate WLA for Connecticut municipalities established in the TMDL will require all facilities to remove nitrogen to some degree.*

III. Comment: ***Growth considerations:***

SUMMARY RESPONSE:

Numerous comments were received concerning the effect of the WLAs on future growth. Developing a procedure to calculate WLAs that was "growth neutral" was a major objective for DEP. Projections of future growth are highly subjective. Municipalities often overestimate anticipated future needs and the time period covered by growth projections such as is done during facilities planning is not consistent among all the States' municipalities. Although the vast majority of Facilities Plans approved by CTDEP in the last ten years included an "allowance" for future growth, during the period 1990 to 1999 there has been no increase in the statewide total volume of municipal effluent discharged during that period. A number of municipalities noted that they expected increases in flow during the next several years based on recent development in the service area. Increasing the allocations to these communities to accommodate near term growth would have required reducing the allocation to other municipalities, limiting their ability to accommodate growth that may not occur until later in the WLA implementation period.

As proposed by DEP, every municipality is provided with an equal opportunity to grow. CTDEP understands that not all municipalities will face the same degree of development pressure. Should the nitrogen credit-trading program be implemented, fast growing communities may be able to purchase additional WLA capacity from slower growing areas. Ultimately, however, the Statewide aggregate WLA established in the TMDL limits the total amount of nitrogen that can be discharged from point sources in Connecticut. Identifying ways to accommodate economic growth while maintaining nitrogen discharged to LIS at acceptable levels will be a significant challenge. Currently, the technology available to treat nitrogen is capable of reducing nitrogen levels in a municipal effluent to approximately 4 mg/l. Achieving this level of performance may be necessary at all facilities if significant increases in flows occur during the next 15 years.

CTDEP believes that the challenge of guiding development is best met at the local level. Local governments have historically decided questions regarding development and growth in Connecticut. Providing an equal allowance for future flow increases (over 1997-1999 flow levels) gives each municipality the opportunity to decide for themselves how best to balance the costs of treatment with the benefits of growth in their community. Any attempt to incorporate a planned growth allowance into the development of WLAs for individual municipalities would substitute the State's judgement for that of the local community.

24. Bristol: The WLA is a mass based limit established based on a municipalities current population. To meet the proposed limits the municipality will need to treat its effluent to a level close to the current limit of technology. This leaves no room for residential and economic growth anywhere in the State of Connecticut. Any population or economic growth must be proceeded by a break through in waste water treatment technology. The only other way for developing communities to progress is by purchasing "penalty points" in the credit trading program.

Response: *The WLA proposed by CTDEP is not based on population but on the volume of effluent discharged from the municipal treatment system. Bristol could increase flow by approximately 20% over the 1997-1999 average and achieve compliance with the final WLA by providing a high but achievable level of nitrogen treatment. Further capacity for growth may be provided by elimination of influent flows to the treatment plant from groundwater infiltration and stormwater inflows to the collection system or through water conservation efforts.*

25. Canton: The proposed nitrogen limitations may ultimately limit our Town's ability to grow. Even if we could reach the number required for nitrogen removal, one large residential development or industrial user might tip the scales and we could not accept the additional flow if we could not meet the effluent nitrogen requirements.

    Response: *Similar problems will be faced by all of Connecticut's municipalities. Municipalities will be challenged to manage future development in such a way as to provide for both economic growth and a healthy environment.*

26. Farmington: The Town of Farmington has contractual commitments to other towns (Avon, Burlington, and Canton) including UConn Health Center to treat flows in excess of the above-mentioned base flows. These towns are also experiencing recent growth and we request that the base flow also be increased to provide for these commitments.

    Response: *The proposed WLAs are based on conditions monitored for the period 1997-1999. Adjusting the WLA for Farmington upward for to allow for growth this municipality anticipates in the next several years would limit the capacity for other communities to grow in future years.*

27. Manchester: The proposed WLA ultimately will affect the economic growth and financial well being of the Town of Manchester.

    Response: *The proposed WLAs will present the same challenges for all other communities in Connecticut. The CTDEP is confident that these challenges can be met and the goal of a healthy economy and healthy environment can be achieved.*

28. MDC: MDC has reviewed EPA's comments on Draft Long Island Sound TMDL and one point raised is that assumptions made regarding present and future growth trends in developing the TMDL should be included. With the proposal for the stadium at Rentschler Field, and the likely development around the area that will support the stadium, MDC is very concerned about the flow to the East Hartford WPCF increasing. Has CTDEP considered the future growth potential of East Hartford based on the Rentschler Field proposal? Pratt & Whitney, formerly the state's largest employer, may win future contracts and/or decide to expand a manufacturing line which may impact the wastewater discharged. In the EPA's TMDL comment letter it states that the discussion on page 23 of the TMDL is the only place where future growth appears to be addressed.

    Response: *Projections of future growth are highly subjective. No consistent basis for comparing growth projections for all of Connecticut's municipalities exists. The WLAs proposed by CTDEP allow for each municipality to accommodate an increase of approximately 20% in flow provided a high level of nitrogen treatment is provided. Additional capacity for growth may be available in the event that the nitrogen credit-trading program is implemented (See also summary response for this Section and Sections VII and VIII).*

29. Naugatuck: The draft WLA does not define how increases in flows will be handled. The required effluent nitrogen concentration at WLA compliance, presented in Table 2 [available in hard copy] is approximately 5.65 mg/l total nitrogen. This concentration is calculated at the baseline flow that was identified as a three-year average for 1997 through 1999. If flows increase in the future, this effluent concentration will need to be further reduced, possibly to a point beyond the capabilities of current technology. This may have the affect of limiting sewer system expansions, because increased flow will require a treatment facility to treat to a lower nitrogen level. This has the potential for additional

environmental concerns as new development is pushed to onsite disposal options that are more difficult to regulate in terms of long-term compliance due to system maintenance issues. In addition, sewer extensions to areas with failed onsite systems may not opted for due to concerns of increasing flows and the resulting lower nitrogen limits.

Response: *Connecticut has a long history of local control over land use and growth management. Although the WLAs provide each municipality with an equal capacity to accommodate increases in flows to the treatment plant, CTDEP believes that this challenge is best met by retaining local control over land use decision making. CTDEP may mandate expansion of sewer collection systems to serve areas where existing pollution problems exist as it has done in the past. However, it will be up to local communities to control development to insure that any future development that relies on on-site wastewater disposal does not result in pollution or surface or groundwater resources.*

30. Simsbury: The proposed WLA of 107 pounds per day will result in an effluent concentration (at the 3.84 mgd average daily flow projection in the Facilities Plan) of 3.3 mg/l as TN. In numerous statements by the CTDEP it has been established that the present limit of technology is 4.0 mg/l. How do the communities served by the Simsbury WPCF resolve their projected flow requirements and the WLA? It should be noted that the Facilities Plan was based on planning by the respective communities [Simsbury, Avon and Granby] that was approved by the CTDEP years ago.

    Response: *CTDEP rejected the use of design capacity as a means of establishing WLAs because not all facilities plans are based on similar methods of projecting future treatment needs. While Simbury's facilities plan may indicate that the plant is capable of treating 3.84 MGD, current flows are only slightly over half that volume. Adjusting Simsbury's WLA to allow for a 50% increase in flow to accommodate growth that may or may not occur would require that the WLAs for all other municipalities be reduced, restricting their ability to accommodate flow increases.*

31. Simsbury: It was stated at the public meetings that we should expect technology to improve and allow attainment of lower limits. Communities are building biological treatment facilities and therefore, microbiology limits the efficiency. Communities should not be expected to jeopardize their futures on the promise of technology improvements. Especially when design and construction is occurring today.

    Response: *Over the last ten years improvements in technology have occurred and future enhancements are likely. However, the final WLAs proposed by CTDEP can be achieved using technology that is currently proven reliable.*

32. South Windsor: In using 1997-1999 flow figures, the program makes no allowance for future flow increases. In 2014, the Town will be required to reduce total nitrogen concentrations to 3.4 mg/l; this requirement may not be achievable using currently available technology. The Town requests that the State CTDEP give consideration for future increases in flow rates attributable to development.

    Response: *The proposed WLA provides the same opportunity for growth in South Windsor as is provided for all other municipalities. If flow does not increase over 1997-1999 levels, an effluent nitrogen concentration of 5.6 mg/l will meet the final WLA. If flows increase 20%, a concentration of 4.0 mg/l would need to be achieved. This level of treatment can be achieved using currently available treatment (See also summary response for this Section).*

33. Stonington: Economic development of the Town could be impacted as a result of treatment requirements. While growth will occur across the State, growth rates are likely to not be uniform. How will CTDEP deal with variable growth patterns?

