



The Problem

For the purposes of the §208 Plan Update, areas of wastewater need are primarily defined by the amount of nitrogen reduction required as defined by the Total Maximum Daily Load (TMDL) or Massachusetts Estuaries Project (MEP) technical report. An MEP report will not be developed for the Pocasset River watershed and other Cape watersheds where nitrogen is not believed to be a critical issue due to tidal flushing, low intensity development, or geomorphology.

- **MEP TECHNICAL REPORT STATUS:** Not Being Studied
- **TMDL STATUS:** Not Being Studied
- **TOTAL WASTEWATER FLOW:** 38 MGY (million gal per year)
- **UNATTENUATED SEPTIC NITROGEN LOAD:** 3,762 kg/Y (kilograms per year)
- **ATTENUATED NITROGEN LOAD:** Not assessed (The Pocasset River watershed offers limited opportunities for natural attenuation through a small number of freshwater ponds.)

CONTRIBUTING TOWNS

- **BOURNE**
- **SANDWICH (JBCC)**

- **DISCUSSION:** The land area in Sandwich, and a portion of the land area in Bourne, is not in the control of the town as it is part of Joint Base Cape Cod (JBCC), which is served by a wastewater treatment facility and discharged outside of the watershed.

POCASSET RIVER ESTUARY

- **EMBAYMENT AREA:** 33 acres
- **EMBAYMENT VOLUME:** Unknown
- **2012 INTEGRATED LIST STATUS:** Category 4a for fecal coliform
 - Category 4a: TMDL has been completed
 - www.mass.gov/eea/docs/dep/water/resources/07v5/12list2.pdf

POCASSET RIVER WATERSHED

- **ACRES:** 2,143
- **PARCELS:** 809
- **% DEVELOPED RESIDENTIAL PARCELS:** 80%
- **PARCEL DENSITY:** 2.6 acres per parcel (approx.)
- **WASTEWATER TREATMENT FACILITIES:** 0

The inlet to Pocasset River is located due south of Toby's Island, with shoreline located entirely in the Town of Bourne. The Pocasset River receives tidal flow from Buzzards Bay. The entrance to the harbor is flanked by two armored jetties and supports a variety of recreational uses including boating, swimming, shell fishing and fin fishing.

Freshwater Sources

PONDS

- **IDENTIFIED SURFACE WATERS:** 10
- **NUMBER OF NAMED FRESHWATER PONDS:** 8
- **PONDS WITH PRELIMINARY TROPHIC CHARACTERIZATION:** 3
(Listed In Appendix 4C, Ponds With Water Quality Data)
- **2012 INTEGRATED LIST STATUS:** None listed

DISCUSSION: The Town of Bourne has not fully engaged in the Pond and Lake Stewardship (PALS) program that has helped establish baseline water quality Cape wide.

STREAMS

- **SIGNIFICANT FRESHWATER STREAM OUTLETS:**
Not Assessed
- **DISCUSSION:** The Pocasset River estuary receives freshwater contributions from the upper reaches of the Pocasset River. There is no quantitative data available on stream flow and water quality.

DRINKING WATER SOURCES

- **WATER DISTRICTS:** 1
 - Bourne Water District
- **GRAVEL PACKED WELLS:** 1
 - 1 has nitrate concentrations between 0 and 0.5 mg/L
- **SMALL VOLUME WELLS:** 0

Degree of Impairment and Areas of Need

Since there is no evidence of water quality impairment at this time, wastewater needs are determined based upon other factors, such as Title5 compliance.

The 2012 Integrated List of Impaired Waters lists Pocasset River as being a Category 4a impaired water body for fecal coliform and a TMDL has been established.

LOCAL PROGRESS

BOURNE

The Town of Bourne has not engaged in wastewater planning in the Pocasset River watershed beyond the 2007 Needs Assessments/Wastewater Management Study, which identified wastewater needs, including drinking

and surface water quality, and Title 5 needs. Presently, Buzzards Bay is the only sewered area in the Town of Bourne. The Town does not own or operate a wastewater treatment facility. All wastewater collected in Buzzards

Bay is transferred to the Town of Wareham for treatment and disposal.

Local efforts in Bourne are described in Chapter 6.