Cape Cod Environmental Summit

Consensus Statement

On September 27, 2012 representatives from thirty-six Cape Cod-based 501(c)3 nonprofit environmental organizations gathered to discuss and agree upon a set of core principles related to wastewater and nutrient loading of Cape Cod's waters. This statement is a product of that meeting.[1]

Why Our Organizations Care

- Water resources—both fresh and salt—define the character and quality of life on Cape Cod.
- Cape Cod's economy is inextricably linked to the environmental health and productivity of its water resources.

The Problem

- Nutrients/wastewater threaten the quality of Cape Cod's groundwater, ponds, and coastal waters.
- There is technically sound scientific evidence of nutrient enrichment in our groundwater, coastal waters and ponds.
- Excess nutrients from wastewater and other sources are contributing to the decline of water quality.

Rationale: Wastewater flows into our groundwater and ultimately to our ponds and coastal waters. Researchers (e.g. Massachusetts Estuaries Program [MEP], Provincetown Center for Coastal Studies [PCCS], Waquoit Bay National Estuarine Research Reserve [WBNERR], Cape Cod National Seashore [CCNS]) have been measuring nutrient levels and associated environmental parameters in coastal bays and ponds for many years. The research has shown that conditions and impacts of nutrient enrichment vary by watershed, water body and estuary. The studies indicate that nutrient enrichment impacts result in reductions in oxygen levels, increased growth of algae and seaweeds, and in the case of coastal waters, reductions in eelgrass production. It can take many years for wastewater pollutants migrating through groundwater to reach our ponds and coastal waters.

[1] The statement is organized by principles followed by the rationale supporting those principles.

Factors that Contribute to the Problem

- Septic systems are the major contributor of nutrients in groundwater, ponds and coastal waters.
- Nutrients come from different sources, including septic systems, fertilizers, surface run-off, and atmospheric deposition.
- Treating wastewater in order to remove nutrients is necessary to provide clean water for drinking, swimming, fishing, and boating.
- Many watersheds cross town boundaries.
- Human activities in the watershed (e.g. flushing, laundry, fertilizing) contribute nutrients to our groundwater.
- All of us on Cape Cod—both residents and visitors—live within a watershed and add nutrients to groundwater through our daily activities; therefore, everyone contributes to the problem.

Action is Urgent

- Nutrient loading of Cape Cod's groundwater, ponds, and coastal waters caused by human activity and waste is the region's number one environmental priority. Immediate action on the part of government, business, and every citizen across Cape Cod is necessary.
- Delay will add to the environmental damage, the cost of remediation and the cost of necessary infrastructure.
- Inaction is not an option.

Principles to Address the Challenge

- Long-term management of nutrients/wastewater requires an integrated approach. Integrated approach is "a holistic approach to water resources management that takes into account land use practices, open space preservation, growth management, zoning, stormwater management, drinking water protection, wastewater management, and water quality enhancement."
- No single wastewater management solution (technologies and approaches) is ideal for all situations.

- Evaluation of appropriate treatment options needs to consider capital investment, life-cycle, operation and maintenance issues. The economic impact, particularly on the less advantaged and retirees on fixed incomes, must be carefully weighed.

- The solution needs to match the scale of the problem and be environmentally sustainable, socially responsible, energy efficient and cost effective. Watershed-based planning and implementation is preferred.

- A regional wastewater plan would encourage and enable communities to work cooperatively with each other to reach and maintain total maximum daily loads (TMDLs) of nutrients and/or other objective water quality criteria for each watershed.

- It is necessary to use appropriate zoning, natural resource protection regulations, and land use regulations to protect our water resources and facilitate the goal of no net increase above each watershed's TMDL for nutrients.

- Land acquisitions and restrictions for the purpose of water protection, nutrient attenuation, and buffer creation, as well as to reduce the need for expensive infrastructure, should be priorities.

- Revised regulations and/or legislation are needed to address nutrient problems caused by continued use of cesspools and on-site septic systems, including Title 5 systems.

- Environmental modeling and monitoring on local and regional levels are important tools for evaluating the success of nutrient/wastewater management.

- As work proceeds on nutrient reduction, all actions will have to be continuously re-evaluated to determine their effectiveness and efficiency in relation to restoration goals (i.e. an adaptive management approach).

Rationale: Water is a key resource and should be managed in an integrated way. Land use practices impact water resources. Towns with shared watersheds and zones of contribution to drinking water wells benefit from working together to protect these resources. Effective wastewater and stormwater management can reduce pollution in groundwater, ponds and coastal waters. There is a range of wastewater and nutrient treatment and abatement options (traditional and non-traditional approaches) available to reduce nutrient loading. Wastewater treatment options can be tailored to specific pollution problems and environmental conditions. Wastewater plumes can travel across town boundaries. Working on a regional basis can create efficiencies and result in cost savings and enhance access to state and federal revenues. With robust

public and town involvement, we can optimize solutions. Sound land use planning, including zoning, can be used to manage growth, facilitate growth in areas with adequate infrastructure and control the generation of nutrients/wastewater. Targeted land acquisition and other land conservation actions can be used to mitigate or reduce new generation of nutrients/wastewater. Septic systems are the major contributor of nutrients in groundwater, ponds and coastal waters. Title 5 onsite septic systems provide insufficient nutrient removal. Using an adaptive management approach enables communities to evaluate the success of solutions and make adjustments where warranted.

WHEREFORE: We the undersigned organizations declare the need to address wastewater and nutrient loading of Cape Cod's groundwater, ponds and coastal waters caused by human activity and waste as the number one environmental priority of the region. Each organization below is committed to advancing the principles contained herein and making clean water a reality. We recognize that each organization, business owner, homeowner, citizen, and visitor, not only on Cape Cod but also throughout Massachusetts, benefits from clean water on Cape Cod, and we believe that each should bear a fair and equitable portion of the cost of necessary solutions. Cape Cod is a valuable local, state and national resource.

Environmental Summit Ratifiers

Association to Preserve Cape Cod	Barnstable Land Trust
Brewster Conservation Trust	Buzzards Bay Coalition
Cape and Islands Self Reliance	Cape Cod Center for Sustainability
Chatham Conservation Foundation, Inc.	Compact of Cape Cod Conservation Trusts
Coonamessett Farm Foundation	Dennis Conservation Trust
Falmouth Associations Concerned with Estuaries and Saltponds	Friends of Arey's Pond
Friends of Herring River	Friends of Pleasant Bay
Harwich Conservation Trust	Lewis Bay Research Center, Inc.
Mashpee Wampanoag Tribe	Massachusetts Audubon Society
Orenda Wildlife Land Trust	Orleans Conservation Trust
Orleans Pond Coalition	Orleans Water Alliance

Provincetown Center for Coastal Studies

Red Lily Pond Project Association, Inc.

Salt Pond Sanctuary, Inc.

The 300 Committee

Three Bays Preservation

Truro Conservation Trust

Wellfleet Conservation Trust

Woods Hole Research Center

Yarmouth Conservation Trust