    Response: *CTDEP does not wish to intrude into local decision making regarding managing growth. Treatment requirements and infrastructure costs have been and will continue to be a*

consideration for all municipalities statewide. If the nitrogen credit-trading program is implemented (See Sections VII and VIII), some additional capacity for growth may be available to rapidly growing communities through trading with slower growing areas (See also summary response for this Section).

34. Vernon: Over the past twenty or so years in Vernon, the majority of expenditures for capital improvements have involved either schools, sewer lines or improvements to the WPCF. The Town of Vernon recognizes its responsibility to provide clean water to its citizens and downstream users and has been responsive and responsible to that end. However, these things have seriously limited the Town's ability to grown and prosper in other areas. We need to upgrade our public works equipment, make road improvements, modernize our municipal buildings, repair sidewalks and provide for other essential improvements to our town. Funding assistance to Connecticut municipalities for the LIS effort should be increased to the highest extent possible to reduce the burden on local taxpayers.

Response: *All municipalities are faced with these same needs and challenges. (Please see Section VI for a discussion of funding issues)*

35. WRCOG: Such a proposed plan may well affect residential and commercial development throughout the state. Municipal (and regional) economic development coordinators and municipal planning and zoning commissioners should have had the opportunity to understand this plan and its implications and to comment on it.

Response: *CTDEP has made extensive efforts to seek widespread comment on this plan as well as the Comprehensive Conservation and Management Plan and the TMDL for Long Island Sound (See also CTDEP's "Response to Public Comments on the TMDL"). This effort will continue in the future.*

IV. Comment: ***Plant has been recently upgraded, modified or reconstructed:***

SUMMARY RESPONSE:

CTDEP has tried to keep the municipalities fully informed of developments with the nitrogen TMDL and expected targets and goals for point source controls. CTDEP has hosted public meetings (to which every municipality with an STP received a written invitation) and training courses on denitrification and plant operations where the need to control nitrogen and potential targets for reduction were shared. Also, the LISS has sponsored public informational meetings on nitrogen control plans from a bi-state perspective. CTDEP municipal engineering staff and Clean Water Fund staff have been kept up to date on potential nitrogen removal needs for Long Island Sound and have made project and funding recommendations to the municipalities in keeping with that understanding. While the specifics of the final WLA and nitrogen control needs have undergone many adjustments through the last few years in keeping with findings from modeling and evaluation efforts, the general tenor of the reduction (on the order of 60 to 70%) for all point source dischargers in Connecticut has been publically shared and advertised for more than five years. There is no question that some projects have been caught in the middle of nitrogen reduction needs, but the generous 15-year implementation time frame coupled with opportunities to put off reconstruction by participating in a trading program should soften the financial and technical implications of implementing the TMDL.

36. Beacon Falls: Town has recently completed (1994-95) a major upgrade of our Wastewater Plant (in excess of one million dollars), during which nothing was conveyed to us by CTDEP regarding additional upgrades/costs in the near future concerning nitrogen removal requirements.

Response: *As noted in the Summary Response (above) CTDEP has tried to keep all municipalities with STPs advised of nitrogen control needs.*

37. CCM: The Department should take special care to ensure that baseline data used to calculate the allocations are accurate and do not unfairly burden communities which have recently undertaken construction projects that included steps for nitrogen reduction.

    Response: *CTDEP believes this WLA public process was designed to meet that need, and similar comments on the TMDL also address this concern.*

38. Farmington: The Town of Farmington constructed an advanced wastewater treatment facility to reduce the loading of ammonia nitrogen to the Farmington River. The 20 year construction bond is not yet paid off as the plant only went on line in 1995. In doing so, we have a combined process consisting of trickling filters (a fixed biomass process) for significant BOD removal followed by a second stage activated sludge process for nitrification. Although the reduction of ammonia to nitrate is an initial step in the removal of nitrogen from the wastewater, the process presently in use at the Farmington WPCF will require costly modification to the WPCF to achieve nitrogen removal. About two year ago our staff tried to convert the initial stage of the activated sludge portion into an anoxic tank; however, this trial was unsuccessful in removing nitrogen. It appears, therefore, we can either add denitrification filters at a substantial cost or revise the entire process flow stream at a substantial cost. We request that if the WLA process is to proceed that Farmington be provided with sufficient financial aid such that the cost of adding denitrification to our WPCF does not exceed the typical cost required by other WPCFs.

    Response: *CTDEP believes that the process of funding through the state's Clean Water Fund will provide adequate funding to municipalities to implement the WLA and TMDL for nitrogen. CTDEP staff will continue to work with the municipalities to ensure project implementation and best use of available funds.*

39. Manchester: The proposed WLA will expedite the requirement for Manchester to modify its new wastewater treatment plant in order to meet the first phase (2004) Nitrogen reduction. The proposed WLA will further require Manchester to implement a second plant upgrade prior to 2014 which would have to meet the Limits of Technology (LOT) or purchase credits form the proposed Nitrogen Trading Program.

    Response: *The WLA evaluation suggests that LOT will not be required unless a municipality has undergone, or will incur, substantial growth since the 1997-99 baseline period. Under today's flow conditions, the statewide average final effluent total nitrogen concentration would be above 5 mg/L. The trading option will also allow for an individual town's growth beyond LOT by purchasing credits.*

40. Naugatuck: In review of the analysis of information used to formulate the WLA, there does not appear to be any consideration for a plant's influent nitrogen loading, current nitrogen removal capacity, operator training, staff capabilities or the overall cost of compliance. In the case of Naugatuck, the 1996 capital upgrades for nitrogen removal were not considered, nor was a dramatic reduction in influent nitrogen form industrial users of their system. An example of the affects to other communities is the requirement of extremely small plants (e.g. <0.5 mgd) to remove an equivalent level of nitrogen which could require significant costs to these communities in capital upgrades and operator staffing for new unit processes with only small relative overall benefits in nitrogen removal.

    Response: *It is correct that influent nitrogen concentration was not part of the evaluation scenario. For reasons discussed in earlier sections (see especially Sections I and II), the flow-proportional approach was judged to be the most equitable and reasonable. Prior upgrades and reductions in industrial contributions of nitrogen at the Naugatuck plant should serve to move Naugatuck closer to the final nitrogen reduction goal, perhaps meeting reduction needs for several years. CTDEP agrees that reconstruction of smaller plants may not always be the most economical choice and expects that smaller plant managers may opt for inexpensive retrofits combined with purchasing nitrogen credits. As noted in the Summary Response for this section, public sessions on nitrogen removal and training classes were available to the municipal staff.*

41. Newtown: The Town of Newtown has taken the Long Island Sound nitrogen control issue very seriously from the inception of our WPCF design, incorporating nitrification and denitrification into the plant (with DEP's support) despite no regulatory requirement to do so. We are currently achieving very good removal rates for total nitrogen, especially in the warmer months. We intend to continue to operate the plant to minimize nitrogen loading in our discharge, but do not want to get penalized on future limits because we were just starting up the plant at the period chosen by CTDEP for the WLA baseline.

    Response: *CTDEP has evaluated Newtown's concerns and adjusted the WLA accordingly.*

42. Vernon: Vernon has just completed a major upgrade to its WPCF at a total cost of $32,500,000. There are five communities that utilize the plant. We are currently in dispute with a neighboring community concerning their share of capital costs and the sewer user charges associated with that improvement. It appears that this matter may ultimately be settled in court which could take several years to resolve. In the interim, Vernon is obligated, as the owner of the facility, to make full debt service payments to the State of Connecticut even though one community refuses to make full payment to Vernon. This is a tremendous issue in my town. Certainly, you can understand the Town of Vernon's reluctance to undertake yet another upgrade of its treatment plant, before resolving the current dispute.

