

HOW YOU CAN HELP & HOMEOWNER ACTIONS

- I/A Nitrogen-reducing septic systems are needed in areas that drain to nitrogen sensitive areas throughout Cape Cod.
- Consider upgrading! Talk to your local health department about I/A options.
- Funding support is available to help you upgrade including Community Septic Loan programs, Tax Credits in MA, and the Buzzards Bay Coalition provides subsidies.
- Maintaining your current septic system can help too! Pump your septic tank on schedule, avoid harsh chemicals, and conserve water.

Additional resources

US EPA Septic System Resources

<https://www.epa.gov/septic>
Region 1 contact
Matthew Stamas
stamas.matthew@epa.gov
(617) 918-1573

Massachusetts Alternative Septic System Technology Center

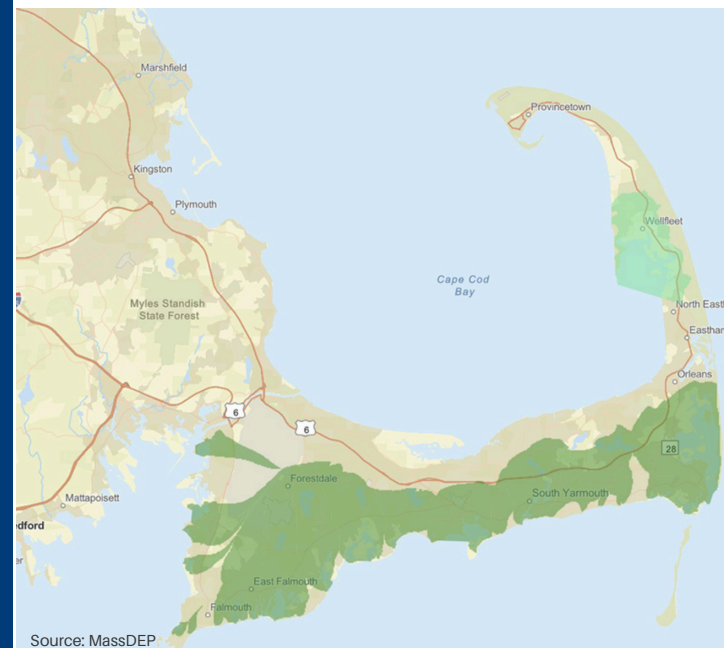
<http://www.masstc.org>
masstc@capecod.gov
(774) 330-3019



follow our research at:
<http://www.poyntonlab.com>

Cleaner Septic Systems = Healthier Ponds & Harbors

How Innovative/Alternative (I/A) septic systems can protect Cape Cod ecosystems.



Protect local ponds, marshes, fisheries, and our drinking water by reducing nitrogen from household wastewater. Learn how I/A systems work and how your household can help.

WHAT'S THE PROBLEM?

- Nitrogen pollution from septic systems is the main source of excess nitrogen in many Cape Cod watersheds.
- Excess nitrogen causes harmful algal blooms, overall decreasing oxygen, and causing harm to marine and freshwater organisms.
- These harmful algal blooms can close beaches from swimming.
- Septic wastewater is also a source of drugs, plasticizers, and other contaminants of environmental concern.
- Blue mussels and other bivalves are keystone species in coastal ecosystems. Chemicals from septic wastewater can cause endocrine disruption and may contribute to population declines.

Image credits: TOP: Ryan Spencer, The Enterprise, Mashpee; BOTTOM: Barnstable Land Trust

Algal blooms such as this one in Mashpee, MA are a result of too much Nitrogen entering our estuaries.



Blue mussels are sensitive to chemicals of environmental concern. I/A systems remove more contaminants reducing impacts to these critical ecosystem engineers.



ADVANTAGES OF I/A SYSTEMS

- Replacing old Title 5 systems with I/A systems can reduce watershed nitrogen faster.
- Lower nitrogen to ponds and estuaries means fewer harmful algal blooms, clearer water, healthier seagrass and shellfish habitat.

CO-BENEFITS TO ECOSYSTEMS AND HUMAN HEALTH:

- I/A systems have the potential to remove pharmaceuticals and other contaminants in addition to nitrogen.
- Cape Cod relies on a sole aquifer; reducing septic contaminants lowers the risk to freshwater that is used for drinking water.
- Impacts from contaminants including endocrine disruption in coastal ecosystems will be reduced.

WHAT ARE I/A SEPTIC SYSTEMS?

- I/A (innovative/alternative) septic systems are home based wastewater systems designed to remove more nitrogen than standard Title 5 systems.
- These technologies* include aerobic treatment units, wood chip bioreactors, denitrifying filters, and other combinations.
- IA systems are installed in place of or in addition to a traditional leach field and are monitored to track nitrogen removal.

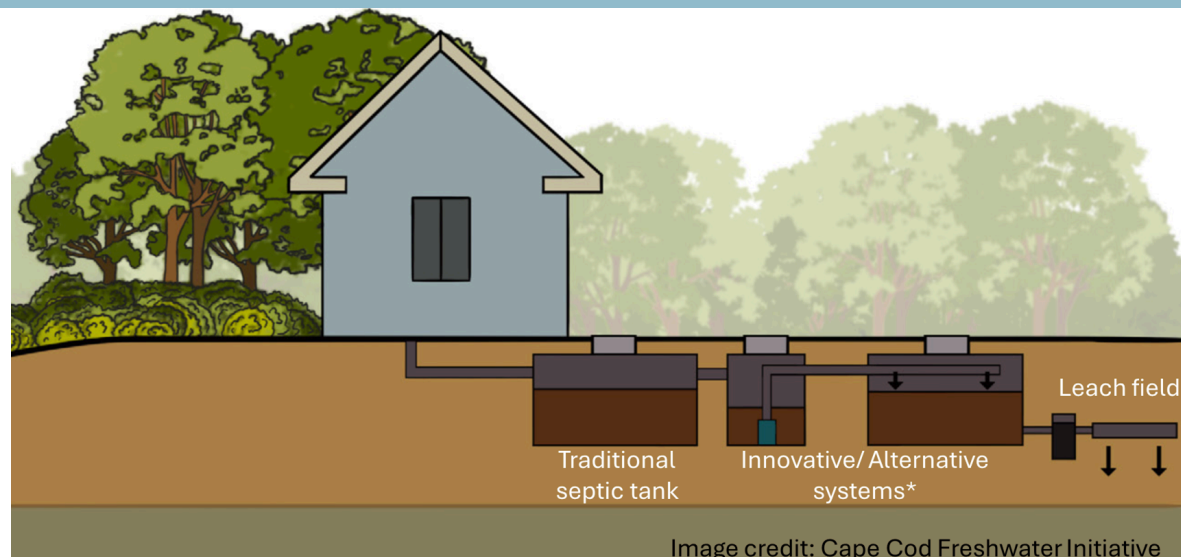


Image credit: Cape Cod Freshwater Initiative