

# GRRIP II Watershed Analysis for Middleborough, MA

Estimates of Land Use, Impervious Surface and Annual Nonpoint Source Pollution Loads

## 2003 Land Use Types

- Crop Land
- Pasture
- Forest
- Non-Forested Wetland
- Mining
- Open Land
- Participation Rec.
- Spectator Rec.
- Water-based Rec.
- Multi-Fam. Res.
- High Density Res.
- Medium Dens. Res.
- Low Dens. Res.
- Salt Water Wetland
- Commercial
- Industrial
- Urban Open
- Transportation
- Waste Disposal
- Water
- Woody Perennial (Includes Cranberry Bogs and Nurseries)

## Land Use Allocation

2454.4 acres

- Rural (33.7%)
- Residential (65.5%)
- Agriculture (2.3%)
- Open Land (0.2%)
- Open Land (0.1%)
- Water (0.1%)
- Commercial (0.3%)
- Transportation (0.2%)
- Waste Disposal (0.2%)
- Water (0.2%)



Land Use Area in Acres is: 2454.4

Impervious Area is: 460 Acres

Percentage of Imperviousness = 18.7%

Avg Annual Nitrogen Load = 14078.8 pounds

Avg Annual Phosphorus Load = 2380.5 pounds

Avg Annual Suspended Solids = 840336.4 pounds

This drainage system is located in an area where stormwater management and the maintenance of conveyance facilities is critical for areas like the Nemasket River. This section of the Nemasket corridor provides important state recognized priority habitat areas.



POINT (Photo 1): The bridge is located on the Nemasket River at the junction of Rt 120 and State St. in Middleborough, MA.



POINT (Photo 2): Located on the Nemasket River at the junction of Rt 120 and State St. in Middleborough, MA.

The GRRIP II (Geographic Roadway Runoff Inventory Program) is an analysis of roadway drainage facilities located in environmentally sensitive areas on defined Federal Aid Eligible Roads. GRRIP II analyzed towns in the SRPEDD region: Fall River, the Nemasket and Taunton River Watersheds. This Watershed Analysis Project further details several of the drainage systems within each of the towns in the Nemasket and the Taunton River Watersheds to show the general health of the contributing watershed from the specified drainage system by extrapolating the area of imperviousness using the Scholar Watershed Modeling and the Watershed Tool Extension developed by M. Lee O'S.

Map prepared by  
SRPEDD  
88 Broadway, Taunton MA  
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Watershed Analysis produced  
using the Watershed Tools  
Extension developed by  
Mass GIS.

Disclaimer: This report was prepared for the Middleborough Regional Planning and Economic Development District, Taunton, MA. Portions of the report and data may have been prepared by the Massachusetts Executive Office of Environmental Affairs (EOEA), Capital Corporation of Taunton, MA, SRPEDD, the Bureau of Transportation Planning & Development, Division of Environmental Services of the State of Massachusetts, Department of Transportation, and the Federal Highway Administration (FHWA). The location of various facilities shown on this map are approximate and are intended for planning purposes only. This map is not intended for legal or planning or survey purposes.

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- + Drainage System
  - Potential Vernal Pools
  - Certified Vernal Pool
  - Public Water Supply
  - ★ Shellfish Beds
  - Rarebird\_noon
  - Rarefish\_noon
  - Rarecrustacean\_noon
  - Rareinvertebrate\_noon
  - Raremammal\_noon
  - Rarebird\_winter
  - Intermittent Wetland Protect
  - ▲ Cold Water Fisheries
  - ▲ Anadromous Fish Run
  - Critical Area after Storm Event
  - Wetlands
  - Solid Waste Facility
  - Estimated and Priority Habitats
  - ACEC
  - Zone 2
  - Zone B
  - Rivers and Streams
  - Lakes & Ponds
  - Road Island Towns
  - Other MA Towns
  - Town Boundary
  - Ocean
  - Transmission Lines
  - Railroad
- Roads (Mass Hwy Functional Classes)
- Local Rd. & Non-Eligible Functional Class Rds (F-GF-B)
  - Interstate (F-1)
  - Rural Principal Arterial & Urban Ext (F-2)
  - Rural Minor Arterial & Urban Ext (F-3)
  - Other Urban Principal Arterial (F-4)
  - Urban Minor Arterial or Rural Major Collector
  - Urban Collector or Rural Minor Collector (F-6)



Inset of Watershed Location