    Response: *CTDEP is aware of this concern, but it's relevance to establishing the WLA is unclear.*

43. Windsor Locks: Windsor Locks has taken an aggressive approach toward enhancing TN removal from our WPCF. We have completed the planning and design phases, and are actively bidding a multimillion dollar improvements project focusing on improving nitrogen removal via maximizing the capabilities of the existing facilities and implementing innovative technologies. Our plan, based on the original 1990 TN baseline and associated 15-year schedule, was to implement improvements now to allow the talented and professional operators working at our facility time to optimize the TN capability of the proposed innovative system. CTDEP reviewed and approved our project-planning document in 1999. The modifications to the schedule as proposed in the current WLA include both a reduction in the TN baseline level, and an acceleration of the implementation schedule that eliminates any "window of opportunity" to experiment and optimize the proposed system. Optimization will involve some trial and error and is not without risk of process upset. In fact, it appears that the facility will be forced to purchase nitrogen credits within a couple of years of the projects completion. By implementing the proposed WLA, CTDEP has effectively penalized Windsor Locks because they were proactive in planning and implementing TN reductions. [A table is provided with baseline and 5-year incremental limits.] The proposed upgrade was designed with the capability to achieve an effluent TN of approximately 100 pounds per day at average flow [vs. the 2004 limit of 87 lbs/day and the final WLA of 66 lbs/day]. This would have afforded our operators a number of years to optimize the system and determine if further improvements will be necessary or cost effective to achieve the ultimate TN goal.

    Response: *CTDEP does not believe Windsor Locks has been penalized by their activities as the modifications are removing nitrogen, which lessens the need to purchase credits over the short term. Because of Windsor Locks' location, credits can be purchased at a favorable exchange ratio, further reducing the cost of meeting the WLA compared to the potential marginal cost of end-of-pipe improvements.*

V. Comment: ***Offsets for nonpoint or failing septic treatment or expansions:***

SUMMARY RESPONSE:

The TMDL for LIS has tried to accurately account for CT's sources of nitrogen, including point and nonpoint sources. The TMDL requires an aggregate reduction of 58.5% from that baseline over the next 15 years (See CTDEP's "Response to Public Comments on the TMDL"). It seems reasonable to adjust a point source WLA if nonpoint source nitrogen, or nitrogen from other,

active point sources is transferred to one of the facilities listed in this nitrogen WLA. It is expected that an estimate of the nitrogen that would have been incorporated into the nonpoint source LA would be made, and that amount would be added to the receiving facility's WLA. However, no set formula for calculating the adjustments, or rules for qualifying adjustments have been made at this time and are not relevant to establishing this WLA. While CTDEP is committed to making such adjustments, they will be handled on a case-by-case basis as they occur through the permitting process. It should be clear that sewering of new areas would not qualify for a nonpoint source offset if there are no existing septic systems.

44. MDC: The MDC has spent many years, a considerable amount of money and effort in reducing CSOs. As a result, a significant amount of nitrogen is captured and treated daily at the Hartford WPCF, which would otherwise be discharged to the Connecticut River. We request that the Hartford WPCF receive credit for reducing this source of nitrogen and treating it at our facility. During our August 30, 2000 meeting with DEP, MDC stated that we wanted to receive credit for removing CSOs from the Connecticut River to the Hartford WPCF. CTDEP stated that it would be possible to use some of the non-point nitrogen to receive credit for the nitrogen removed from the CSOs. [MDC provides lengthy discussion on how CSO nitrogen offsets might be calculated. Calculation A estimates 103 lbs/day removed by the wet weather storage basin (WWSB) project while calculation by estimates 76 lbs/day removed. See letter for details.] Averaging the two values, MDC has captured and removed an additional 90 lbs/day of nitrogen. This reduction in the non-point source nitrogen load to the Connecticut River should be credited to the MDC on an annual basis as determined by measurement of nitrogen removal through the WWSB for the previous 12 months. The credits will be used for the Hartford WPCF in DEP's planned Nitrogen Credit Trading Program. Work is continuing on removing CSOs from the collection system and therefore the MDC will continue to reduce the amount of nitrogen from these non-point sources.

    Response: *As discussed at the public meetings held for this WLA, CTDEP is amenable to reviewing circumstances that might warrant a nonpoint source offset for the point source WLA. However, these adjustments are not relevant to the establishment of a WLA and will be handled on an individual basis as part of the permitting process.*

45. New Milford: In March of 2000, the New Milford WPCA completed an expansion project which included the decommissioning of both the Sullivan Farm and Willow Springs private package treatment plants. Those plants were converted to pump stations and discharge into our facility and no longer discharge to the Still River. I would like to know how this reflects on the WLA of New Milford's treatment plant.

    Response: *New Milford's situation with the incorporation of package plants into their flow is likely to result in an adjustment to their overall baseline. However, no determination of this adjustment can be made as part of the WLA process. These cases will be handled during the permitting process.*

46. Salisbury: The Town of Salisbury has been considering several sewer extensions in order to replace septic systems in areas that have documented or suspected failures. We are concerned that the WLA is based on a set flowrate from 1997-1999, and that adding flow in the future will actually make our effluent nitrogen concentration limits even lower than the 5.6 mg/l currently in the WLA. Given our small size, the impact of adding sewer service area has a major percentage impact on our flow, and may even push our effluent limits below the generally accepted limits of technology for nitrogen removal. We understand CTDEP has said it plans to offset WLA loadings from sewering areas served by septic systems, but this policy is not stated in writing that we have seen. Furthermore, the CTDEP has stated that the details of such an offset have not been worked out. We are concerned with Salisbury's vulnerability on this point, and don't want to be in a position of being penalized relative to nitrogen concentrations because we respond to environmental and public health concerns by extending sewers.

Response: *As noted in the summary response for this section, no adjustments for sewer expansions will be made as part of this WLA process. CTDEP will evaluate these requests during the permitting process. If expansions are part of community growth, it is unlikely that an adjustment in the WLA will be made (See also Section III). However, if the expansion is to remedy a failing septic system condition or to incorporate flow from a smaller facility, some adjustment in the WLA may be appropriate.*

47. Simsbury: A general statement was made at the public meeting that if a treatment facility increases its flow and that increase was due to correction of existing septic system problems, then there would be a relaxation of the permit limit commensurate with the correction of septic system failures. How will the program providing TN "credits" for sewering homes with failing septic systems be implemented?

    Response: *It is correct that CTDEP plans to consider WLA adjustments for these situations. However, no specific plans or procedures have been formulated at this time. These adjustments will be made as part of the permitting process.*

48. Stonington: What happens if a non-sewered Town elects to construct a sewer system given that their present WLA is zero? This is important to our town since North Stonington – a town that is presently unsewered – is located on our northern boundary. Again, North Stonington represents a non-point source that apparently has not been considered in the program at this time. If a water pollution control facility accepts and treats flows from a community such as North Stonington, it should be rewarded in some manner for removal of non-point source nitrogen. Wasteload allocations should be increased for WPCFs accepting and treating flows from non-point sources (e.g., sewer system expansion and marine pumpout facilities). A community should not be penalized for reduction of non-point sources.

    Response: *As noted in the summary response for this section, no specific procedures have been formulated to describe the WLA offset process. However, it is likely that a nonpoint source offset will be made for situations described in Stonington's comment. (See also the summary response for this Section).*

49. Windham: At the DEP's request, the Town of Windham served as the lead community for a DEP-sponsored regional septage study for 11 towns in our region in 1995-96. The major recommendation of that study was that the Windham WPCF be modified to receive septage from the region, and that CTDEP would then be able to close down two major unpermitted septage lagoons along the Willimantic River. The Town subsequently agreed to serve as a regional septage receiving and treatment facility and recently modified our WPCF significantly to accommodate this practice. We now take in significant volumes of septage, which results in increased nitrogen loads (though relatively small increases in flowrate), to our WPCF. We want to go on record as stating that we believe the Town's nitrogen WLA should give the Town credit for the reduction in non-point source nitrogen loading that was previously taking place from the septage lagoons. This would be in line with statements made at the September 6 meeting by CTDEP personnel that adjustments would be made where non-point sources of nitrogen (e.g. septic systems, abandoned package plants) were eliminated by changes in municipal sewerage systems. Specifically, the 1996 report by Fuss & O'Neill on the Regional Septage Study documented septage volumes of 2,000,000 and 550,000 gallons per year going to Kelly's and Trickett's septage lagoons prior to startup of Windham's Septage Receiving Facility. This report identified a representative TKN concentration of 214 mg/l for septage based on actual sampling. Using the TKN concentration to represent the total nitrogen concentration (there was a very low nitrate concentration), one can compute that these two lagoons combined discharged 12.5 pounds per day of total nitrogen, which very low nitrate concentration went fairly directly to the Willimantic River. (Using EPA mean values for septage nitrogen concentrations results in a 48 lb/day figure). We believe our WLA should be offset by this amount, i.e. 125 lb/day (the draft WLA) plus 12.5 equals 137.5 lb/day (revised WLA).

