



**Stakeholder
Involvement,
Lake Hopatcong
New Jersey**

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New Jersey Department of
Environmental Protection
Division of Watershed Management**

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LAKE HOPATCONG

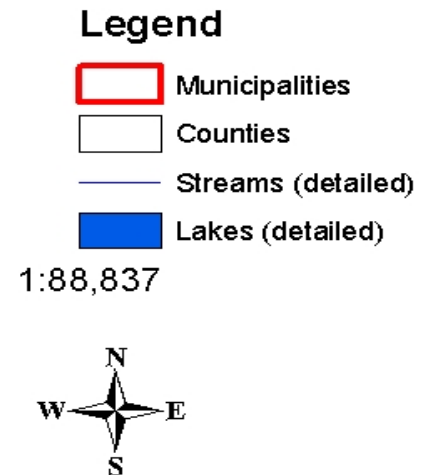
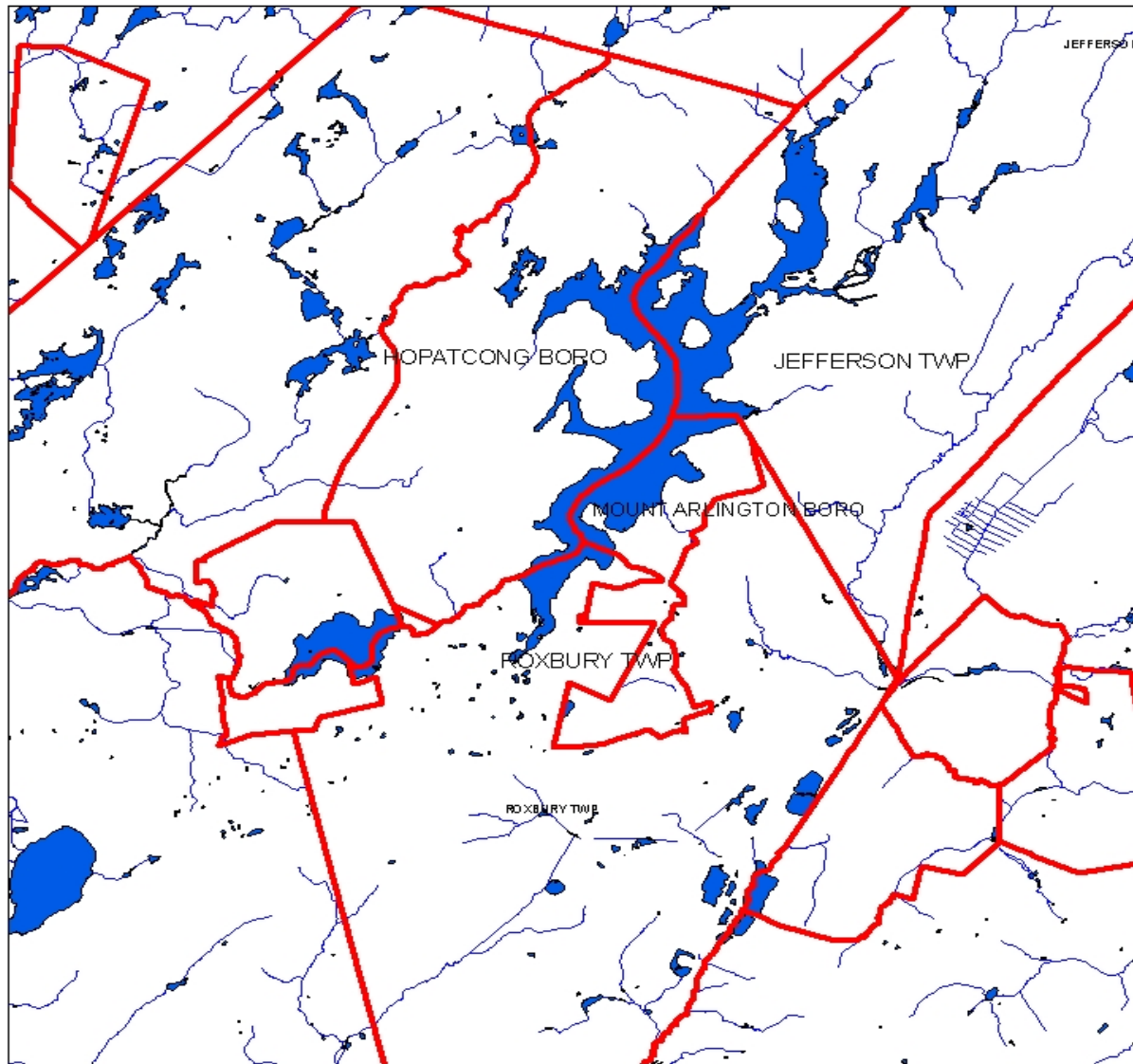
NJ's Largest Freshwater Lake

