

TOWN OF NANTUCKET
SEPTAGE MANAGEMENT PLAN
ADOPTED 11-9-05 BY
BOARD OF SELECTMEN

INTRODUCTION

Long term protection of Nantucket's quality of life depends on the Town's ability to prevent adverse impacts to human and environmental health. Successful management of the treatment and disposal of human waste and wastewater is the single most important factor in achieving long term protection for Nantucket's ground and surface water resources. Sustaining high quality ground and surface water resources is absolutely necessary to protect human health, to maintain healthy environmental resources, the economy and the quality of life expected by residents of and visitors to our island. Management of the treatment and disposal of human waste and wastewater on Nantucket involves direct management and regulation of flows carried to treatment plant facilities and of flows disposed of through onsite sewage disposal facilities. Currently the Town of Nantucket is in the process of constructing and upgrading treatment facilities in Siasconset and Surfside in accordance with approvals from the Massachusetts Department of Environmental Protection (DEP) and as authorized by Town Meeting.

The goal of this Septage Management Plan (SMP) is provide the tools, options and resources necessary for Nantucket to manage onsite wastewater management systems so as to protect and maintain public health, ensure the protection of ground and surface water quality, maintain water resources as environmental, economic, recreational and aesthetic assets, retain local control of onsite wastewater disposal systems without regulatory or management intervention, to protect investments with respect to property values, to maximize options for onsite management based on implementation of best available management practices tailored to local conditions and in compliance with state and local regulatory requirements and to identify man power and financial needs . The successful long-term sustainability of onsite wastewater disposal systems is dependent upon proper design, operation and maintenance in order to prevent adverse health and environmental impacts. This SMP is intended to operate in conjunction with the Town's municipal wastewater collection systems. It should be noted here however, that depending on future management and design implementation options that may become available through currently proposed changes to DEP Title 5, the implementation of the SMP may result in flow quantity and strength changes discharged to the Town's wastewater treatment facilities that may require future retooling of plant processing practices.

GENERAL

In the late 1990's, the Town of Nantucket initiated two distinct processes to address the protection of its ground and surface water resources. First, in 1997, Town Meeting authorized a study with resultant recommendations for protecting the Nantucket Harbor Watershed with the intent that the efforts of the Nantucket Harbor Watershed

Work Group would result in the evaluation of existing data to determine and rank sources of pollutants. This Work Group completed their review of existing data and produced a report that ranked pollutant sources, prioritized local regulatory actions that has resulted in the implementation of Board of Health regulations for the Nantucket Harbor Watershed, sponsored educational forums for professionals, regulators and landowners, and established by its example, the prototype for a public participation process and action template for the Madaket Harbor Watershed Planning Group and future defined needs areas across the island. Second, in 1998, the Town of Nantucket authorized an Island-wide Comprehensive Management Plan/Environmental Impact Report to address the wastewater needs of the Island. A large component of the CWMP was to identify those areas on the Island, based on available local file information and available mapping information, that cannot sustain onsite wastewater disposal systems and those areas that can sustain long term use of onsite wastewater disposal systems under the guidance of a SMP. The SMP is intended to provide a comprehensive management program that encompasses the design, construction, inspection, maintenance, monitoring, disposal and treatment of septage, record keeping, public outreach and education, regulatory changes, identification of financial sources and options to fund implementation, define personnel needs and outline SMP compatibility with existing and proposed improvements to existing municipal treatment plan facilities.

The SMP as currently proposed recognizes the actions already taken by the Board of Health since 2003 and presumes that the SMP will be administered by the Board of Health and implemented through the Health Department. Further, the SMP recognizes the uncertainties of the Commonwealth's Massachusetts Estuaries Program and proposed changes to DEP's Title 5 Regulations and maximizes locally generated data from actual onsite observations and inspections as the basis for ongoing and future management actions.

BENEFITS

Benefits of the SMP accrue to the Town of Nantucket, individual property owners, residents and visitors to the island. This SMP will serve to protect the public health and minimize adverse environmental impacts. This SMP will offer an opportunity to obtain the same level of service for onsite sewage disposal systems as the areas on Island serviced by the municipal sewer and treatment plant system.