    Response: *CTDEP has indicated a willingness to review these situations on a case-by-case basis. However, no determination or adjustment in the WLA is appropriate at this time. (See also the summary response for this Section.)*

VI. Comment: ***Cost and funding concerns:***

SUMMARY RESPONSE:

The proposed 15-year nitrogen removal management plan as detailed in the TMDL and the WLA at issue here were based on the ability of Connecticut's Clean Water Fund to finance the necessary improvements to meet the nitrogen reduction goals. The estimated $670 million cost for nitrogen removal projects will be reduced by about $200 million if the trading program is implemented (See Sections VII and VIII, below) creating an annual cost of about $32 million. The CWF currently funds approximately $100 million each year in project costs, leaving sufficient funding capability to fund all other identified needs including CSO abatement, odor control, sludge treatment, additional capacity, etc. Large plants (e.g. Hartford MDC) will receive higher funding priority to build necessary upgrades and expand capacity if nitrogen removal capability is added to their projects.

Funding mechanisms at CTDEP are the same for all communities in the state. Fifty-five percent grants are available for nitrogen removal engineering studies. Thirty- percent grants are provided for nitrogen removal construction projects with the balance loaned at 2% interest. In order to achieve the WLA for the state, a reduction of nitrogen at all municipal wastewater treatment facilities will be needed. The shoreline facilities alone cannot remove enough nitrogen to satisfy the final, statewide WLA.

CT presently has two nitrogen removal funding programs. The first is a nitrogen removal retrofit program that has a cap of $2.5 million for project costs and is funded at 30% grant and a 2% low interest loan for the balance. This program is available on a first come, first served basis. The second is the Clean Water Fund priority list for larger projects. Projects on this list must be rated and funding is 30% grant for the nitrogen removal portion of the project, 20% grant for other wastewater treatment costs, and a 2% low interest load for the balance.

50. Beacon Falls: Nothing has been presented by CTDEP to illustrate what the costs of these nitrogen removal systems will be and insufficient information has been provided by CTDEP regarding any vehicle for the funding of this proposal.

    Response: *CTDEP has funded over 25 BNR projects since 1995 with costs ranging from $210,000 to $115 million. CTDEP maintains cost data specific to the projects funded that can be shared with all municipalities. In any case, the costs are expected to be affordable, as noted in the Summary Response for this section and Sections VII and VIII.*

51. Canton: The proposed nitrogen regulations appear to have an adverse financial implication for the residents of this small community. The Town of Canton already provides treatment processes beyond that required of the surrounding communities. To maintain the existing quality of treatment we have increased our user rates and substantially increased the connection fee. A mandate for yet additional treatment, while environmentally sound, will require additional taxes to be levied on our small user base.

    Response: *See Summary Response for this section and Sections VII and VIII, as well as the response to Comment 50.*

52. Canton: Some wastewater treatment facilities located along Long Island Sound have received extensive funding for the proposed nitrogen regulations. Due to proximity of these facilities to the Sound they would logically become a priority. It is a hard sell, if not impossible, to mandate that residents who live approximately 50 miles from the Sound will not receive an equivalent level of funding and benefit as the shoreline communities. Seriously question the far-reaching mandate of this

program without an appropriate level of funding. We cannot begin to fund the cost for facility planning and construction without supplemental funding.

Response: *See Summary Response for this section and Sections VII and VIII. CTDEP believes the trading program is an effective means of fairly distributing costs and that CWF priorities will assure affordability. Also, funding mechanisms at CTDEP are the same for all communities in the state.*

53. Farmington: We have successfully constructed and operated a composting facility which allows beneficial use of sludge. This should have resulted in a net savings to the users (or at the very least to break even), however, it has become an added expense to the users of the system. Existing limits set for the use of this material and application rates within the State has caused this increase to the users. Further financial burden resulting from these expensive and restrictive WLAs for nitrogen will force us to take measures to control the rising costs of sewage treatment, perhaps including abandoning of the composting operation. This would be a shame, as we feel it is a beneficial environmental friendly method of sludge treatment and it may even become an income producing operation someday.

    Response: *The use of the composting facility at Farmington should not be affected by the operation of a nitrogen removal facility. The Farmington facility presently removes ammonia and denitrification should not change the present operating conditions. A nitrogen removal planning study should be conducted to evaluate the options available for BNR at the Farmington WPCF. CTDEP feels the costs are affordable and necessary to meet water quality goals in Connecticut. See also the Summary Response for this section and Sections VII and VIII.*

54. MDC: Over the 15-year period of the nitrogen program, and beyond, the costs associated with the capital and operations and maintenance improvements will be momentous. Hartford is a distressed community. While we have not calculated the percent increase for a homeowner, based on the current Clean Water funding scenario, the cost for each household will increase significantly. The MDC is very concerned about how the costs will impact member towns. Under current Clean Water Funding, CSO projects are funded at 50% and nitrogen reduction at 30%. The MDC will be looking for funding for both of these types of projects. Realistically, the funding for the CSO projects will be more aggressively sought since a greater portion of the project will be funded.

    Response: *Additional funding may be available through the Estuaries and Clean Waters Act of 2000, which authorizes up to $40 million for fiscal years 2001 through 2005 and specifies the expenditures target distressed communities. The MDC should perform a comprehensive nitrogen removal planning study at all of their facilities. The study will evaluate options and costs at the various treatment facilities. Many low cost BNR retrofit projects have been successfully completed in CT. A comprehensive engineering study will evaluate the range of available options including the low cost BNR retrofit improvements for the District.*

55. Salisbury: The cost ramifications of the new nitrogen WLAs are a serious concern for the Town of Salisbury, as we have limited financial resources. The $2.0 million in modifications for nitrogen removal mentioned above [in their letter] would be very difficult to absorb. This is particularly true because we have other expenditures facing us (e.g. the sewer extensions describe above [in failing septic areas], as well as I/I control. For your information, the CCM's "The Connecticut Clean Water Challenge: How to Finance State and Local Wastewater Needs, 2000-2005" report from November 1998 listed Salisbury as facing $4.5 to $6.5 million in wastewater system costs (including $2.0 million for nitrogen removal). We do not have the capacity to take on all these needs, and this heightens our concern for the potential implications of the WLA for nitrogen.

    Response: *Smaller towns such as Salisbury can make low cost improvements to their facilities for less that $2 million and then evaluate options for purchasing nitrogen removal credits to achieve their final WLAs. As nitrogen implementation progresses, Salisbury may find that the option of purchasing credits would be more economical. See also response to other comments in this section and the Summary Response for this section and Sections VII and VIII.*

56. Southington: In Southington, a minor modification to 7-9 mg/l should cost about $300,000-$500,000, whereas a full modification, which would be required in order to attain an effluent nitrogen level of 5.6 mg/l would cost about $20,000,000 to $30,000,000. It doesn't make sense to spend all that extra money to attain a few extra parts per million, unless and until we are absolutely sure that the expenditure is, in fact, required. [Made the case that inland facilities should do less by employing only minor modifications to meet 7-9 mg/l].

    Response: *Southington is presently conducting a nitrogen removal engineering study that will evaluate a range of treatment alternatives along with the potential for purchasing or selling nitrogen credits. The Town will then be in a better position to choose its treatment alternative and future direction with respect to achieving their WLA. CTDEP agrees that marginal costs may indicate a more sensible approach of purchasing credits rather than treating at the facility. Please also refer to the Summary Response in this section and in Sections VII and VIII.*

57. Stonington: How will CTDEP prioritize grants for nitrogen removal? Is Stonington less likely to receive funding given its location on the Sound? The Town of Stonington has committed to invest its time and funds to prepare a 20-year wastewater facilities plan for our wastewater collection and treatment facilities, as directed by DEP. This study is underway and these efforts will become clouded as a result of the uncertainties within this program. Complete, accurate direction from your office regarding implementation of this program will be essential in order to fully assess our options and adequately plan for the future.

    Response: *A system for assigning priorities for projects has been established and has been in use by CTDEP to determine CWF project funding. CTDEP cannot determine at this time Stonington's ability to receive funds until the project is proposed, evaluated and scored on the priority list. While not essential to this WLA, CTDEP will work with municipalities through the implementation process. Please see the Summary Response for this section for details.*

58. WRCOG: Who will fund the improvements needed to bring all of the WPCF's into compliance?

    Response: *Connecticut's CWF will be the funding mechanism. See also Summary Response for this section and Sections VII and VIII.*

VII. Comment: ***Nitrogen trading/credit program:***

SUMMARY RESPONSE:

The potential Nitrogen Trading Program received a lot of comment and interest as a mechanism for reducing nitrogen removal costs at an individual plant and fairly distributing the cost of implementation in proportion to a source's impact on Long Island Sound. However, it is not an integral component of the WLA at issue here. Responses were provided for clarification but it should be recognized that the enabling legislation for both the general permit and the trading program has not been adopted at this time. Responses are based on the proposed legislation, which may change during the adoption process.