- Located in Northern New Jersey
 - 2,686 acres
 - ~40 miles of shoreline
 - 9.5 miles long
- Relatively complex shape
 - Central basin's average depth is
 - Max depth is 58 Ft
 - Many coves, bays, and canals
 - long hydraulic residence time of 1.7 years
- 4 Municipalities - Borough of Mount Arlington, Borough of Hopatcong, Roxbury Township, and Jefferson Township



Picture Courtesy of: www.lakehopatcong.org/

Lake Hopatcong Municipalities



LAKE HOPATCONG – 1800'S

Tourist Destination



Boating and Recreation



MAJOR USES

- Boating
- Fishing
- Swimming
- Sight seeing
- Water Supply



State Park - 107 acres – 500,000 annual visitors

Intense recreational use



Like many lakes in the nation, shoreline is no longer predominately seasonal bungalows.

USE IMPAIRMENTS

Woodport Area



LAKE HOPATCONG COMMISSION

- Predecessor Regional Planning Board
- Created by Legislature 2000
- First Lake Hopatcong Meeting - May 2001
- Mandate: “To oversee and safeguard Lake Hopatcong as a natural, scenic and recreational resource.”
- 11 Members – 5 State/6 Local
 - State - Chair, DEP & DCA Commissioners and 2 Public Members
 - Local - 1 from each county (2) and municipality (4)

Stakeholder Involvement

- NJDEP prepared a Phosphorus Lake TMDL in 2003 – limited stakeholder involvement
- NJDEP funded Lake Characterization and Restoration Plan - was vetted w/stakeholders
- Led to refined TMDL loads by municipality which provided the tool for municipalities to become fully engaged in implementing the TMDL

Refined TMDL Loads by Municipality

Table 4 - Municipal-based Phosphorus Loads for Lake Hopatcong

Municipality	kg per yr	Percent Contribution	Required Reductions (kg / yr)
Jefferson Township	4,201	57.6	1,899
Borough of Mt. Arlington	322	4.4	145
Roxbury Township	235	3.2	106
Borough of Hopatcong	2,538	35	1,147
Total	7,296	100	3,297

Jefferson Twp – not sewered



Implementation – Who? How?

