

FACES' POSITION STATEMENT ON WASTEWATER PLANNING FOR FALMOUTH

24 November 2011

The unique glacial origins of Cape Cod make Falmouth a special place. The Cape's sandy and porous soil is all that protects the sole-source groundwater aquifer that we rely on for our fresh water. For many decades we have used our soil and our groundwater to dispose of household waste. Pollutants from wastewater, especially nitrogen, ultimately make their way into the aquifer and flow toward the coast, where they fuel algae growth, destroy habitat, and lower oxygen levels in our estuaries, bays, and saltponds. With Falmouth's growth over the last 50 years, we have exceeded our environment's capacity to absorb and process our waste.

Nitrogen from wastewater has severely degraded Falmouth's estuaries and saltponds and threatens our drinking water. Most nitrogen comes from the septic tanks that more than 90 percent of us rely on, although other sources, including the atmosphere, storm-water runoff and lawn fertilizers, also contribute. The degradation of our waters has occurred over decades through the inadvertent actions of us all. Falmouth's reduced water quality now directly impacts our economy and threatens the well being of our children, our grandchildren, and the public in general. Solving the problem will require removing nearly all of the nitrogen from wastewater in many watersheds. This conclusion has been validated recently in a thorough scientific review of the models, data, and methodology used by the State to determine the environmental condition of each water body and the specific need for nitrogen reduction. FACES, as a citizens' organization concerned about water quality, recognizes that the cost of treating Falmouth's nitrogen pollution problem seems high. But the costs of inaction—continued decline in water quality; loss of property values, tourist revenue, and recreational opportunities; and risks to drinking water safety—are much higher.

It is time for Falmouth's citizens to take action to clean up and solve our nitrogen problem.

- **FACES recommends that Falmouth adopt a two-part approach to solving its wastewater problem.** The first is to expand the Town's current sewer system from downtown to the densely-populated areas in Teaticket and East Falmouth near Route 28 to the south coast. The second is to phase-in alternative technologies and approaches that employ proven cost-efficient technology, meet regulatory requirements, and are accepted by the public. On house lots in less dense areas and away from the coast, these alternatives may include denitrifying septic systems and composting and urine-diversion toilets. Along some stretches of the coast and in the estuaries, construction of permeable reactive barriers along the shoreline, expansion of shellfish aquaculture, and inlet modification may also offer promise. A two-part approach to wastewater treatment has wide support. Spring 2011 Town Meeting approved unanimously funds to plan for phased sewerage of dense areas in East Falmouth and concurrently to study the feasibility of alternative approaches.
- **FACES urges immediate action on finalizing the Comprehensive Wastewater Management Plan (CWMP) and submitting the planning document to the state for approval.** The current CWMP outlines a phased plan to expand the sewer area and to treat wastewater by expanding the current wastewater treatment plant on Blacksmith Shop Road. The existing wastewater treatment plant employs well-established technology that

effectively removes more than 90 percent of nitrogen. Falmouth should not wait for the results of every potential alternative treatment approach before moving ahead with known and cost-effective sewerage technology in some areas. Delay will raise the ultimate cost of action. The Wastewater Department should quickly resolve remaining issues of how to distribute treated water and return it to the groundwater system.

- **FACES recommends spreading the cost of wastewater treatment as widely as possible.** All Falmouth citizens and visitors contribute to the problem and all will benefit from its solution. The costs should fall predominantly on the general tax base with some smaller portion of the costs paid by the homeowners that either connect to the sewer system or invest in on-site treatment technologies. Falmouth should also fully explore long-term financing alternatives and pursue opportunities for grants and loans.

- **FACES urges three additional immediate measures to provide critical information on the cost- effectiveness and acceptability of alternative wastewater treatment approaches.**
 - 1). Falmouth should conduct a detailed and objective assessment of the total lifetime cost for construction and maintenance of alternative technologies relative to the cost of Title 5 septic systems and the cost of central sewers. Some alternative technologies such as composting or urine-diversion toilets would require mandatory retrofitting into existing homes, and require annual costs for operation and waste removal, regulatory inspections, and maintenance.

 - 2). Falmouth should support a rigorous study of the nitrogen removal efficiency of the most promising alternative technologies under realistic household conditions, such as seasonal use versus year round use. Many alternatives require maintaining existing septic systems, and the effectiveness of alternative technology depends in part on how they are used and what residents put down their drains. Also, these alternatives should be evaluated for their capacity, compared to that of central sewerage, to treat for so-called “emerging contaminants,” synthetic harmful chemicals that are likely to be regulated in the near future.

 - 3). Falmouth should take the lead in evaluating the acceptance of alternative technologies from a cross section of the public. Some, such as composting or urine-diversion toilets, require regular maintenance and adjustment in lifestyles. It is currently unclear how residents would view tradeoffs between potential cost savings of alternative approaches versus more traditional central sewers. A logical evaluation of these technologies might be to start by retrofitting schools, firehouses, town hall, beach bathhouses, libraries, and public rest rooms in Falmouth. And to help protect homeowners' property values and rental property businesses, it is also important to determine whether alternative toilets will be a deterrent to tourists when choosing a rental or to prospective home buyers.

Finally, FACES accepts the fact that Earth’s climate is changing and that global warming poses an increasingly significant risk to Falmouth. Falmouth needs to take the risk seriously and implement a comprehensive planning process that includes actions for mitigation and adaptation. An important aspect of this process will be to factor sea-level rise and increased storm activity into wastewater treatment plans.

FACES' Objectives:

- To educate the public and help preserve the environment and natural resources of the estuaries and salt ponds of Falmouth, Massachusetts;
- To combat and prevent pollution of these estuaries and salt ponds through proactive consultation with Town planners, environmental scientists, engineers, and monitoring of existing conditions;
- To publicize problem areas via meetings, newsletters, and news releases; and,
- To alert local, county and state officials to the urgent need for corrective measures and the critical importance of mobilizing community support for such measures.

To learn more about what FACES does, visit us on the web at: www.facesfalmouth.org or email us at: info@facesfalmouth.org.

You can also find us on Facebook (under Falmouth Associations Concerned with Estuaries and Salt Ponds) and follow us on Twitter (www.twitter.com/@facesfalmouth).