APRIL 2008

Town of

Chatham

Comprehensive Wastewater Management Planning Project

Chatham's Comprehensive Wastewater Management Plan Nears Completion

Since 1997, Chatham officials, citizens and consultants have been working to develop plans for long-term solutions to the town's wastewater treatment and nitrogen management needs. This work has taken place in cooperation with the Massachusetts Department of Environmental Protection (MassDEP), which recently provided nitrogen limits (also called Total Maximum Daily Loads or TMDLs) for our coastal estuaries. Scientific studies completed by the Massachusetts Estuaries Project (MEP) have supported local observations that too much nitrogen is being discharged to these estuaries. The MassDEP project involved setting stringent limits on nitrogen discharge to restore and protect estuarine water quality. Much of the wastewater that is currently discharged to the ground through septic systems will need to be collected and treated to remove nitrogen and other pollutants to meet the TMDLs. The present poor health of our embayments and fresh water ponds attests to the inadequacy of individual septic systems.

With the nitrogen limits in hand, the town has developed a draft plan for the next steps: the **Draft Comprehensive Wastewater Management Plan and Draft Environmental Impact Report** or DCWMP/DEIR. This plan will allow Chatham to transition, over a 30 year period, from our current reliance on septic systems to a more advanced, reliable and effective method for treating wastewater. The plan calls for collecting the wastewater, subjecting it to state-of-the-art treatment to remove nitrogen and returning the treated water back into the ground at a location that will not negatively impact downstream water resources. The DCWMP/DEIR has been reviewed by the Wastewater Management Plan Citizens Advisory Committee (CAC) and the Water & Sewer Advisory Committee. A summary of the findings has also been presented to the Town's Board of Selectmen.

This fact sheet summarizes the main findings and recommendations of the draft plan, and describes upcoming public and regulatory review of the plan.