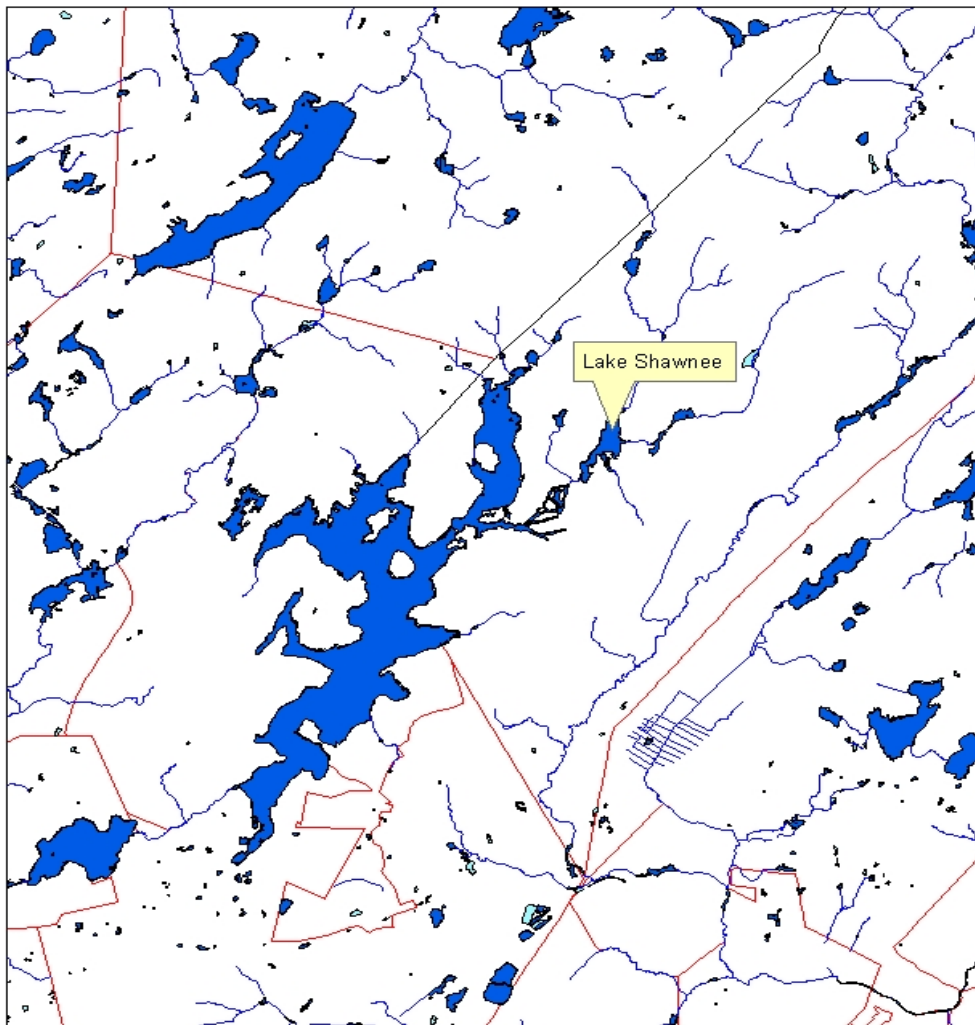
Who? Partners

- Lake Hopatcong Commission
- Division of Watershed Management
- Municipalities
- Counties
- Fish and Wildlife
- Parks and Forestry
- Land Use Regulation Program
- Pesticide Control
- Division of Water Quality
- Compliance and Enforcement
- Knee Deep Club/Stakeholders
- USEPA

How? Potential Funding

- State Appropriations
- Federal Grants (i.e. Targeted Watershed)
- 319(h) Non-Point Source
- 604(b) Water Quality Planning
- Infrastructure Trust Financing
- Municipal and County Appropriations
- Other Grants/Special Appropriations
- Public/Private Partnerships
- User Fees/Dedicated Funding/Taxes

LAKE SHAWNEE Jefferson Twp
540 homes part of Highlands Preservation Area e.g. can't sewer
Became NJ's 1st Volunteer Monitoring Lake Group



Legend

- Counties
- Municipalities
- Lakes (Statewide) with Name Attributes
- Streams (detailed)
- Lakes (detailed)

1:99,593



LAKE SHAWNEE – Jefferson Twp

**2005 Section 604(b) Water Quality Management Planning
Grant Funds – passed 3 yr pumpout/inspection ordinance
Database to help Health Dept keep track of compliance
GIS mapping of env constraints to prioritize upgrades
Leach field monitoring**



