

APPENDIX E

NASHUA RIVER WATERSHED

(HUC8: 01070004)

I. WATERSHED DESCRIPTION AND MAPS

The Nashua River Watershed covers an area of approximately 193 square miles centrally located on the New Hampshire-Massachusetts border. Approximately 46% of the watershed is located in New Hampshire and includes from west to east the towns of: New Ipswich, Greenville, Mason, Wilton, Milford, Brookline, Hollis, and Nashua. As shown in Figure 1, the primary watercourse in the region is the Nashua River which flows northeast from the Wachusett Reservoir in Massachusetts. The river ends at its confluence with the Merrimack River in Nashua, NH. Small hills dot the landscape of this watershed with few landforms above 1,200 feet. Lake Potanipo is the largest waterbody in the watershed.

The watershed consists of 70% forested land cover. A very small portion of the forest land is conserved through the Beaver Brook Association Land Park and other small parks. Development and disturbed land identified on the following land cover map (Figure 2) are concentrated in Nashua, NH and along major roadways. Developed and agriculture land covers 19% of watershed area in New Hampshire.

Based on the 2010 303(d) list, two assessment units (AUs) in this watershed are listed as being impaired for bacteria. The location of the bacteria impaired surface water AUs are shown on Figure 1 as red lines. Items E1 and E2 present the percent reduction needed to meet each water quality criterion (and TMDL), based on the highest recorded bacteria measurement that exceeds the criterion for the AU, as well as the bacteria data collected in the impaired AUID that was used to list the AU as impaired on the 2010 303(d) list.

FIGURE 1:

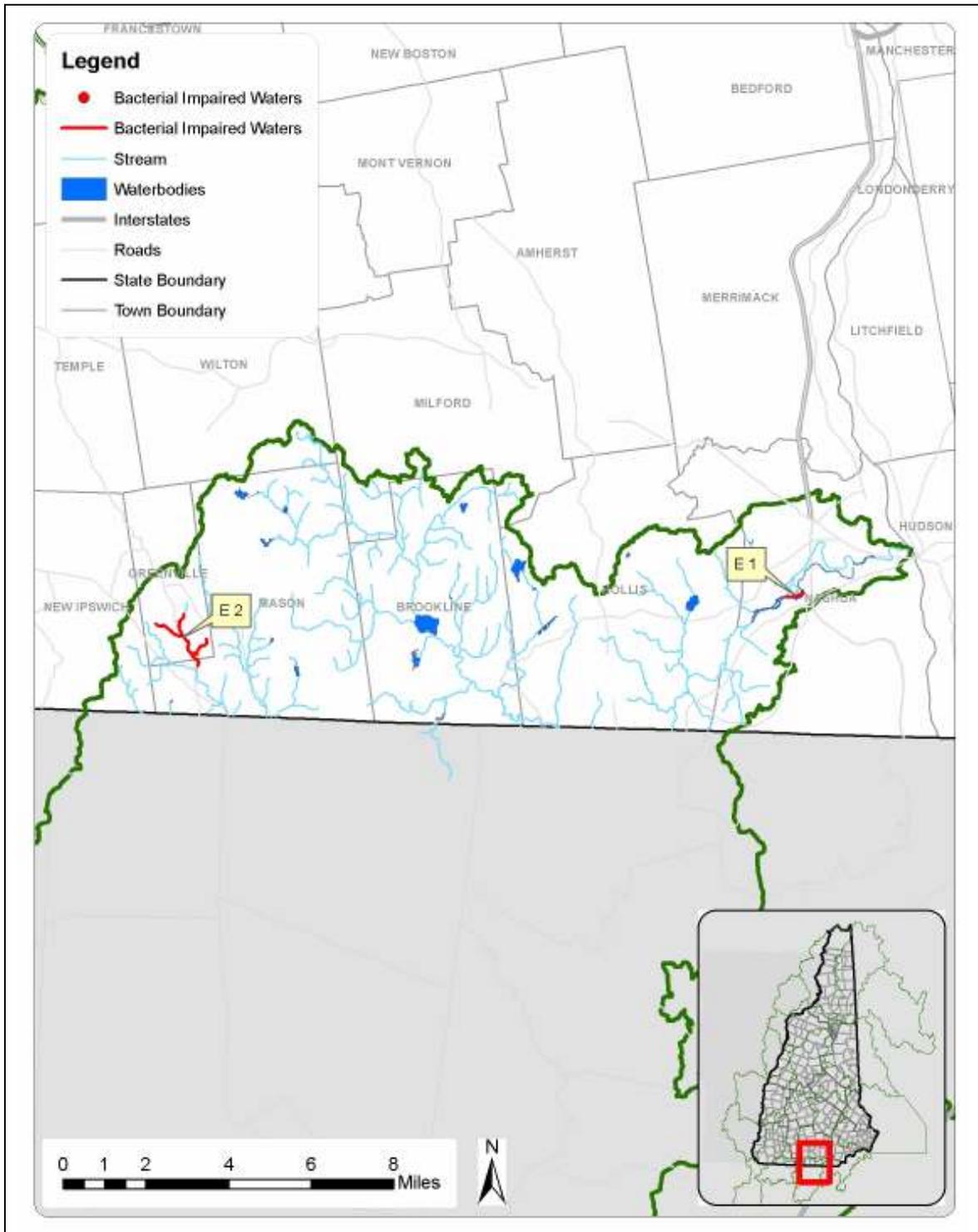
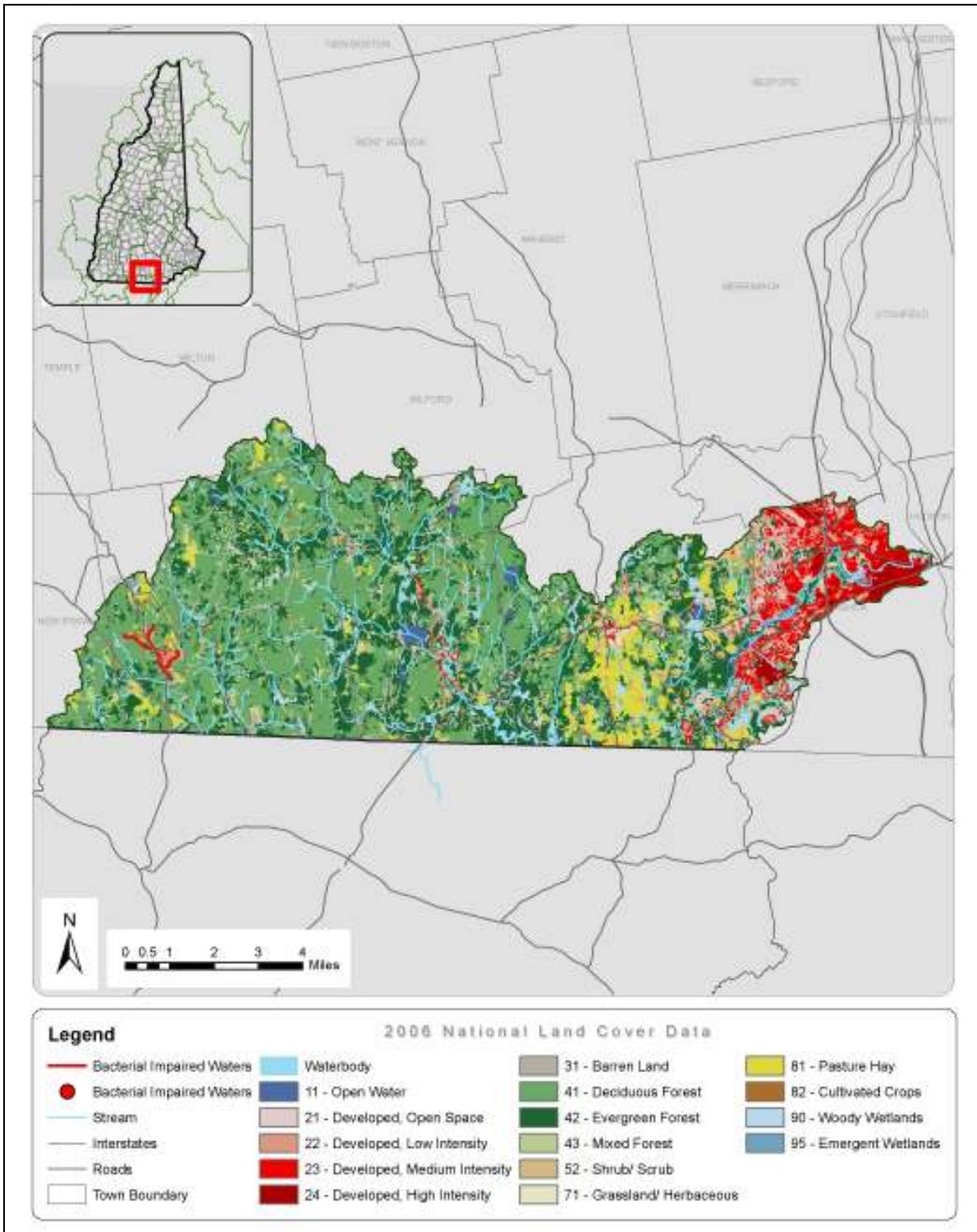


