

Neshanic River Watershed Restoration Plan - Quality Assurance Project Plan (QAPP) Overview

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PROJECT BACKGROUND

- A Watershed Restoration Plan is a Plan that will define measures that will result in a % pollutant reduction and when implemented will achieve the required reductions defined by a TMDL.
- Neshanic River Watershed project period: 10/1/06 – 9/30/09
- The proposed planning area is 31 square miles of the Neshanic River Watershed.
 - Walnut Brook; 1st, 2nd, & 3rd Neshanic River; Neshanic River

WHY DO WE WANT TO COLLECT DATA IN THE NESHANIC RIVER WATERSHED?

- **New Jersey 2004 Integrated Water Quality Monitoring and Assessment Report:**
 - The Neshanic River and its branches are impaired for aquatic life, phosphorus, total suspended solids and copper, and listed on Sublist 5
- **New Jersey 2006 Integrated Water Quality Monitoring and Assessment Report:**
 - Neshanic, HUC02030105030010, 20, 30, 40, and 60: Sublist 4 for fecal coliform (primary recreation impairment) and aquatic life (general); Sublist 5 for arsenic and TP.
- A TMDL for fecal coliform has been adopted for the Neshanic River.
 - The TMDL requires 87% reductions in fecal coliform loading to the Neshanic River so that water quality standards can again be met.

GOALS

- **The overall goal of the project:**
 - To develop a watershed restoration plan that achieves the required fecal coliform TMDL reductions, the attainment of the water quality standards for total phosphorus, TSS, and a reduction in aquatic life impairments to a non-impaired level so that the water quality of the Neshanic River will be restored.
- **The overall goal of the QAPP:**
 - To collect the water quality data needed to support the development of the watershed restoration plan.

MONITORING PROGRAM – *Biweekly Surface Water Sampling*

- Samples will be collected from all locations twice (2x) a month, independent of weather, from May through October 2007 (12 events).
- Three (3) additional samples will be collected from all sampling locations, independent of weather, in June, July, and August 2007 for fecal coliform and *E. coli* analyses for nine (9) additional sampling events.

MONITORING PROGRAM – *Wet Weather Surface Water Sampling*

- Three (3) wet weather sampling events, at a minimum, will be conducted between May and October 2007 at each station.
- The wet weather samples for this plan will be in addition to the 12 biweekly sampling events.
- Collection of samples will begin at the onset of the storm (i.e., a storm predicted to produce a minimum of ½ inch of precipitation), and an attempt will be made to span the course of the event.

**MONITORING PROGRAM –
Biological Sampling**

- Samples of the benthic macroinvertebrate community will be collected in accordance with the Rapid Bioassessment Protocol (RBP) procedure used by the NJDEP Bureau of Freshwater and Biological Monitoring.
 - procedure based on USEPA's Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers (EPA 841-B-99-002 Nov. 1999)
- Benthic macroinvertebrates will be collected from the four AMNET locations within the project area (i.e., FN1, SN1, TN3, N1) once in late spring (i.e., May).

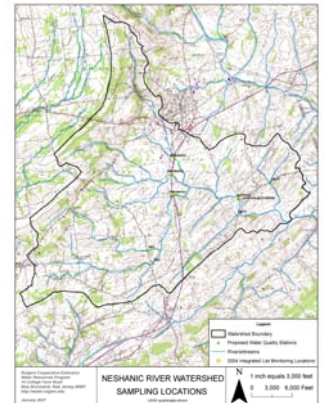
SCHEDULE

Task:	Date:
Submit QAPP	January 2007
Conduct biweekly surface water sampling	May – October 2007
Conduct wet weather surface water sampling	May – October 2007
Conduct biological sampling	Late Spring 2007
Submit data and summary report to NJDEP	January 2008

PARAMETERS

- *In situ*
 - dissolved oxygen
 - temperature
 - pH
- Nitrogen
 - ammonia
 - TKN
 - nitrate
 - Nitrate
- Phosphorus
 - total
 - dissolved ortho-P
- Bacteria
 - fecal coliform
 - *E. coli*
- total suspended solids (TSS)
- total dissolved solids (TDS)
- flow
 - stream width
 - stream depth
 - stream velocity
- benthic monitoring

**NESHANIC RIVER
WATERSHED
SAMPLING
LOCATIONS**



Site #FN1: First Neshanic River
at Route 202 crossing; AMNET #AN0330



Site #SN1: Second Neshanic River
at Route 202 crossing; AMNET #AN0331



Site #TN1: Third Neshanic River
at Route 579 crossing



Site #TN2: Third Neshanic River
at Dunkard Church Road and Route 579



Site #TN3: Third Neshanic River
at Route 202 crossing; AMNET #AN0332



Site #N1: Neshanic River mainstem
at Everitts Road and Reaville Road;
AMNET #AN0333; USGS #01398000



Site #UNT1: Unnamed Tributary
at Route 514 crossing



Site #UNT2: Unnamed Tributary
at Old Mill Court crossing



QUESTIONS?

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Our website will have project information soon
and can be viewed at <http://www.water.rutgers.edu>

Thank you!