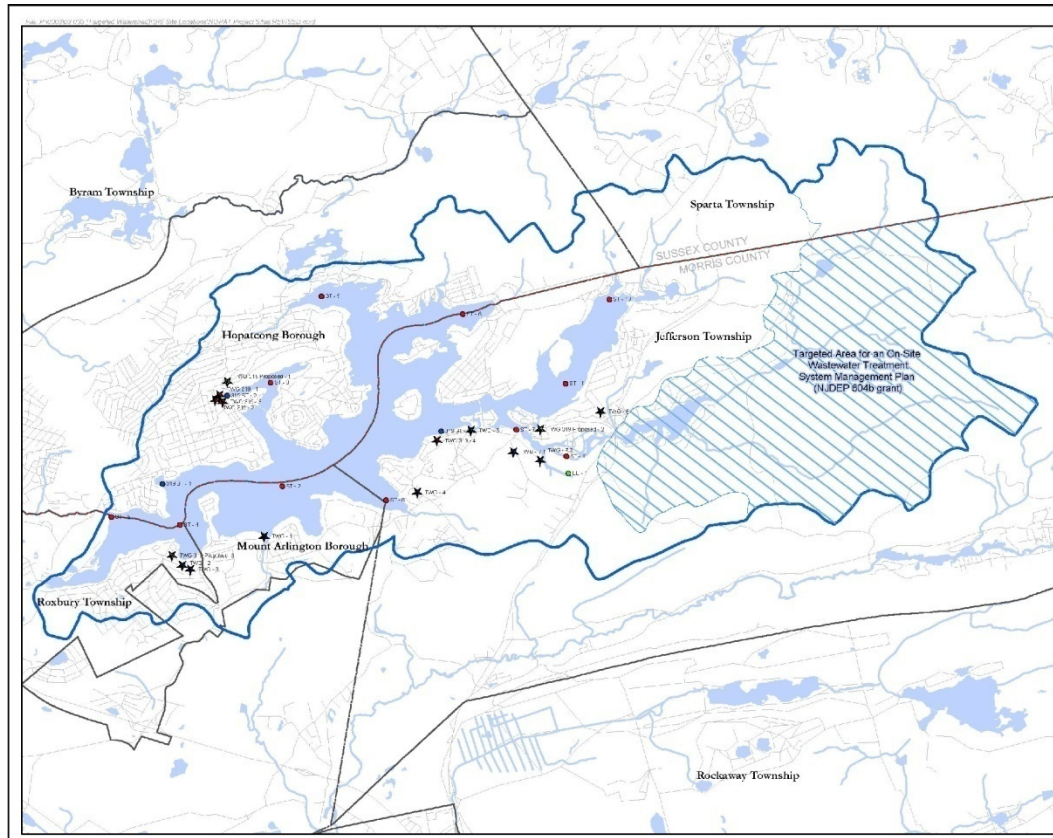
STORMWATER MANAGEMENT

319(h) grant-4 BMP implementation projects; E&O; signage





EPA Targeted Watershed Grant (TWG) for Lake Hopatcong, New Jersey



NEW JERSEY COUNTY MAP

PRINCETON HYDRO

PRINCETON HYDRO, LLC.
120 E. Uxian Avenue
Suite 204
Exton, PA 19341

0 2.4
Miles
1 inch equals 2.5 miles

LAKE HOPATCONG WATERSHED PROJECT LOCATIONS

LEGEND

- ★ US EPA TWG BMP Site
- ★ NIDEF 319 BMP Site
- ★ NIDEF 319 Proposed BMP Site
- US EPA Environmental Edu. Grant Demo Project
- In-lake Sampling Station
- 310 In-lake Sampling Station
- ▭ Lake Hopatcong Watershed
- ▭ Lake Shawnee Watershed
- Road
- County Boundary
- Lake
- Stream

Parameter	Value
Lake Surface Area	2,636 acres (2,037 hectares)
Watershed Area	13,548 acres (5,483 hectares)
Watershed Area/Lake Surface Area	5.0
Mean Depth	18.6m (61.5 m)
Maximum Depth	38.9m (127.7 m)
Lake Volume	45,057 acre-ft or 147,800 (5.34 x 10 ¹⁰ m ³)
Shore Line Length	31.7 miles (50,976 m)
Hydraulic Residence Time	1.71 yr (623 days)
Drenchback from 4' Water Level	9237 ft ² above sea level*

RESTORATION ACTIVITIES

As the Lake State-appointed steward, the Lake Hopatcong Commission will use the TWG funds to Address the stormwater based phosphorus loads by installing Best Management Practices (BMPs)

- Implement innovative iron oxide retrofits and compare effectiveness at removing phosphorus
- Convert Detention Basins to wetland basins TWG site #2 and # 5
- Install Aqua-Filter a stormwater filtration system capable of Gross contaminant removal and the removal of fine sediments (TWG sites #3 and #7)

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P-Free Fertilizer ordinance passed by all 4 municipalities



SHARED SERVICES- Catch Basin Clean Out



OUTFALL INVENTORY AND CATCH BASIN SURVEY



WEED HARVESTING – 2003 approx 3,317 cu yds vegetation harvested



BEFORE



AFTER





TMDL COORDINATION MEETINGS

IMPLEMENTING A TMDL AS A WATERSHED EFFORT IS NOT:

- FAST
- EASY
- WITHOUT PROBLEMS
- WITHOUT FRUSTRATION AND AGGRAVATION
- ONE STRAIGHT SHOT
- A SOLO ENDEAVOR
- CHEAP
- A 30-SECOND SOUND BITE
- STATIC

IMPLEMENTING A TMDL AS A WATERSHED EFFORT IS:

- REWARDING
- ENGAGING
- ENRICHING
- CUMULATIVE
- AN EXPERIENCE OF THE WHOLE IS GREATER THAN THE SUM OF THE PARTS
- HUMBLING
- AN AMAZING LEARNING JOURNEY
- THE ONLY GAME IN TOWN



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Lake Hopatcong Commission

Donna McHalle-Holly

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