The proposed legislation for 2001 is summarized as follows:

The general permit limit is set based upon each treatment plant's nitrogen removal capability. The weighted average nitrogen removal capability is calculated for each year. Plants that remove more than their weighted average load will sell credits to the plants that remove less. If the plant capability is calculated correctly in the general permit, there will be a balance between credits produced and purchased. Each year as new projects are completed, the weighted average removal across the state will be reduced. Each municipality will buy and sell credits against a new standard. The amount discharged will be reduced and the water quality in LIS should

improve. When the statewide WLA is met, trading will still occur as some facilities will be treating below their individual WLA while some will be above their individual WLA. As growth occurs, more limit of technology projects will be constructed to offset growth. No evaluation of the potential increases in customer fees is feasible at this time. Indications from the BNR projects that have been constructed to date point out that the increased user fees will be affordable.

59. Bristol: The CTDEP hopes to implement a credit rating program that will allow these facilities to pay ongoing annual fees to buy credits to avoid an environmentally non-beneficial upgrade. This is the equivalent of paying unending penalties for not upgrading. Additionally, trading will only be available with those communities which have achieved treatment to levels below its individual WLA. Upon final implementation of the 2014 WLA which require treatment approaching its level of technology it is unlikely that any significant credits will be available for trading.

    Response: *Each discharger will have the choice of treating or purchasing credits. While there is no question that when growth is factored in, the amount of available credits will diminish over the years and become more costly. However, CTDEP's analysis shows that adequate credits will be available through the 2014 time frame and will be affordable. At that time, Connecticut and New York have agreed to reassess the Long Island Sound TMDL and appropriate adjustments can be made.*

60. Canton: Some advance financial data indicating the overall cost of the nitrogen credits and when they will be available in the budget cycle would be helpful for our analysis of this program. If the credits become available after March each year, it will be very difficult to finalize a town budget not knowing what the actual cost of the credits as well as the availability will be.

    Response: *Once the general permitting and trading legislation is adopted, trading program procedures and trading board oversight will be formalized and the program put into operation. While not relevant to the WLA comments, the CTDEP and the trading program board will work to ensure the towns received whatever information is most useful to them in a timely manner.*

61. CWPAA: The CTDEP should use their original approach to ratchet the target loads in three five-year increments. This would allow municipalities to plan and capitalize Nitrogen Removal Projects without being subject to credit costs at least for the first five years.

    Response: *CTDEP's analysis of the trading program showed that the five-year increment approach would not provide a workable and predictable approach to nitrogen management. Annual review and target setting will allow the trading program to better balance credits to avoid a large surplus or deficit and allow for steady progress towards the nitrogen removal goal.*

62. Cytec: We are informed that the trading program will be limited to public sources; private sources will be precluded. Indeed, this is ironic given that the very same public policy goals supporting cost effective management and flexibility in achieving nitrogen reduction goals apply equally to public and private sources. Such a program that would distinguish between private and public entities for the availability of publicly-managed credits would be legally suspect, imposing as it does an inequitable burden on those ineligible to participate. We therefore urge the Department to support and implement a nitrogen trading program open to all subject point sources.

    Response: *While non-public point sources and nonpoint sources are not specifically disallowed, the proposed legislation does not incorporate either into the program. CTDEP encourages Cytec to work with the legislators and, when adopted, the trading program board to propose incorporation of private point sources into the program for their review.*

63. MDC: MDC currently receives sludge from towns such as Southington. CTDEP has stated that the cost of treating the sludge in accordance with the nitrogen reduction program should be included in the fee charged to Southington. Not knowing what the value of a credit will be, until the following

January or February or each year, it will be difficult to set a price. The same issue applies to the receipt of septage.

Response: *Prices of nitrogen credits will be set on an annual basis and are not expected to rise precipitously each year. MDC and others in a similar position should be able to adequately price treatment services with annual information provided by the trading program board.*

64. MDC: It is unclear as to whether DEP's nitrogen reduction program will have POTWs performing nitrogen reduction in five-year increments (40, 75 and 100%) or equal annual steps over the 15-year period. Due to the way capital projects proceed at municipal organizations, design conception, referendum, bidding of projects, and construction, meeting of the annual or five-year limits is important. In EPA's TMDL comment letter to CTDEP they state that the schedules established in the permits must be at least as aggressive as the Phase III agreement. Therefore what will the "compliance schedules" be?

    Response: *While not relevant to the WLA in question, the proposed trading program will set the rules and schedule for annual nitrogen reductions and cost. As noted in response to Comment 61, it is anticipated that reductions will be on an annual bases, rather than the five-year increments proposed in the TMDL to ensure steady progress is made and that the TMDL targets are not jeopardized.*

65. Naugatuck: Of concern for the Borough of Naugatuck is the discussion of the proposed Nitrogen Credit Trading program. It was explained that the credit program would be administered by CTDEP under the auspices of a Nitrogen Credit Trading Board. It is not clear exactly who will comprise this board or how decisions regarding the availability of nitrogen credits will be made and which facility(ies) will be allowed to purchase them. As proposed, this is a closed trading program (only credits within the State can be traded) and there will be no carryover from one year to the next. It will therefore be impossible to anticipate the amount of credits which will be available for purchase for compliance from year to year and therefore a community will not be able to rely upon these credits being available for compliance. It is also not clear if there are insufficient credits, who will decide which plant is allowed to purchase credits and who will be out of compliance. We would recommend that, due to the complexity of the issues associated with this aspect of the Nitrogen Reduction Program, the entire Nitrogen Credit Trading Program be opened to a separate and distinct public comment process.

    Response: *CTDEP agrees. The trading program is not integral to this WLA. It will be formed through legislation before the Connecticut General Assembly and be managed by a trading board that will include representation from the regulated community, if adopted as currently proposed. The opportunity for public comment exists in both the law making process and through the trading board as the program develops.*

66. Simsbury: Purchasing nitrogen credits is proposed as a way for WPCFs to meet their discharge requirements. Simsbury, Avon, and Granby are being requested to invest significantly to remove TN or purchase pounds from the "bank." However, if we trade credits, Simsbury WPCF's are of little value relative to those facilities located on LIS. This would seem to prove that the relative impact of Simsbury's discharge on the hypoxia in Long Island Sound is insignificant. Since the cost of nitrogen removal is uniform, regardless of geographic location, how can the difference in the value of a pound of TN be justified?

    Response: *This argues for a trading program that will encourage the actual reductions occur in the areas with the highest trading ratios and the purchases occur in the areas with the lowest ratios, as makes economic sense. Each discharger was given their WLA to ensure they address their relative contribution to the problem in Long Island Sound. Trading allows the flexibility for each source to determine the most cost-effective way of meeting their requirement. There are many low cost options that can bring sources in the Simsbury area down and partially meet the goal at a cost lower than purchasing credits. When the marginal cost exceeds a certain level, it*

may make more sense to purchase rather than treat additionally. Also, any excess removal in the area of Simsbury would have a favorable exchange ratio with more distant sources in eastern Connecticut and a 1:1 exchange ratio with neighboring communities. While not as valuable as sources closer to Long Island Sound, they still have value in the trading program.

67. Stonington: What will the intermediate limits be for 2004 and 2009? Will CTDEP offer credits for early compliance? What happens, in terms of enforcement, if Stonington needs credits to meet its WLA, assumes they are available, but they are not because there are more buyers than credits? If we elect to buy credits and credits are limited, will CTDEP grant credits by need or some other protocol?

    Response: *The intermediate limits established in the TMDL are 40% progress by 2004 and 70% progress by 2009. However, through pending legislation, the CTDEP trading program will require annual limits for nitrogen loading to ensure a reasonable balance between credits and debits. However, the annual limits must be below the TMDL five-year targets to ensure the requirements of the TMDL are met.*

68. Stonington: As of August 1999, a portion of the flows from the Mystic facility is being diverted to the Stonington Borough facility. Please confirm that Stonington can consider the sum of the WLAs from its three WPCFs as a total allocation, and that it can distribute this allocation as it deems appropriate.