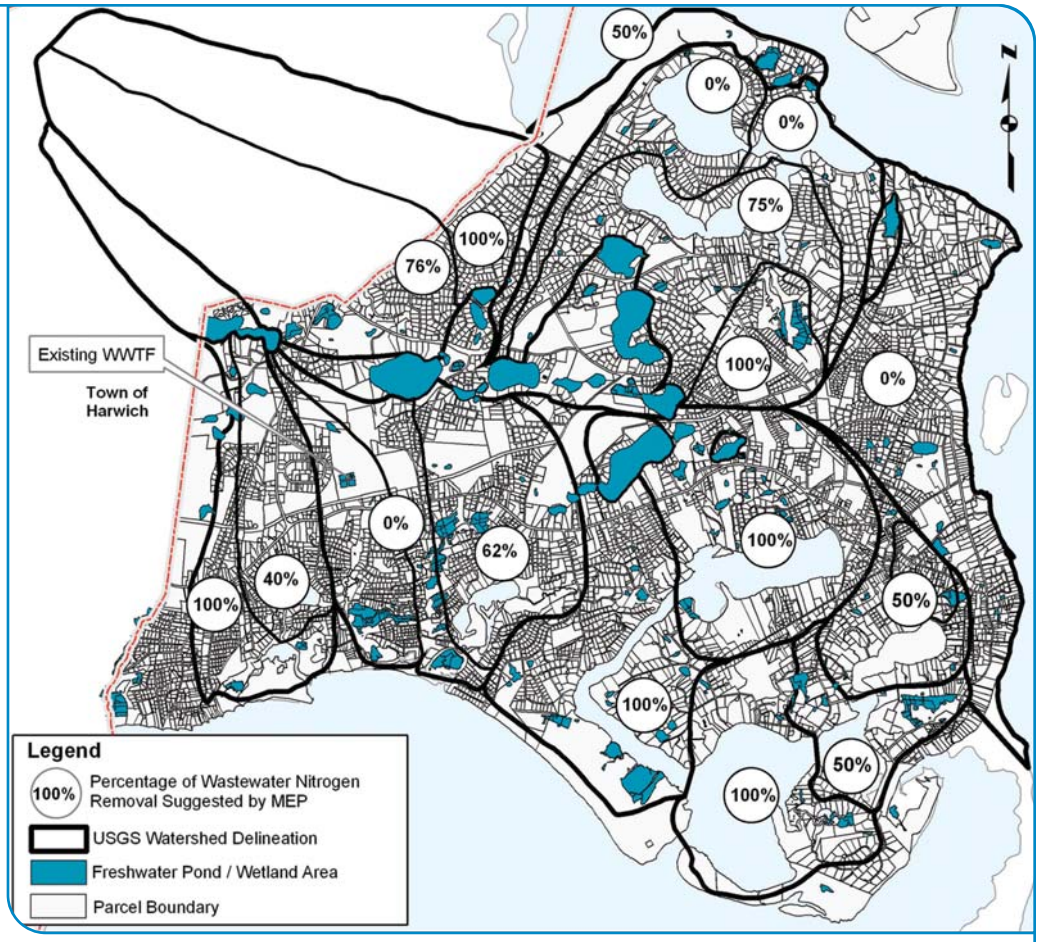
Protecting Chatham's Water Resources

The project offers long-lasting benefits to Chatham's residents, businesses and property owners. It will:

- Provide a comprehensive strategy for Chatham's wastewater treatment and treated water recharge;
- Restore and protect Chatham's estuaries, drinking water, lakes, ponds and public health;
- Enhance property values; and
- Comply with state and federal laws and regulations.

Project Evaluations and Conclusions

Chatham's citizen, municipal and technical teams have worked on aspects of the Comprehensive Wastewater Management Plan for more than a decade. These efforts included surveying the town's needs, analyzing the results of studies and water quality sampling and receiving limits for nitrogen discharge. Over the last year, the project team evaluated several alternatives for managing Chatham's wastewater. Here are the key findings:



- Individual Title 5 septic systems do not remove enough nitrogen to meet the nitrogen (TMDL) limits set by MassDEP.
- Even new, individual nitrogen-removing septic systems cannot meet the TMDL limits in many watersheds. These systems will incur ongoing operation and maintenance costs, and will require substantial oversight to ensure they are effective.
- The use of community/cluster wastewater systems would require siting multiple small treatment plants and recharge facilities in town. Chatham does not have sufficient town-owned property to site these plants.
- Upgrading and expanding Chatham's Wastewater Treatment Facility (WWTF) is the most environmentally-sound, cost-effective way to treat wastewater and return the treated water back to the groundwater. A single facility makes dealing with new and emerging contaminants, such as pharmaceuticals, endocrine disruptors, etc., more efficient.
- Sewers will be needed to carry the wastewater to the WWTF. Sewers need to be extended to approximately two-thirds of the Town to meet the nitrogen TMDL limits.
- Sewers should ultimately be extended Town-wide to address all of Chatham's wastewater issues, making the entire system more cost effective and further protecting our water quality for the future.

The Recommended Plan

After multiple studies and detailed evaluations, the Project Team prepared the Recommended Plan. The Plan includes the following components:

- Phased upgrade and expansion of the Chatham Wastewater Treatment Facility to treat the wastewater. This will be done in a modular approach (2 phases) to keep costs manageable and efficiently treat the variable (seasonal) wastewater flows;
- Expansion of the sewer system over a 30-year time period (20 years for the Phase I area to meet the nitrogen TMDL limits, with an additional 10 years to extend the sewers to the remaining portions of town);
- Continued work to investigate nitrogen management alternatives in the Muddy Creek watershed. One alternative involves restoration of a dike to convert the upper creek into a freshwater system thereby taking advantage of natural attenuation of nitrogen (which will help improve the lower creek and Pleasant Bay);
- Continued stormwater management to deal with road contaminants and sediments; and
- Education on proper fertilizer application and management to prevent overuse of fertilizers (a source of nitrogen, and phosphorus, which impacts lakes).

No-Action Alternative

A **No-Action Alternative** was evaluated to summarize the consequences of not dealing with the impacts of nitrogen on Chatham's water resources. Nitrogen levels would continue to rise, resulting in more frequent blooms of algae, increased periods of low or no dissolved oxygen in local waters, potential for fish kills and increased aesthetic impacts (odors and floating algae). Negative impacts to the local economy and property values would result as environmental conditions continue to decline. Failure to act would put Chatham in violation of an existing Administrative Consent Order with MassDEP, resulting in the potential for fines. Additionally, Chatham would be in violation of the TMDLs and subject to further enforcement action by MassDEP.

Next Steps

Now that the draft Plan (DCWMP/DEIR) has been completed, it will be submitted to the Massachusetts Environmental Policy Act Office (MEPA). This submittal will initiate the formal review and comment on the DCWMP/DEIR by local, regional, state and federal agencies, as well as the public. MEPA will announce a public comment period and will hold a public hearing during the comment period. At the end of the comment period, the state Secretary of Energy and Environmental Affairs will rule on the adequacy of the DCWMP/DEIR and indicate any outstanding issues or needed clarifications. The Project Team will address the outstanding issues/clarifications and prepare a Final CWMP/Final EIR, which will be submitted to MEPA. This will initiate another round of public review and comment after which, if all issues have been addressed, the Secretary will certify the FCWMP/FEIR.

