

Chapter 2
Data Review

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DATA REVIEW

2.1 INTRODUCTION

This chapter provides an overview of information used in preparing the Interim Needs Assessment and Alternatives Screening Analysis Report for the Town of Eastham Wastewater Management and Disposal Project (Project). It also identifies ongoing projects which are developing information that may be used by the Project as it proceeds.

2.2 TECHNICAL REPORTS AND DATA

The following technical reports and data, presented in chronological order, were reviewed for the Needs Assessment Report.

A. Site Assessments and Studies.

1. Eastham Onsite Evaluations, Various.
2. “Projected Use of Innovative/Alternative On-Site Sewage Treatment Systems in Eastham, Under Current Regulations and Policies,” May 2007, Barnstable County Department of Health and Environment, Rask, S.
3. “Performance of Innovative Alternative Onsite Septic Systems for the Removal of Nitrogen in Barnstable County, Massachusetts,” 1999-2007, Barnstable County Department of Health and Environment, Heufelder, G., Rask, S. and Burt, C.
4. “Simulated Water Sources and Effects of Pumping on Surface and Ground Water, Sagamore and Monomoy Flow Lenses, Cape Cod, Massachusetts,” 2005, USGS, Walter, D.A. and Whealan, A.T.

5. "Phosphorus in a Ground-Water Contaminant Plume Discharging to Ashumet Pond, Cape Cod, Massachusetts, 1999," USGS, McCobb, T.D., LeBlanc, D.R., Walter, D.A., et al.
6. "Soil Survey of Barnstable County, Massachusetts," March 1993, USDA.

B. Eastham Groundwater and Water Supply Studies.

1. "Comprehensive Source Protection Plan, Cape Cod National Seashore Eastham, Truro & Wellfleet, MA," June 2006 (revised July 2006), Mass Rural Water Association.
2. "Municipal Water Distribution System Master Plan," May 2006, Environmental Partners Group.
3. "District H Well Site Permit Application #W072354, BRP WS 15 Pumping Test Report/Approval to Construct Source For a Source Under 70 Gallons per Minute," April 2006, Environmental Partners Group.
4. "Limited Municipal Water System, Task 1 – Project Definition and Feasibility Study," August 2005, Environmental Partners Group.
5. "Limited Municipal Water System, Task 2 – Water Supply Source Identification," September 2005, Environmental Partners Group.
6. "District H Well Site Permit Application #W072354, BRP WS 13 Approval to Site a Source and Conduct Pumping Tests for a Source Under 70 Gallons per Minute," December 22, 2005, Environmental Partners Group.
7. "Lower Cape Regional Municipal Solid Waste Management Study, Final Report," November 2003, Wright-Pierce.
8. "Non-Community Public Water Supply, Nauset Regional High School, Cable Road, BRP WS 15 Pumping Test Report Approval and Approval to Construct Source," January 1996, Coastal Engineering Co., Inc.

C. Eastham Surface Water Studies.

1. “Eastham Freshwater Ponds: Water Quality Status and Recommendations for Future Activities,” Draft Final Report, December 2008, UMass SMAST Coastal Systems Group and Cape Cod Commission.
2. “Massachusetts Estuaries Project Linked Watershed-Embayment Model to Determine Critical Nitrogen Loading Thresholds for the Rock Harbor Embayment System, Orleans, Massachusetts,” Draft Report – June 2007, Howes, B., et al.
3. “Coastal Nitrogen Loading Project Final Report,” June 2002, E. Eichner, T. Cambareri, et al.

D. Eastham Sanitary Landfill Studies.

1. “Lower Cape Regional Municipal Solid Waste Management Study Final Report,” November 2003, Wright-Pierce.

E. Eastham Town Planning Documents.

1. “Pre-Disaster Mitigation (PDM) Plan, Eastham, MA,” October 2004, Prepared by Eastham’s Local Multiple Hazard Community Planning Team with Assistance from the Cape Cod Commission.
2. “Local Comprehensive Plan, Second Edition,” October 2002, Town of Eastham.

F. Other Lower Cape Town Planning Documents.

1. “Town of Orleans Comprehensive Wastewater Management Plan,” Draft October 2008, Wright-Pierce.
2. “Town of Orleans Comprehensive Wastewater Management Plan, Detailed Evaluation of Alternatives,” Draft May 2008, Wright-Pierce.

3. “Town of Orleans Comprehensive Wastewater Management Plan, Alternatives Screening Report,” Draft December 2007, Wright-Pierce.
4. “Orleans Integrated Water Management District, A Holistic Wastewater, Water Supply and Stormwater Management Framework,” Final Report May 16, 2005, Horsley Witten Group.
5. “Tri-Town Septage Treatment Facility Evaluation,” August 2005, Wright-Pierce.

2.3 TOWN DATA AND MAPPING

The following maps and plans were reviewed for this Needs Assessment Report:

1. “Ground-Water Recharge Areas and Traveltimes to Pumped Wells, Ponds, Streams, and Coastal Water Bodies, Cape Cod, Massachusetts,” 2004, USGS, Walter, D.A., Masterson, J.P. and Hess, K.M.
2. Town Assessor maps for the study areas.
3. MassGIS and Town parcel files for Eastham.

Additional technical data from Town and regional sources has been received and reviewed as identified below:

1. Eastham Board of Health Database (extracts of water quality/septic data and nitrate data).
2. Town of Eastham GIS data, including areas of critical environmental concern (ACECs), Eastham parcels, wetlands, floodplains, historic districts, existing and planned public well sites, marine water recharge areas, water supply zones of contribution, surface contours, and additional flyover information.
3. U.S. Census data.