    Response: *This would appear to be the case based on the currently proposed trading program legislation.*

69. Stonington: Is the trading program perceived to be a temporary or permanent program? It is our understanding that nitrogen credits will have the same purchase price on the Rhode Island border as on the New York border. Is this correct? If we elect to sell credits, would our credits be worth less, given the value of nitrogen reduction in Stonington as compared to a community on the New York border? Please confirm that nitrogen trading will be done statewide. Will the primary goal be to first trade within a zone and then on a statewide level?

    Response: *The trading program is anticipated to last at least until the year 2014 and probably will be a permanent solution to nitrogen control for the foreseeable future. While an "equalized" or "par" value credit will have the same base price, application of "exchange ratios" will determine the relative value of a credit from each geographic location. The exchange ratios will be specified as part of the trading program. Currently, Stonington's credits will be worth about 17% of a credit from southwestern Connecticut. Trading is expected to be done statewide. Credits will all be bought and sold by the trading program, so no specific source and destination of a trade will be apparent.*

70. Windsor Locks: The proposed WLA differs from the original 1990 Requirements by accelerating the implementation schedule. As shown on an attached graph [available in hard copy], the implementation schedule in the proposed WLA is significantly below the TMDL required by EPA. This effectively changes the rules of the TN reduction program immediately prior to its implementation. All the facilities that have planned for, designed and/or constructed WPCF improvements to achieve TN reductions have done so under previously recommended levels. The goal of any effluent trading program is to achieve a desired effluent quality at minimum cost. Forcing the WLA well below the TMDL increases the potential cost of the program to the residents of Windsor Locks. The situation is further exacerbated because the planning for TN reduction improvements was based on different requirements (1990 Requirements) than those currently proposed. Forcing trading only for the sake of initiating a trading program is contrary to the economic principles that make the concept of pollutant trading attractive.

    Response: *The WLA, at issue here, does not specify an implementation schedule. Without an adopted trading program, the WLA limits will have to be worked into the next five-year permit for each facility. With trading, the costs are equally shared, in proportion to a facility's contribution to the problem.*

VIII. Comment: ***Trading/general permit legislation and timing:***

SUMMARY RESPONSE: *CTDEP acknowledges that it would be helpful to have the trading and general permitting legislation adopted prior to finalizing the WLA. Unfortunately, the legislation failed in last year's session of the General Assembly. Connecticut was in a position, through agreements with New York and the EPA, of having to finalize the WLA and TMDL prior to the next session of the General Assembly. In any case, there are no legal or technical barriers to completing the legal WLA process without a formal trading program. CTDEP hopes that the trading program will be adopted early in the 2001 session of the General Assembly and can be implemented without undue delay and without upsetting the value of a trading program to meeting the WLA and requirements of the TMDL.*

71. Bristol: At this time it is not clear weather the proposed credit trading program the is such an integral part of the States program will even passes in legislation.

    Response: *Correct. CTDEP has presumed that trading will occur. If it does not, the WLA will apply to each plant as per EPA's TMDL regulations.*

72. CCM: There is no mechanism presently in place that would allow municipalities to meet the allocations that are proposed, nor is sufficient funding available. CCM urges CTDEP not to adopt the proposed WLA unless and until there is agreement between the State and municipalities on a mechanism that will provide municipalities with realistic opportunities to meet these new mandated requirements. Such a mechanism should include a program of buying and selling nitrogen credits, significantly increased state financial assistance for the mandated costs, and other elements. If WLA are adopted prior to agreement on a trading and financing system, municipalities will have been placed in a bind – they would be forced to choose between DEP-sponsored legislative proposals to which they have not agreed (and which they may feel compelled to oppose) or complying with stringent allocations on a permit by permit basis. Adoption of the WLA before agreement would only breed discontent among the DEP's municipal partners in the program, and endanger municipal support for such a program.

    Response: *CTDEP would have preferred to have the trading program adopted and in place prior to completion of the WLA and the Long Island Sound TMDL. However, the trading program and general permitting legislation failed in the last General Assembly session, but CTDEP was still under agreement with New York and the EPA to expeditiously finalize the WLA and TMDL. Further, CTDEP believes that the CWF can supply sufficient funding to comply with the CCMP and the 15-year schedule.*

73. CWPAA: The WLA should not be included in the TMDL analysis of nitrogen to Long Island Sound for submission to the USEPA until the Nitrogen Trading Program is adopted by the Legislature. The Nitrogen Trading Program will take into account the different locations of the treatment facilities and their impacts to Long Island Sound. This would equalize the actual impacts the facilities would have on the Sound.

    Response: *CTDEP agrees that the trading program is fundamental to fair and equal management responsibility throughout the state. See the response to Comment 72.*

74. Farmington: There is no assurance that the nitrogen credit trading program will proceed, how it will be administered, and what the credits will cost. This information is required to make the appropriate management decisions as to how to proceed. We are charged with the responsibility to scrutinize the allocation of public funds. To this end we cannot make sound financial decisions based on conflicting and limited concepts. We respectfully request that the implementation of WLAs not be instituted until the nitrogen credit trading provisions are developed, accepted by the State and approved by US EPA.

Response: *There is no legal reason why the WLA cannot proceed without a trading program. However, CTDEP agrees with Farmington that a trading program will be instrumental to cost-effective implementation and, when finalized, will greatly assist planning for nitrogen removal at the local level. See the response to Comment 72.*

75. Town of Groton: A Nitrogen Trading Program was envisioned to take into account the different locations of the treatment facilities and the impacts to Long Island Sound. This would equalize the actual impacts the facilities would have on the Sound. However, this program is not in effect.

    Response: *Agreed. See Summary Response and earlier responses, too.*

76. Salisbury: We understand that CTDEP is planning to initiate a nitrogen credit-trading program. We expect your likely answer to our points above [regarding Salisbury's small load and relevance to LIS in the face of costs] would be that the normalization and attenuation factors would be taken into account in the trading program. However, we are concerned that we will be at the whims of the legislature passing or not passing a trading program. If it doesn't pass, Salisbury is left with the highly undesirable, and difficult to justify, situation described above [having to treat at a high cost for little benefit to LIS]. Therefore, if you don't exempt us altogether as requested, we request the WLAs not be instituted until a trading program is passed by the legislature and implemented by DEP.

    Response: *See Summary Response and earlier responses in this section.*

77. Stonington: CTDEP appears unclear regarding the implementation and enforcement protocols for this program. These protocols must be fully defined prior to implementing the proposed WLAs. It is important that the CTDEP fully develop and disclose this information in advance, in order that we may properly operate our facilities now and plan for the future.

    Response: *CTDEP agrees that a finalized trading program would benefit the understanding of how the WLA might be implement. However, as noted in the Summary Response and other responses in this section, it is not essential to establishing a WLA that the trading program be adopted and finalized.*

78. Vernon: From a budgeting and planning perspective, it is difficult, if not impossible at this time, to determine what the financial impact the WLA requirements will have on individual municipalities without the Nitrogen Trading Program being fully defined and adopted by the legislature as part of the TMDL analysis. As a municipal employee who is responsible for informing my WPCA and Town Council about the potential for major capital expenditures concerning the WPCF, there is nothing worse than attempting to do that without all of the pertinent information and a long term projection of costs. Without the trading program in place and without knowing the various values applicable to each treatment plant (inclusive of attenuation factors), municipalities will be forced into reactive situations as the need for progressive nitrogen reduction evolves.

    Response: *See Summary Response and other individual responses in this section.*

IX. Comment: ***Enforcement and compliance issues:***

79. Stonington: Will the WLA be defined as a maximum daily or maximum annual load? Will our WLA be regulated by a discharge limit? This information is necessary to properly assess our options during the ongoing facilities planning. Will there be seasonal limits? How will CTDEP determine Stonington's compliance with its WLA? When/how will CTDEP determine compliance with our WLA?

    Response: *The WLA is defined as a daily load calculated on a 12-month rolling or moving average. The rolling average allows for seasonal variation and periodic upsets in nitrogen removal capacity. There are no plans for seasonal limits and compliance will be determined*

based on the 12-month average beginning as soon as 12 months of monitoring have been completed after issuance of the permit that incorporates nitrogen limits.

