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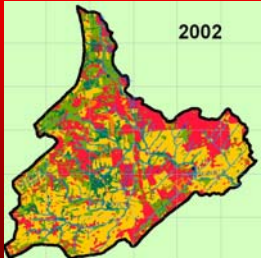


Neshanic River Watershed Restoration Plan

Photos courtesy of Joe Kazmierczyk (www.joekaz.com)

**Neshanic Watershed Project Area
Land Use/Land Cover 1995-2002**

CATEGORY	ACRES	%
AGRICULTURE	16405.06	0.53
BARREN LAND	336.29	0.02
FOREST	4240.88	0.14
URBAN	7763.84	0.25
WATER	64.52	0.00
WETLANDS	1982.57	0.06
TOTAL	30793.16	1.00



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**Neshanic River
Known Water Quality Threats**

- Fecal Coliform
- Aquatic Life
- Phosphorus
- Dissolved Oxygen
- Other

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Water Quality Standards for FW2 Waters

Designated Uses:

- Maintenance, migration and propagation of the natural and established aquatic biota;
- Primary and secondary contact recreation;
- Industrial and agricultural water supply;
- Public potable water supply after conventional filtration; and
- Any other reasonable uses

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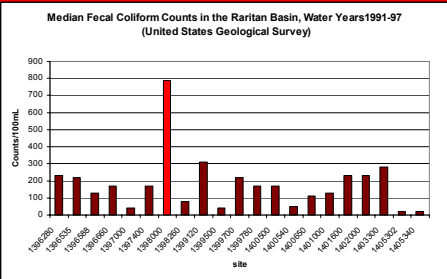
Fecal Coliform

- Pathogen indicator
- 2002 Integrated List of Waterbodies
Neshanic River segments included on 303(d) list
- TMDL adopted in September 2003 recommends 87% reduction for Neshanic

(Total Maximum Daily Loads for Fecal Coliform to Address 48 Streams in the Raritan Water Region, NJDEP 2003)

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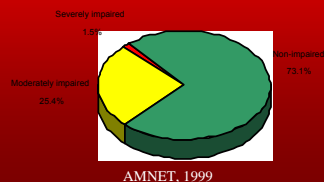
**Median Fecal Coliform Counts in the Raritan Basin, Water Years 1991-97
(United States Geological Survey)**



Aquatic Life Impairment

Biological monitoring pertains to the collection and analysis of stream benthic macroinvertebrate communities as indicators of water or habitat quality.

Watershed Management Area 8
1999 Bioassessment Results



NJDEP Ambient Biomonitoring Network

- Non-impaired
- **Moderately Impaired:** macroinvertebrate richness reduced; reduced community balance and numbers of intolerant taxa.
- Severely Impaired

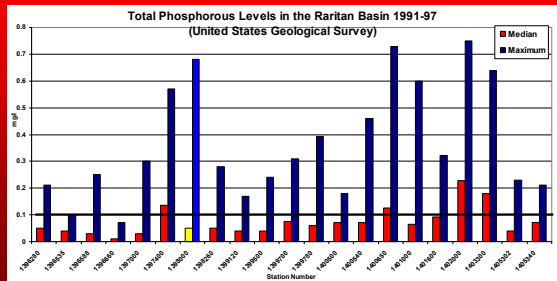


AMNET 1999 Benthic Macroinvertebrate Data

- 4 Sampling Sites in Neshanic Project Area
 - Neshanic River at Everitt Road in Raritan Twp.
 - First Neshanic River at Rt. 31 in Raritan Twp.
 - Second Neshanic River at Rt. 31 in Raritan Twp.
 - Third Neshanic River at Rt. 31 in Raritan Twp.
- Results indicated moderate impairment at all sites
(Ambient Biomonitoring Network, Raritan Water Region Watershed Management Areas 7, 8, 9, and 10, Round 3 Benthic Macroinvertebrate Data, Volume 1 of 2, NJDEP 2006)

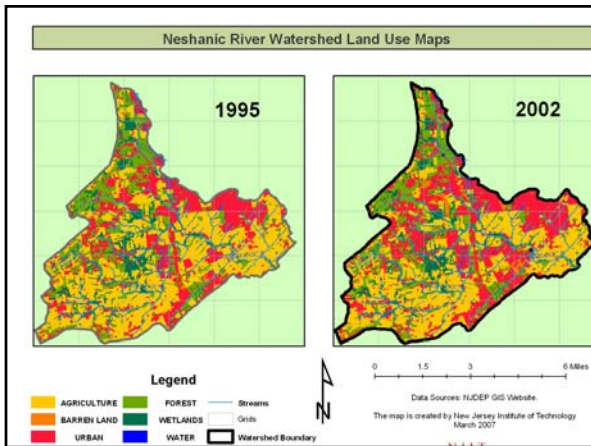
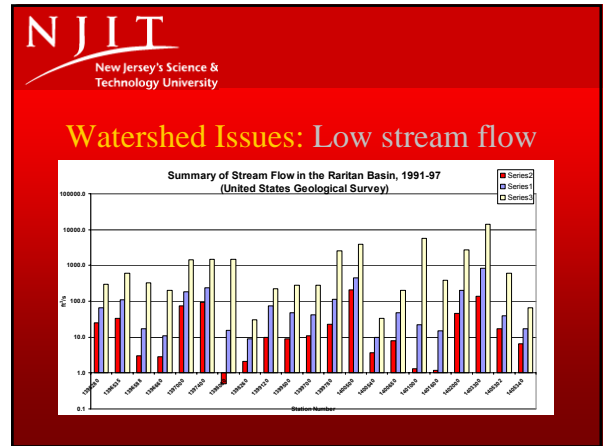
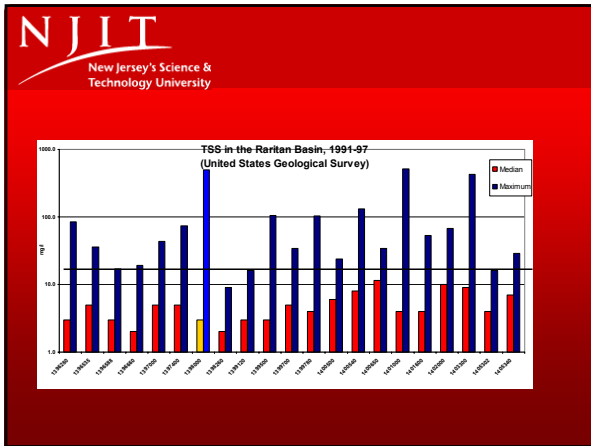
Phosphorus and Dissolved Oxygen

- Phosphorus TMDL under development for Neshanic River (below FNR/SNR confluence). 2007 anticipated adoption.
- 2006 Integrated Monitoring and Assessment Report reported that TMDL's will be developed for Dissolved Oxygen for Headwaters tributary to Third Neshanic and Third Neshanic River



Other Pollutants of Concern

- Total Suspended Solids
- Temperature
- pH
- Metals
- Dissolved solids



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- ### Nashanic River Watershed Restoration Plan
- 9 NJDEP Required Components
1. ID causes and sources of pollution
 2. Estimate load reductions expected for BMPs
 3. Describe BMP's needed to achieve load reductions and identify critical locations

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- ### Nashanic River Watershed Restoration Plan
4. Estimate **technical** and **financial** assistance needed
 5. Information/education component
 6. Schedule for implementation
 7. Description of interim, measurable milestones

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- ### Nashanic River Watershed Restoration Plan
8. Criteria to measure progress
 9. Monitoring to evaluate effectiveness of implementation efforts

Neshanic River Watershed Restoration Committee

