Enhanced Implementation Plan for the Long Island Sound Total Maximum Daily Load

1. Develop enhanced implementation plan for the 2000 TMDL. The plan will be a short agreement, preferably signed by all parties by December 2011 to codify the following actions.
    a. CT and NY will continue WWTP upgrades and optimization work to attain the 2000 TMDL.
    b. Consistent with the 2000 TMDL[i], EPA and the tributary states will implement a tributary state wastewater treatment plant (WWTP) permitting strategy with a goal of essentially capping existing WWTP total nitrogen loads at or near existing levels until agreement is reached on final allocations and how they will be achieved[ii].
        i. Cap upstream state WWTPs at or near existing total nitrogen loads.
        ii. Require optimization studies for upstream state WWTPs.
        iii. Establish nitrogen monitoring requirements.
    c. Within one year of completion of the enhanced implementation plan, all states will complete a preliminary evaluation of current stormwater and nonpoint source control efforts with a goal of qualitatively assessing whether they are adequate for meeting the 2000 TMDL LAs. The work should be coordinated among states and with the LISS Nonpoint Source and Watersheds Work Group. The evaluation will:
        i. Assess available monitoring data and published reports on trends in tributary flow and nitrogen concentrations to infer trends in watershed contributions of nitrogen;
        ii. Qualitatively assess the scope and effectiveness of MS4 stormwater and urban, agricultural and other NPS control programs being implemented;
        iii. Identify gaps in information on the extent of on-the-ground project implementation and the performance of those best management practices regarding nitrogen control; and
        iv. Identify needed improvements in data or tools to quantitatively track and assess the attainment of stormwater WLAs and urban and stormwater LAs described in d. below.
    d. To support long term TMDL evaluations, EPA and the states commit to develop and implement a feasible tracking system to evaluate attainment of stormwater WLAs and urban and agricultural LAs, considering factors such as the number and type of control practices, land use, population levels, and ambient monitoring (where feasible).
        i. EPA and the states will evaluate the technical options for developing the system, considering monitoring, modeling (and other analytical approaches), cost, feasibility, and utility.
        ii. EPA and the states will develop a proposal for the most feasible system within one year after completion of item c, and, pending resources, strive to develop the system within three years after that.

[i] Example permit language from a permit issued in 2010 for the Town of Charlestown, NH WWTP
1) For optimization studies: Within one (1) year of the effective date of the permit, the permittee shall complete an evaluation of alternative methods of operating the existing wastewater treatment facility to optimize the removal of nitrogen, and submit a report to EPA and NHDES-WD documenting this evaluation and presenting a description of recommended operational changes. The methods to be evaluated include, but are not limited to, operational changes

designed to enhance nitrification (seasonal and year-round), incorporation of anoxic zones, septage receiving policies and procedures, and side stream management. The permittee shall implement the recommended operational changes in order to maintain the existing mass discharge loading of total nitrogen. The annual average total nitrogen load from this facility (2004 – 2005) is estimated to be approximately 60 lbs/day.
The permittee shall also submit an annual report to EPA and NHDES-WD, by February 1st of each year that summarizes activities related to optimizing nitrogen removal efficiencies, documents the annual nitrogen discharge load from the facility, and tracks trends relative to the previous year.
2) For nitrogen monitoring requirements: Total kjeldahl nitrogen, ammonia nitrogen, nitrite nitrogen, and nitrate nitrogen samples shall be collected concurrently and the results reported once per month. (Weekly monitoring is required at facilities with greater than 1MGD design flow). The results of these analyses shall be used to calculate both the concentration and mass loadings of total nitrogen (total nitrogen = total kjeldahl nitrogen + total nitrate nitrogen + total nitrite nitrogen).

[ii] EPA and the delegated states will enforce permits consistent with the requirements of the permit with consideration given to the quality of the data used to determine the annual average nitrogen load limit and the overall strategy objective of capping existing WWTP annual average total nitrogen loads. The annual average total nitrogen load (in lbs/day) is equal to the sum of the average daily total nitrogen loading values for each month from January through December (in lbs/day), divided by 12.