

A Regulatory Road Map to Wastewater Treatment

Federal Environmental Protection Agency

Clean Water Act of 1977

- To restore & maintain the chemical, physical and biological integrity of the nation's surface waters for "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water.
- Does not deal directly with ground water or with water quantity issues.
- Reduces direct pollutant discharges into waterways; finances municipal wastewater treatment facilities; manages polluted runoff.
- Sets Water Quality Standards (WQS) for waterbodies based on water quality criteria and surface water uses.
- Impaired or threatened waterbodies placed on the "303(d) list" States must develop strategies to return those impaired waters to WQS.
- Total Maximum Daily Loads (TMDLs) - the amount of pollutant a water body can receive to achieve WQS -- must be developed for every waterbody impaired by a pollutant.

State Department of Environmental Protection

- Monitors the waters of the Commonwealth
 - Identifies those waters that are impaired
 - Develops a plan to bring them back into compliance with the Massachusetts Surface Water Quality Standards
- ↑ "303d list," identifies river, lake, and coastal waters and the reasons for impairment

Title V

- Requires the proper siting, construction, and maintenance of all **on-site** wastewater disposal systems.
- Title V systems **do not** remove significant amounts of nitrogen, the primary pollutant impacting our estuaries

Regional

Cape Cod Commission

Regional Planning Agency with regulatory power to review Developments of Regional Impact (DRI), those projects that exceed specific thresholds.

The Wastewater Threshold is triggered for projects that generate 10,000/gals a day or more.

Cape Cod Water Protection Collaborative

Advisory committee composed of representatives from each of the 15 Cape Cod Towns and two County Commissioner Appointees.

Goals are to:

- Attract funding for financing assistance to the Towns
- Maximize regional cooperation and action
- Coordinate the development of cost-effective, technologically efficient and environmentally appropriate technology
- Educate the public

Barnstable County Department of Health and Environment

Provides public health & environmental services to Cape Towns

Offers the **Community Septic System Loan Program** for Title V systems

Offers a twenty-year betterment loan at **0% interest** to replace a failed septic with a composting-type toilet

Tests Denitrifying on-site septic systems at the County's **Alternative Onsite Septic System Test Center.**

Massachusetts Estuaries Project (MEP) Reports

- The Estuaries Project is the State's method for bringing impaired water bodies, (from 303d list) back to "healthy conditions".
- Reports will develop pollution budgets for 89 impaired estuaries in SE Mass by setting TMDL's for nutrients (primarily nitrogen). TMDLs are sent to DEP and then EPA for their approval.
- Each MEP report will delineate the geographic area contributing nutrients, determine nutrient sources, the nutrient load, and how great a nutrient load each estuary can tolerate to maintain water quality that can support shellfish habitats and eel grass beds.

Most estuaries will require removing a significant percentage of the nutrient sources, primarily by wastewater treatment and secondarily by storm water management programs and limiting lawn fertilizer use. Some scenarios may include increasing tidal flushing.

Completed Project Reports:
Oyster Pond, West Falmouth Harbor, Little Pond Green Pond, Great Pond, and Bourne Pond

In Progress:
Megansett Harbor, Rands Harbor, Fiddlers Cove, Quissett Harbor

Planned:
Wild Harbor, Salt Pond, Falmouth Harbor, Child's River, Waquoit Bay

Local

Planning Board

Reviews site plans and special permits under the zoning bylaw and subdivision plans under the Subdivision Control Law.

Zoning Board of Appeals

Can grant exceptions and variances to the Zoning Bylaws.

Board of Selectmen

Coordinates and Sets Town policy for Wastewater Management

Five Year Strategic Plan 2008-2012 includes a Wastewater Planning Element

Wastewater Department

Manages wastewater & septage for the town, works with hired consultants to develop CWMP

CWMPs

GHD Technical Consultants to the Town who wrote the *Comprehensive Wastewater Management Planning (CWMP) Project for the East Falmouth watersheds* of Little Pond, Great Pond, Green Pond, Bourne Pond, Eel Pond, and Waquoit Bay.

TMDLs and other data from the Estuaries reports is used to develop this plan.

Wright-Pierce is developing the Oyster Pond CWMP.

Conservation Commission

Regulates septic systems in wetland resource areas and 100 buffer zones to the resource areas.

Water Quality Management Committee

Advisory committee tasked with drafting a Comprehensive Wastewater Management Plan that incorporates alternative technologies such as inlet widening, shellfisheries and compost toilet along with centralized sewerage to meet the reduced nitrogen levels mandated in the TMDLs for Falmouth's estuaries.

Health Department

- Implements and oversees every aspect of all septic systems.
- Approves septic system designs, issues septic permits and inspects installations.
- Is developing a "zero-growth" bylaw to limit development impacts of sewerage.

Local Comprehensive Plan

Sets Goals and Policies for the Town
Revised Mar 2005

Water Resources Element includes Goal 1, Policy 3:

"The Town will develop a comprehensive nutrient control strategy regarding Nitrogen and Phosphorus for every watershed in Town. The strategy shall include nitrogen discharge controls, and phosphorus application limits, for development, redevelopment, and existing development to achieve water quality standards specified in the zoning bylaws. The standard shall take into account the cumulative nutrient discharge load of the entire development, in addition to the concentration from each contributing source."

Non Profits interested in Wastewater Management Issues

- Oyster Pond Environmental Trust
- FACES Falmouth Associations Concerned with Estuaries and Saltponds
- APCC- Association to Preserve Cape Cod
- Coalition for Buzzards Bay Coalition
- The 300 Committee
- Waquoit Bay National Estuarine Research Reserve
- Buzzards Bay National Estuary Program

Town Meeting

Members approve any expenditures for the wastewater plan and vote to place overrides on the ballot for the Town-wide election.

Alternative Wastewater Technologies

- Constructed wetlands and other natural systems to treat waste water
 - Wood chip barriers (Nitrex System) intercept and removes nitrogen from groundwater before entering estuaries
 - Compost Toilets, etc.
 - Urine Diverting Toilets
- Just a few examples of other systems*