FIGURE 2:



II. WATER QUALITY DATA TABLES

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E1: Nashua River – Nashua Canal Dike

AUID NHIMP700040402-03

Characteristics: freshwater, class B designation, primary contact recreation.

Impairment: *E coli*

Water Quality Criteria & TMDL for *E coli*

Single sample: 406 CTS/100ML

Geometric mean: 126 CTS/100mL

Percent reduction to meet TMDL:

Single sample: 50%

Geometric mean: in compliance

Data: 2007 (inclusive) from NH DES, 2010 TMDL cycle

Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	6/2/2007	816.4
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	6/16/2007	20.3
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	7/21/2007	51.2
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	8/18/2007	9.8
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	9/15/2007	23.1
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	4/21/2007	32.7
NASHUA RIVER – NASHUA CANAL DIKE	04A-NSH	10/20/2007	727.0

Shaded cells indicate exceedance of water quality criteria

Geometric mean *E. coli* results (CTS/100ML)

Station Name	Date	Result
NASHUA RIVER – NASHUA CANAL DIKE	7/21/2007	94.7
NASHUA RIVER – NASHUA CANAL DIKE	9/15/2007	22.6
NASHUA RIVER – NASHUA CANAL DIKE	5/23/2007	81.5

E2: Walker Brook

AUID NHRIV700040301-03

Characteristics: freshwater, class B designation, primary contact recreation.

Impairment: *E coli*

Water Quality Criteria & TMDL for *E coli*

Single sample: 406 CTS/100MI

Geometric mean: 126 CTS/100mL

Percent reduction to meet TMDL:

Single sample: 64%

Geometric mean: in compliance

Data: 2007 (inclusive) from NH DES, 2010 TMDL cycle

Single sample *E coli* results (CTS/100ML)

Station Name	Station ID	Date	Result
WALKER BROOK	01-WKR	6/2/2007	21.3
WALKER BROOK	01-WKR	6/16/2007	24.1
WALKER BROOK	01-WKR	7/21/2007	410.6
WALKER BROOK	01-WKR	8/18/2007	14.4
WALKER BROOK	01-WKR	9/15/2007	159.7
WALKER BROOK	01-WKR	4/21/2007	6.3
WALKER BROOK	01-WKR	10/20/2007	1,119.9

Geometric mean *E. coli* results (CTS/100ML)

Station Name	Date	Result
WALKER BROOK	7/21/2007	59.5
WALKER BROOK	9/15/2007	98.1
WALKER BROOK	5/23/2007	14.8

Shaded cells indicate exceedance of water quality criteria