Concurrent with the MEPA process, the Cape Cod Commission (CCC) will review the draft and final environmental documents under the Commission's Development of Regional Impact process. Following completion of the MEPA process, the Commission will rule on the adequacy of the Plan in addressing the Regional Policy Plan.

Financing the Plan

The expansion and upgrade of the wastewater collection and treatment system will be a large capital investment in Chatham's infrastructure. It will cost an estimated $300 million, based on June 2007 costs. The final cost is likely to increase. Chatham is evaluating the best way to pay for the new facilities and has applied for Federal and State grants and low-interest loans. Other funds are likely to come from sewer user charges, debt drop-off, betterments and property taxes. Due to the low tax rate in Chatham, financing of this project is feasible over a 30-year period.

Photo courtesy of Spencer Kennard.

How You Can Be Involved

The Citizens Advisory Committee encourages Chatham residents and business owners to be well-informed and to comment on the project plans. Here are a number of ways to learn about and be involved in project decision making:

- Participate in reviewing the DCWMP/DEIR (see Next Steps). The document will be available on the Town's website, www.chatham-ma.gov, under Health & Environment Department. You can attend a briefing or public hearing or send a comment letter.
- Talk to members of the Citizen's Advisory Committee, who are listed on page 4, or contact the Town's Project Manager, Robert Duncanson, Ph.D., at rduncanson@chatham-ma.gov.
- Review earlier project reports, which are available on the Town's website, www.chatham-ma.gov, and at the Eldredge Public Library. The website also contains project updates and announcements of upcoming meetings.
- Tune to Channel 18 for project announcements and updates, as well as CAC and Board of Selectmen's discussions of the plan.
- Volunteer to help monitor the Town's waters by contacting Friends of Chatham Waterways Water Watchers at 508-945-3686 or 508-945-2716.
- Support warrant articles to fund the solutions that will protect our waters at future Town Meetings.

Understanding the Terms

Common terms and definitions

Estuaries: Coastal water bodies where fresh ground and surface waters combine with marine waters to form the productive and scenic harbors and bays that are characteristic of Chatham's coastline.

Nutrients: Essential food for plants (such as nitrogen and phosphorus) that can produce an over-abundance of algae when too much is discharged into water bodies. Nitrogen is typically the nutrient that promotes excessive algal growth in marine waters, while phosphorus does the same thing for fresh waters.

Eutrophication: The degradation of the water quality in estuaries, lakes and ponds due to the excessive growth of algae resulting from too much nitrogen or phosphorus in the water.

Total Maximum Daily Load (TMDL): Nitrogen limit as determined by Mass DEP and the MEP. This is the quantity of nitrogen that can be assimilated by an estuary without causing water quantity impacts related to nutrient enrichment. The nitrogen loadings to many of Chatham's estuaries currently exceed the TMDL's for these estuaries.

Watershed: The land area that contributes surface or ground water recharge to a water body such as an estuary, pond or lake.

People to Contact if You Have Questions

The planning effort has a **Citizens Advisory Committee** (CAC) that was appointed by the Board of Selectmen to provide Town-Wide citizen representation and input to this planning effort. They include:

Fred Jensen, Chairman, from Central Chatham, fredjensen@comcast.net

Robert DePatie, Co Vice-chairman, At Large

Philip Christophe, Co Vice-chairman, from West Chatham

Didi Lovett, from Sears Point

David MacAdam, from Old Village

John Randall, from North Chatham

John Payson, At Large

Charles Pollard, from sewered area

John Raye, M.D., from Morris Island, Stage Island & Little Beach

Burton Segall, from South Chatham

Scott Tappan, from Stage Neck

Ex Officio Members:

Mike Berg, Chamber of Commerce

William Schweizer, Conservation Foundation

Ted Lucas, Shellfish Advisory Committee

Charles Bartlett, Friends of Chatham Waterways

Alfred Haven, Water and Sewer Advisory Board

Technical Advisory Group:

Robert Duncanson, Ph.D, Director of Health and Environment, Project Manager, 508-945-5165, rduncanson@chatham-ma.gov

William Hinchey, Town Manager

Judith Giorgio, R.S., Health Agent

Kevin S. McDonald, Director of Community Development

William Redfield, P.E., Water and Sewer Department Manager

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