Specific benefits of this SMP include:

- protection of ground and surface water quality (elimination of failed systems, potential elimination of black water contaminants, reduction of pollutant loading source, regulatory changes tailored to existing conditions and documented sensitive areas)
- protection of public health (elimination of failed systems)
- ground water conservation and more effective watershed based recharge (repair and upgrades in place will allow for infiltration of "treated effluent" which will recharge groundwater within watershed it is generated rather than as a transfer to municipal plant facilities in a different watershed)

- tax rate equity for financing of municipal costs for treatment plant upgrades and operation and maintenance (black water pump out/discharge available to all with transport to/treatment at plant)
- cost savings to property owner for long term operation and maintenance of onsite systems (fewer failures and repairs, coordination of inspection/monitoring requirements, etc.)
 - funding assistance options to owners for repair and town for management
 - education and outreach to targeted recipients to maximize effectiveness
 - ability to develop effective enforcement policies, practices and penalties
 - Board of Health/Health Department implementation maximizes public exposure and outreach opportunities and allows for variance procedure as deemed necessary

STANDARDS

The SMP is designed to work in conjunction with the Town's municipal wastewater system and with state and local standards for inspection, design, construction, repair, monitoring and record keeping of onsite systems as referenced below.

- 310CMR15.00 (Title 5, including proposed revisions relative to blackwater/graywater separation, holding tanks, etc.)
- TON Board of Health Regulations Sections 50.00, 51.00, 60.00, 61.00, 62.00, 64.00, 66.00, and 68.00 as most recently revised in 5/05
- TON Chapter 99, Nantucket Harbor Watershed
- TON Bylaws
- Massachusetts DEP TMDL Program, Massachusetts Estuaries Project

**TOWN OF NANTUCKET
SEPTAGE MANAGEMENT PLAN COMPONENTS**

The primary elements/components of the Nantucket Septage Management Plan are as follows:

- 1) Regulations (including variance provisions and escrow options)
- 2) Inspections (Nantucket Harbor Watershed, other identified needs areas/environmentally sensitive areas, Island wide)
- 3) Staffing (Health Department analysis; consultant staffing options)
- 4) Funding Options (Homeowner assistance; Town facilities & management- User fees &/or tax base)
- 5) Record Keeping (inspections, monitoring, tracking)
- 6) Education and Outreach (Nantucket Harbor Watershed, other identified needs areas/environmentally sensitive areas, Island wide)
- 7) Management of Onsite Sewage Disposal Systems (Nantucket Harbor Watershed, other identified needs areas/environmentally sensitive areas, Island wide)
- 8) Timeline

Since 2003, when Earth Tech provided its Draft Septage Management Plan for Nantucket, local regulatory boards, commissions and advisory committees have worked to revise and/or implement regulations, update inspection standards, develop education and outreach materials and strategies, investigate funding options and determine staffing options and needs for septage management. In each instance the Board of Health and Health Department has taken the lead in implementing septage management actions for the Island based on actual existing conditions and/or Island based studies. The following table summarizes actions taken to date and lists actions identified for future action.

<u>MILESTONE/ACTION/PLAN COMPONENT</u>	<u>TARGET DATE/TIMELINE</u>
1) REGULATIONS:	
Local:	
A. Update & implement Nantucket Harbor Watershed (NHW) regulations	adopted 5/05
1. include variance process, enforcement procedures, inspection & certification schedules	
2. develop repair options (escrow account)	proposed 8/05

- 3. adopt blackwater separation separation options anticipated 6/06
- B. Adopt & implement Madaket Harbor Watershed (MHW) regulations, using NHW regs as template anticipated 12/05
- C. Identify remaining “needs areas/ environmentally sensitive areas” anticipated fall 2006
- D. Adopt & implement regulations, using NHW regs as template, for remaining identified “needs areas/environmentally sensitive areas” anticipated 1/07 – 12/07

State:

- A. Title 5 changes
 - 1. actively participate as advocate for blackwater separation 5/05 – 7/06
 - 2. actively participate as advocate for holding tank and “environmentally sensitive areas” changes 5/05 – 7/06
- B. Massachusetts Estuaries Program 1/03 to post designation hearings
 - 1. assist with program
 - 2. stay informed to maximize benefit to town