80. Windsor Locks: Connecticut is currently facing a shortage of trained and qualified wastewater operators to staff existing facilities. As these proposed WLAs take effect it is my concern that many existing plants that have a Class II or Class III rating will be elevated to a Class III or Class IV rating respectively. In June of this year the CTDEP adopted new regulations that also require single shift facilities to staff their operations with a shift operator certified no less than one class below the rating of the plant. This will take effect by June 5, 2002. This will mandate all Class IV plants to have a Class III as shift operator. I believe this is a good idea and as higher level operators move to new facilities there will be a person being groomed for their replacement. What I foresee is that as many towns have to upgrade to achieve TN removal limits they are going to be faced with either large capitol costs for upgrading to the above [mentioned in letter] type of systems or innovatively working within the existing footprint of the facility and optimizing operations and instituting new technologies to achieve these TN goals. This is going to require a higher level of training and expertise. This is not going to happen overnight. It has been said that Connecticut will be spending between one and two billion dollars on wastewater treatment plant upgrades in the next decade to alleviate the nitrogen into Long Island Sound. As an example Waterbury went through a 130 million-dollar upgrade, Stamford is undergoing a 100 million-dollar upgrade. While we are pouring all these dollars into concrete and steel what amount are we dedicating to training to ensure we have the staff to maintain and operate these muti million dollar complexes?

Response: *CTDEP is committed to providing basic BNR training courses available to municipal staff and has offered several in the past few years. Other courses are available through commercial and non-profit entities such as WERF. CTDEP will work to provide training opportunities whenever feasible and necessary.*

IX. Comment: ***Role of nonpoint sources and management:***

SUMMARY RESPONSE:

The allocation of nitrogen reductions from point versus nonpoint sources was a primary issue of the Long Island Sound TMDL for nitrogen (See CTDEP's "Response to Public Comments on the TMDL"). Connecticut and New York feel the division between the WLA and LA is fair and reasonable. The nonpoint source LA requires a 10% reduction in nitrogen loadings from urban and agricultural land covers, which will be a difficult target to attain.

81. Cytec: Cytec believes the Department has significantly underestimated the contribution of nitrogen loading from urban and agricultural land covers. This gives rise to an inequitable burden on point sources to achieve the nitrogen TMDL and we urge the Department to re-examine its assumptions concerning the nitrogen contribution of non-point sources.

Response: *The estimates of urban and agricultural runoff can only be considered "first order" because of the lack of studies and monitoring data to support them. However, they fare well when compared to the few studies conducted in this area and may even over-estimate nitrogen export when compared to a recent watershed modeling effort. Whether they are accurate or not, they represent a reasonable approximation of nonpoint source contributions and, because of their relatively small contribution, any adjustments in nonpoint source loading is unlikely to effect a meaningful change in the relative importance of point sources. Also, CT and NY have scheduled periodic reassessments of the TMDL to ensure that new findings are incorporated (See CTDEP's "Response to Public Comments on the TMDL"). If new science supports adjustments in the nonpoint source contribution, it can be worked out during those reassessments.*

82. Stonington: The goal of the proposed nitrogen reduction program is to reduce the nitrogen wasteload discharged to Long Island Sound by 58.5%. However, the burden of reducing the nitrogen load on the

Sound is placed largely on its point sources; specifically water pollution control facilities. To achieve the overall 58.5% reduction, we understand that your office will require a 64% nitrogen reduction of water pollution control facility discharges with no requirement or incentive for reduction of nitrogen from non-point sources. Understandably, wastewater treatment facilities are the easiest nitrogen source to limit given the present NPDES permit process. However, non-point sources (e.g., septic systems, stormwater runoff and direct boat pumpouts) represent a high nitrogen load despite the small discharge volume and should, therefore, be included in the nitrogen reduction program. All subsurface disposal systems (e.g., septic systems) tributary to Long Island Sound impart a nitrogen load on the Sound, not just failing systems. This is especially true of coastal areas. The state should establish "no discharge zones" and other restrictions for direct boat pumpouts to the Sound. More than fifteen states have established no pumpout zones. Three zones in New York, all of which border Long Island Sound, require that openings which discharge to the ocean be wired or locked closed. The present plan offers no incentive for non-point source reduction. Since accepting and treating additional flows requires a higher level of treatment to achieve the same wasteload to the Sound, communities will be placed in a position of conflict if they connect known problem areas to the sewer system.

Response: *This issue was more appropriate to the TMDL public comments (See CTDEP's "Response to Public Comments on the TMDL"). Briefly, the nonpoint source contributions from manageable sources (urban and agricultural lands), are minimal compared to the point source contributions. As pointed out in Stonington's comment, they are also much less efficient to manage. Connecticut and New York established a 10% nonpoint source nitrogen reduction requirement in the TMDL, which is very aggressive and will be a challenge to meet.*

XI. Comment: ***Out-of-state sources and actions:***

SUMMARY RESPONSE:

The comments in this section should have been directed towards the draft TMDL for Long Island Sound. In fact, many of the same comments and concerns were expressed in comments submitted on the TMDL. Briefly, the TMDL equitably distributes reduction requirements between Connecticut and New York and calls upon the federal EPA to develop plans for controlling appropriate out-of-state sources, including point, nonpoint and atmospheric deposition. Please refer to CTDEP's "Response to Public Comments on the TMDL" for more detail.

83. Bristol: Treatment facilities in the State of New York, result in a very large impact on the Sound. Although New York is participating somewhat, in the Long Island Sound effort, they have adopted less stringent dissolved oxygen standards for the Sound. As a result all municipalities in Connecticut will shoulder the financial and economic burden to compensate for reduced participants of major coastal municipality of New York.

Response: *This concern is not relevant to the WLA. Bristol is encouraged to review CTDEP's "Response to Public Comments on the TMDL" for details on the nitrogen reduction allocations for all sources. See also the Summary Response for this section.*

84. Canton: It is difficult to increase our sewer use charge and connection fees higher to comply with the proposed regulations when the neighboring states are not participating in this program. Non-point sources and out of state sources do not appear to have equal pressure to comply with the proposed nitrogen regulations.

Response: *See the response to Comment 83.*

85. CCM: CCM reiterates the concerns stated in our testimony earlier this year on the proposed TMDL. These include, in particular, a concern about the impact of the new allocations on economic development, failure of the State and the City of New York to take significant steps forward in cleaning up the Sound.

Response: *For the record, New York City has made significant strides in reducing their load of nitrogen to Long Island Sound over the past few years and is current at a percent reduction that equals or exceeds the reduction attained in Connecticut. See the response to Comment 83 as well.*

86. Danbury: How does Massachusetts fit into the Long Island Sound program and nitrogen removal? Massachusetts contributes nitrogen to both the Housatonic River and the Connecticut River with their sewage treatment plants. The cost of reduction to municipalities in CT will be difficult for many to bear and it seems that Connecticut and the EPA should be doing more to follow this issue upstream and reduce the loading of nitrogen from those sources upstream.

    Response: *See the response to Comment 83.*

87. Farmington: There is conflicting information on water quality limits for dissolved oxygen. Why does New York have a limit which is higher than Connecticut's? What would be the impact on the WLAs if Connecticut's limit was equal to New York's? Why would CTDEP require the WPCFs in Connecticut to achieve WLAs to strive to dissolved oxygen limits which may be too stringent? We request answers to these questions.

    Response: *In fact, Connecticut's DO standard is higher than New York's. If both states had a standard equivalent to New York's current 5 mg/l, there would have been no change in the proposed TMDL for Long Island Sound and the WLA for Connecticut. In any case, the proposed nitrogen reductions will only bring the oxygen level in western LIS to 3 or 3.5 mg/l, far below the state standards, so the reductions are not considered too stringent. See also CTDEP's "Response to Public Comments on the TMDL."*

88. Farmington: It is our understanding, that CTDEP has stated that it is "fairer" to apply the same limits to all WPCFs. We believe that this approach is faulty because it is not being applied to all point sources across the LIS basin (i.e. New York, Massachusetts, New Hampshire, and Vermont).

    Response: *This is not directly relevant to the WLA, but was a frequent comment on the TMDL for LIS. Please refer to CTDEP's "Response to Public Comments on the TMDL" for a complete discussion.*

89. MDC: The nitrogen in the Connecticut River also comes from activities to the north of Connecticut. We understand that CTDEP has had discussions with EPA Region 1, and Massachusetts POTWs along the Connecticut River are now required to perform nitrogen sampling. If Massachusetts and beyond do not participate in a nitrogen reduction program all of the work performed in Connecticut may not allow us to reach the goal.

    Response: *See response to Comment 88.*

90. Simsbury: What is the current status of the New York program to remove nitrogen? On a dollar spent basis, it would seem that any program to remove nitrogen from New York treatment plants, being closer to the Sound's problem areas, would have the most positive impact. A relatively minor improvement in the level of treatment in New York would seem to have a larger impact, on a pound for pound basis, than trying to wring relatively minor amounts of additional nitrogen from Connecticut plants.

