

## Neshanic River Watershed Restoration Plan Project

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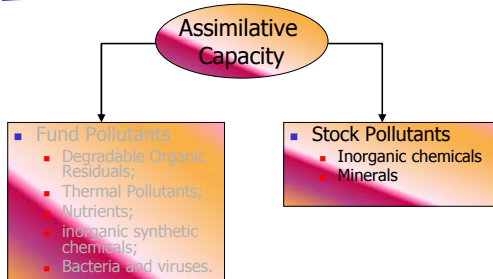
New Jersey Institute of Technology

Neshanic River Watershed Restoration  
Planning Committee Meeting  
March 28, 2007

## Water Pollution Sources

- Point Sources
  - Industrial wastewater
  - Municipal sewer discharges
- Nonpoint sources
  - Agricultural activity
  - Stormwater runoff
  - Silviculture
  - Municipal separate storm sewer systems (MS4)

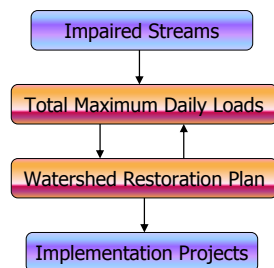
## Types of Water Pollutants



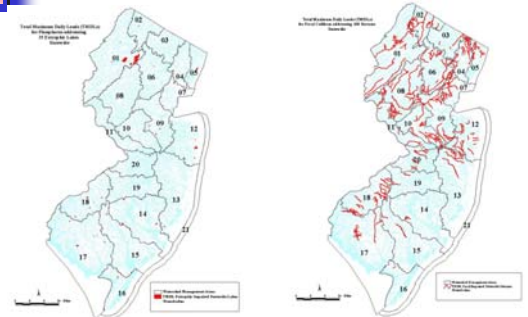
## The Clean Water Act

- 1972 Clean Water Act
  - Nonpoint source pollution assessment
  - Section 208 – State management plan
- Section 319(b)(4) of the 1987 CWA Amendment
  - State development and implementation programs
- Section 303(d)
  - A list of the impaired waterbodies

## TMDL (Total Maximum Daily Load)



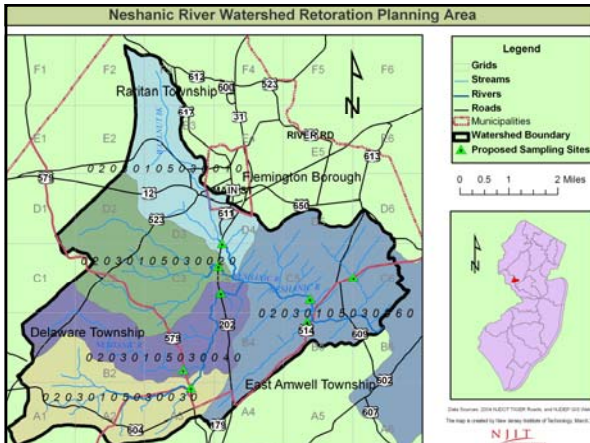
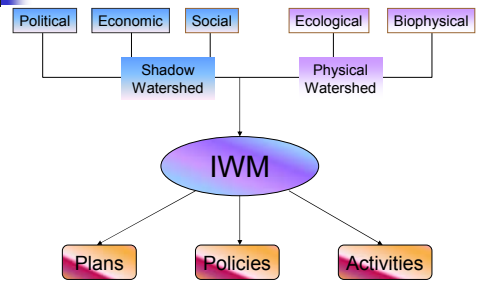
## NJ TMDLs for Eutrophication Lakes and Fecal Streams



## A Watershed Approach

- “A geographic area in which water, sediment, and dissolved materials drain to a common outlet -- a point on a larger stream, a lake, an underlying aquifer, an estuary, or an ocean” (EPA, 1992).

## Integrated Watershed Management (IWM)



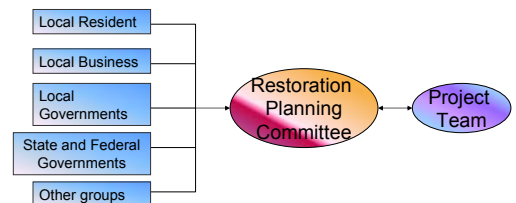
## Neshanic River Watershed Restoration Project

- Funded by Division of Watershed Management at NJDEP through the CWA Section 319(h) funding.
- Project duration
  - October 1, 2006 – September 30, 2009.

## Project Objective

- to develop a watershed restoration plan that will detail the management measures needed to achieve the necessary reduction in fecal coliform and attain water quality standards for the total phosphorus, TSS, reduce the aquatic life impairments to a non-impaired level, and outline the possibility of restoring the base flow of the Neshanic River.

## Project Management Structure





## Project Team

- Administrative Agency
  - Division of Watershed Management at NJDEP.
- Lead Agency
  - New Jersey Institute of Technology
- Supporting Agencies
  - Rutgers Cooperative Extension
  - North Jersey RC&D
  - New Jersey Water Supply Authority
  - South Branch Watershed Association
  - Hunterdon County Soil Conservation District
  - Natural Resource Conservation Service
  - 4 Municipalities in the watershed



## Project Tasks

- Task 1: Establish and operate a Neshanic River watershed restoration planning committee
  - SBWA
- Task 2: Conduct biological and chemical water quality monitoring
  - RCE (SBWA, NJIT)
- Task 3: Conduct stream visual assessment
  - SBWA (NJWSA, RCE, NJIT)
- Task 4: Conduct stormwater infrastructure inventory
  - HCSCD
- Task 5: Evaluate stormwater management measures.
  - RCE



## Project Tasks (Cont.)

- Task 6: Evaluate agricultural best management practices (BMPs)
  - New Jersey RC&D (NJIT)
- Task 7: Calibrate and apply the Soil and Water Assessment Tool (SWAT)
  - NJIT
- Task 8: Determine optimal spatial patterns of stormwater management measures and agricultural BMPs.
  - NJIT
- Task 9: Prepare a watershed restoration plan.
  - NJIT and all supporting agencies
- Task 10: Develop an interactive project website.
  - NJIT



## Get Involved

- Restoration Planning Committee
- Restoration Planning Committee Meetings
- Volunteers
  - Stream Visual Assessment
  - Water quality monitoring
  - Neshanic farm group
  - Various project and outreach activities



## More Information

- Project Brochure (handout)
- Project Website after April 1, 2007
  - <http://ims.njit.edu/neshanic.php>



## Questions and Comments