2. INSPECTIONS (record keeping, funding and staffing listed separately)

- A. Revise inspection and certification standards 5/05
- B. Revise inspection schedules
 - 1. Nantucket Harbor Watershed 5/05
 - 2. Madaket Harbor Watershed anticipated 12/05
 - 3. other identified “needs areas/ environmentally sensitive areas” 1/07 – 12/07
 - 4. other island areas: real estate transfers, failed systems no changes currently anticipated

3. STAFFING

- | | |
|--|--|
| A. Develop staffing cost needs analysis for implementation of NHW regs and revised inspection/certification standards | 4/05 |
| B. Implement staffing assignments for for NHW regulations, inspections & certifications | 9/05 – 10/05 |
| C. Seek additional staff support | |
| 1. food service, housing inspections | 5/05 – 12/05 |
| 2. consultant assistance for for septic | as deemed necessary by separate contract |
| D. Develop staffing cost and needs analysis for implementation of Madaket Harbor Watershed regs, inspections, certifications | 11/05 |
| E. Implement staffing assignments for MHW regulations, inspections, Certifications | 1/06 – 3/06 |
| F. Seek additional staff support | |
| 1. consultant assistance for septic | as deemed necessary by separate contract |
| 2. additional personnel for for Health Department | 3/06 |
| G. Develop staffing cost & needs analysis for implementation of regulations for other identified “needs areas/environmentally sensitive areas”, inspections certifications | 12/06 |
| H. Implement staffing assignments for other identified “needs areas/environmentally sensitive areas”, inspections, certifications | 1/07 – 3/07 |
| I. Seek additional staff support | |
| 1. consultant assistance for septic | as deemed necessary by separate contract |
| 2. additional personnel for Health Department | 3/07 |

4. FUNDING

A. Town Wide

1. user fees - to offset non-septic inspections (cover shift in personnel work assignment); to cover additional staffing costs for septic work, including field work, reports & record keeping; and cover costs of consultant services
 - a. develop cost analysis for increase in Health Department staff, for consultant services and/or combination of both preliminary assessment 4/05
 - b. establish user fee schedule 9/05
 - c. establish revolving account done

2. tax base – for O&M, retooling and capital cost offsets fro treatment plant facilities
 - a. develop cost analysis for regular septic system maintenance schedule use of treatment plant done ?
 - b. develop cost analysis for blackwater treatment (retooling, etc) 7/06

3. grants ongoing

B. Onsite septic system owner

1. research available loan programs 10/05

2. establish necessary protocols, agreements, infrastructure for loan programs 1/06
 - a. Nantucket
 - b. co-operative with Barnstable County

5. RECORD KEEPING

- | | |
|---|--|
| A. Board of Health – establish clerical accounting system for inspections, Compliance, scheduling, tracking | prelim computer accounting program in place, update as Needed, ongoing |
| B. Board of Health – system performance Monitoring | |
| 1. Town of Nantucket based | ongoing |
| 2. co-operative with Barnstable County | to be negotiated but available – 9/05 |
| 3. private maintenance contracts | ongoing based on need |
| C. Financial Accounting | |
| 1. Health Department option | ongoing system to be expanded as implementation needs require |
| 2. TON Accounting Dept option if deemed viable | 1/06 |

6. EDUCATION & OUTREACH

- | | |
|---|------------|
| A. Nantucket Harbor Watershed | |
| 1. Nantucket Harbor Watershed Work Group | |
| a. public informational meetings held | 1998- 2002 |
| b. public workshops held | 2002 |
| c. reports issued | 2002 |
| d. information posters & pamphlets developed & distributed | 2000-2002 |
| 2. Health Department | |
| a. participation in civic group meetings | 2004 |
| b. development & distribution of NHW regulations/compliance explanation | 2004 |
| c. development & distribution NHW informational notice of regs and noncompliance consequences | 10/05 |

- d. development & distribution of warning notice for noncompliance to NHW regs 3/06

- B. Madaket Harbor Watershed
 - 1. Madaket Harbor Watershed Work Group
 - a. public informational meetings 10/05 – 12/06
 - b. development of outreach materials using NHW efforts as template
 - 2. Health Department
 - a. same actions/items as listed for NHW, tailored to Madaket 10/05 – 12/06

- C. Other identified “needs areas/ environmentally sensitive areas”
 - 1. Dependent upon area identified but will use information developed for NHW and MHW as template 12/06 – 12/07+

- D. Town wide
 - 1. Board of Health 2003- ongoing
 - 2. Town Meetings 1997-2004
 - 3. Other public meetings/hearings of boards, commissions, committees ongoing