    Response: *See response to Comment 83.*

91. Stonington: Is the CTDEP exploring limits for Massachusetts and Rhode Island to reduce nitrogen loads in waters flowing through Connecticut from other states? Wasteload allocations are being placed on Stonington, while the Westerly, Rhode Island wastewater treatment plant – just upstream of our Pawcatuck WPCF – has no restrictions. These outfalls are approximately one mile apart.

Response: *See response to Comment 83.*

92. Vernon: There should be some assurance that the state of New York, (particularly NYC), will be working in concert with Connecticut to reduce nitrogen loadings to the Long Island Sound. Many of their wastewater treatment plants are providing secondary treatment and I would assume will require very significant and costly upgrades.

Response: *See response to Comments 83 and 85.*

93. WRCOG: What restrictions will be placed on nitrogen loads entering the waterways from Massachusetts, and from Vermont and New Hampshire? How is this to be monitored to assure that Connecticut's efforts to decrease nitrogen loads are not counteracted by increase loads from these other states?

Response: *See response to Comment 83.*

XII. Comment: ***Federal EPA role:***

SUMMARY RESPONSE:

Although these concerns are not relevant to the WLA, CTDEP has supported and will continue to support efforts to increase federal funding opportunities. The recent "Estuaries and Clean Water Act of 2000" includes Title IV proposed by Rep. Nancy Johnson and others, which authorizes up to $40 million for each of fiscal years 2001 through 2005 for implementation activities with priority assigned to distressed communities. For FY2001, $5 million has been appropriated.

94. Canton: If the EPA will mandate the cleanup of the Long Island Sound, additional funding as a backbone for the program must become a reality.

Response: *CTDEP agrees that a stronger federal role is warranted for this immense undertaking and has been supportive of federal legislative efforts to increase funding. Recently, the "Estuaries and Clean Waters Act of 2000" was passed, which included authorization for addition funding to clean up Long Island Sound proposed by Rep. Nancy Johnson. See also Summary Response.*

95. MDC: Knowing that the Clean Water Fund is a finite sum of money we suggest that the funding from EPA and other sources (e.g., special funding from Connecticut via legislative act, and CZM through NOAA) be significantly increased. The funding from EPA should be similar to that provided to other programs around the country, including Chesapeake Bay and the Great Lakes. EPA has made the following reference "Long Island Sound has long been recognized as a unique estuary." If this is true there should be funding that reflects the importance of the Sound. The nitrogen reduction program is a similar effort as the upgrading of treatment plants to secondary treatment in the late 1960s. MDC received approximately 85% of the total cost for the secondary upgrade from the State and Federal government.

Response: *See response to Comment 94 and also the Summary Response.*

96. Stonington: Please clarify the roles of the US EPA and CTDEP related to administration of this program [specifically trading, I think]. These roles need to be fully defined prior to implementation.

Response: *The EPA must provide final approval for the TMDL into which this WLA will be incorporated. With respect to trading, Connecticut is delegated by the EPA to run its own permitting and enforcement program, including the proposed trading, but it must be conducted in accordance with EPA regulations and federal law.*

XIII. Comment: ***Atmospheric deposition:***

SUMMARY RESPONSE:

Atmospheric sources of nitrogen have been recognized in the TMDL as an important contributor to hypoxia in LIS. However, there is no relationship to this WLA. CTDEP supports efforts to address atmospheric nitrogen deposition and has strengthened commitments in the TMDL to move action forward more aggressively.

97. Canton: It atmospheric sources of nitrogen from mid-west power generating facilities indirectly contribute to the problem, they also must be held to the same bar as the small Town's in Connecticut.

Response: *While not directly relevant to the WLA, atmospheric deposition is addressed in the TMDL for Long Island Sound. CTDEP agrees that atmospheric deposition nitrogen reductions needs to be more aggressively pursued to solve the problems in LIS, and has strengthened language in the TMDL to move planning forward.*

XIV. Comment: ***Relative to the TMDL:***

SUMMARY RESPONSE:

These questions are relevant to the TMDL and do not affect the WLA at issue here. Responses are provided for informational purposes. More detailed responses to comments on the TMDL of a similar nature are available in CTDEP's "Response to Public Comments on the TMDL."

98. CWPAA: The CWPAA requests that the CTDEP respond to the CWPAA comments regarding the TMDL and receive a copy of the final draft prior to issuing the TMDL to the USEPA.

Response: *Responses to the TMDL are presented in CTDEP's "Response to Public Comments on the TMDL.*

99. Simsbury: The TMDL program is to be reevaluated every five years. If the Sound's water quality improves, will relief be provided from the proposed restrictive TN limits set for those facilities that are remote from the Sound?

Response: *The TMDL provides for five-year reassessments. The intent of the reassessments is to revisit the TMDL and adjust it appropriately based on new information. If it appears that the Sound has responded to management, TN limit adjustment is a possibility but it is unlikely that geographic exclusions would be the mechanism for making the adjustments. Any reductions would likely be equally distributed among all contributing sources.*

100. Stonington: What will happen if the target nitrogen reduction is found to be insufficient? Will this result in higher nitrogen reduction goals and reduced WLAs in the future?

Response: *This is the converse scenario to Comment 99. If new information shows that the current WLA and TMDL limits are insufficient to clean up LIS, more stringent limits could be considered.*

XV. Comment: ***Miscellaneous:***

SUMMARY RESPONSE:

These comments are not strictly relevant to the WLA, but a response is provided for informational purposes.

101. Simsbury: It was mentioned at the public meeting that phosphorus may be a nutrient of concern for some watersheds. This type of comment is a significant concern for communities that want to design an upgrade in the very near future. A limited footprint is available for the Simsbury WPCF expansion. Being able to add fermentation tankage and solids handling appropriate for phosphorus removal will be improbable, if not incorporated into the initial design.

Response: *The present understanding of LIS shows it to be nitrogen limited, which means management of nitrogen will have the desired effect on production of algae and hypoxia in the Sound. It is unlikely that management of phosphorus will be required. However, there may be reasons to manage phosphorus to control eutrophication in inland streams and impoundments, where phosphorus is often the limiting nutrient.*

102. Southington: Supports comments of CWPAA and attached their comment submission.

Response: *Please refer to those specific comments for CTDEP's responses.*

103. Stonington: What is the probability of a total organic carbon limit, as well as nitrogen?

Response: *CTDEP has no plans to issue a WLA for carbon as part of the LIS TMDL. It is anticipated that nitrogen removal projects will also remove additional carbon and that the removal of carbon will be at or near the limit of technology without special requirements or a separate WLA.*

104. WRCOG: Please add RPOs (RPAs, Councils of Elected Officials, and COGs) to your mailing list for notification of such public information meetings in the future. I was fortunate enough to have received last minute email notification by your Thames River Basin Coordinator, but our office received no official notice until after the last public information meeting had been completed.

Response: *The RPOs have been on the mailing list for public meetings on the LIS Phase III plans, the draft TMDL and this WLA. CTDEP apologizes if the mailing went out late for the WLA public meetings and will try to send the announcements in a more timely fashion. Mailings are done as a courtesy to the RPOs as well as to the chief elected officials and water pollution control authorities and municipal treatment plant supervisors or public works directors as well as state and federal representatives and senators. The meetings and public comment periods were broadly published in newspapers throughout the state. We do count on word of mouth to supplement the official notices and would expect that the RPO constituent municipalities would be in close communication with the RPOs for your input and assistance. It's surprising to us that none of the WRCOG towns called to discuss these meetings with you.*

105. WRCOG: If phosphorus is the limiting factor in the Thames River Basin, should we (in the Windham Region) not be directing our efforts (and expenditures) toward that, rather than toward nitrogen loads? Will the other parts of the state have to share equally (with the Thames River Basin) in the burden of reducing phosphorus levels, when those restrictions are implemented?

Response: *The proper answer to this question is "both." It has not yet been resolved how to best manage the local oxygen and other water quality issues in the Thames estuary. If phosphorus or additional nitrogen reductions are required to solve water quality problems in the Thames, they will be subject of a separate TMDL and WLA. If a TMDL or WLA requires local control of nitrogen, the local needs would take precedence over greater LIS needs, and could limit opportunities for trading.*

Attachment 1. Public Notice and Notification Letters

Attachment 2. Informational Materials on the WLA.

Attachment 3. Comment Letters Received on the WLA.