7. MANAGEMENT OF ONSITE SEWAGE DISPOSAL SYSTEMS

- A. Nantucket Harbor Watershed
 - 1. Board of Health/Health Department
 - a. establish tracking system 2004
 - b. establish inspection schedule 10/05
 - c. establish maintenance pumping schedule 2/06
 - d. evaluate & determine whether onsite O & M plans will be established by BOH/Health Department; private sector Contractual agreements; Guidelines provided from 10/5

- Other sources (i.e. Barnstable County Health Dept.)
- e. evaluate & determine need for consultant contractual agreement to provide assistance 10/05 & ongoing
 - f. determine user fee schedule to offset costs to TON 10/05 & ongoing
2. Onsite sewage disposal system owner/manager
- a. professional O & M contract required 10/05
- B. Madaket Harbor Watershed
- 1. Board of Health/Health Department – same as for NHW, tailored to MHW 12/05
 - 2. Onsite sewage disposal system owner/manager – same as for NHW, tailored to MHW 12/05
- C. Other identified “needs areas/ environmentally sensitive areas”
- 1. Board of Health/Health Department – same as for NHW & MHW, tailored to needs areas 12/06
 - 2. Onsite sewage disposal system owner/manager – same as for NHW & MHW, tailored to Needs areas 12/06
- D. Island wide
- 1. Board of Health/Health Department
 - a. establish maintenance pumping and inspection schedule 6/06
 - b. require O & M Plan and contract for all I/A systems 10/05
 - c. establish tracking system 2004
 - d. establish user fee schedule 10/05 & ongoing

8. TIMELIINE; (reference attached graph)

The timeline for the SMP as currently proposed is extremely aggressive and will be impacted both by state and local actions. However, it is clear that the basic components of the SMP can be implemented locally within the existing framework of Town and County of Nantucket government structure. It is also clear that implementation of the SMP as proposed will require strong administrative and financial commitment from governmental officials and voters, not only to achieve the goals as set forth but to have a chance at meeting the proposed schedule. The costs to implement this SMP will be significant but the rewards to the community and the island will be more than quadruple the dollars and time spent.

DISREGUARD AS FIRST DRAFT ATTEMPT----CHOSE DIFFERENT FORMAT

CURRENT STATUS OF SEPTIC MANAGEMENT PLAN COMPONENTS

1. REGULATIONS: During the last two years, the Nantucket Board of Health has adopted regulations strengthening the management of onsite sewage disposal systems within the Nantucket Harbor Watershed and the Island in general. It is anticipated that the Board of Health will adopt regulations for the Madaket Harbor Watershed by the end of 2005 and determine future “needs areas/environmentally sensitive areas” by 2007. The Conservation Commission has revised its regulatory performance standards to require a 100 foot set back for septic

A. LOCAL -

Board of Health

1. Nantucket Harbor Watershed (updated 5/05)
 - includes variance provisions, mandatory inspection schedule, mandatory repair schedule and enforcement (updated 5/05)
 - proposed “escrow” option to be presented 8/05
 - intended to serve as template for Madaket Harbor Watershed and other to be designated “needs areas/environmentally sensitive areas”
2. Septic System Design and Inspections (updated 5/05)
 - standards applied to all areas of island
 - Nantucket Harbor Watershed establishes mandatory inspection schedule and may require enhanced treatment design
 - Madaket Harbor Watershed regulations establishing mandatory inspection schedule and enhanced treatment provisions anticipated for adoption in 12/05
 - Regulations for other “needs areas/environmentally sensitive areas” as documented by existing conditions data or required by DEP TMDL’s is targeted for 1/07

Other Local Regulatory Agencies/Boards/Commissions (as deemed appropriate)

1. Planning Board – consideration of communal space dedicated for “subdivision septic system design” with association required O & M and monitoring may be warranted in environmentally sensitive areas.
2. Conservation Commission – currently requires all leaching facilities to be in

excess of 100 feet from all wetland resource areas. If waiver granted, septic design most likely to require enhanced treatment.

3. Department of Public Works – consideration of existing sewer hook up requirements and blackwater holding tank discharge impacts will be necessary

B. STATE

1. DEP Title 5
2. DEP Groundwater Discharge Permit (POWTF)