



NJ Watershed Ambassadors Program

Getting Things Done

8th Water Monitoring Summit

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Presentation Highlights

- I AmeriCorp NJ Watershed Ambassador Program Overview
- II TMDL Background
- III AmeriCorps Partnership Projects that Implement TMDLs
- IV Collecting Data
- V How to Obtain and Use AmeriCorps Data

AmeriCorps NJ Watershed Ambassadors Program

- NJ Watershed Ambassadors Program one of 18 AmeriCorps Programs in NJ
- Administered since its inception in 2000 by NJ Department of Environmental Protection
- 20 Ambassadors serve 10 months in a host agency in each of NJ's 20 WMAs
- Our Motto is Getting Things Done.....

Watershed Education and Outreach Presentations

- Ambassadors Required to Give 50 Presentations
 - Schools, Civic Organizations, and General Public
 - Watershed Stewardship, NPS and Clean Water Initiatives



Watershed Monitoring

Ambassadors Required to Do 50 Stream Assessments

- Biological & Visual Assessments + 5 Lakes
- Targeted Stream Segments, TMDL background data gathering, C 1 Waters and Climate Change Stations



Volunteer Monitoring Trainings

- Each Ambassador Must Conduct 5 Volunteer Monitoring Trainings to Groups of 25
- 2010/11 78 Volunteer Monitoring Trainings
- 1200 People Trained to Conduct Assessments
- New Biological Monitoring Protocols
- New Student Volunteer Training

Partnership Projects

Ambassadors are Required to Plan and Execute 3 Partnership Projects

- Tree Plantings
- Rain Garden/Rain Barrels
- Streambank Revegetation
- Stream Cleanups



Partnership Projects

- 1 of 3 Projects Must be within ½ mile of a Waterbody
- Last Year 2 Partnership Projects Helped to Implement TMDLs to Reduce NPS Loadings



What is a TMDL?

- Total Maximum Daily Loads (TMDLs) represent the amount of pollutant(s) that a waterbody can assimilate without violating surface water quality standards.
- TMDLs are required, under Section 303(d) of the federal Clean Water Act

Where Does Water Pollution Come From?



$$\text{TMDL} = \sum \text{WLA (Point Source)} + \sum \text{LA (NPS)} + \text{MOS}$$

Nutrient Sources

Many waters can “bloom” with algae when excessive phosphorus is present.

Large amounts of plant growth can reduce dissolved oxygen and change pH which can be harmful to organisms such as fish.



Outcome

The intent of a TMDL is to elicit action; the State and the public can both implement TMDLs to achieve Clean Water.

AmeriCorps Watershed Ambassadors Getting Things Done!

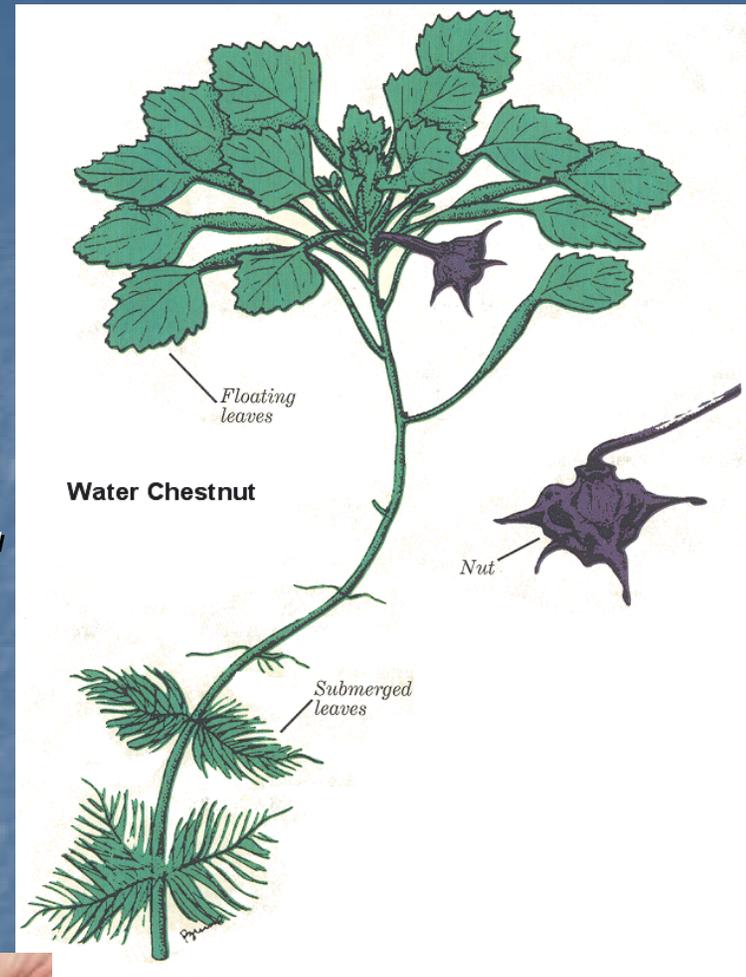
- Last Year 2 Partnership Projects Helped Implement TMDLs to Reduce NPS Loadings
 - WMA 1 Lake Musconetcong
 - WMA 17 Burnt Mill Pond

Lake Musconetcong TMDL

- Phosphorus Lake TMDL Approved by EPA in 2003
- Required 4800 Lbs Phosphorus Reduction
- Approved Watershed Restoration Plan that identifies Phosphorus Sources to Lake Musconetcong
- August 2011 Lake Musconetcong Water Chestnut Weed Pull Partnership Project resulted in 16,600 tons of water chestnut removal = 3 lbs of phosphorus removal

Water Chestnuts

- Invasive from Europe, Asia, Africa
- Loosely bound in sediment and able to pull out with hands



Before



During



After



Project Accomplishments

- 45 volunteers in the water
- 20 background volunteers
- 16 tons of water chestnuts pulled
 - Equivalent of 10 Toyota Priuses &
 - Two average horses



- Approximately 711 lbs pulled per person in water

Volunteers in Action



Burnt Mill Pond TMDL

- Phosphorus Lake TMDL Approved by EPA in 2003
- Required 63 Lbs of Phosphorus Reduction Needed
- Burnt Mill Pond Cleanup w/Vineland Env Commission, boy scouts, and Tri-County Motorcycle Club
- 12 Bags of Debris Removed = 2 lbs of Phosphorus Prevented from Entering the Lake

Burnt Mill Pond Background

- Located at intersection of Delsea Dr and Arbor Ave in Vineland, NJ
- Has a historic bridge that crosses over lake, site of cleanups and plantings
- Residential area around the lake
- Eutrophication problems at the lake, due to possible fertilizer pollution from nearby farms and lawns



Burnt Mill Pond Cleanup

- Coordinated by Watershed Ambassador Philip Arsenault
- Worked with Vineland Environmental Commission and Rutgers Environmental Steward Mike Brady
- Three parts to project- brush clearing 1/08/2011, trash cleanup 1/22/2011, & tree planting in May
- Philip attended a NJ Tree Foundation Workshop in March 2011 and received trees for planting at Burnt Mill Pond on 5/14/2011







Collecting Data Getting Things Done!



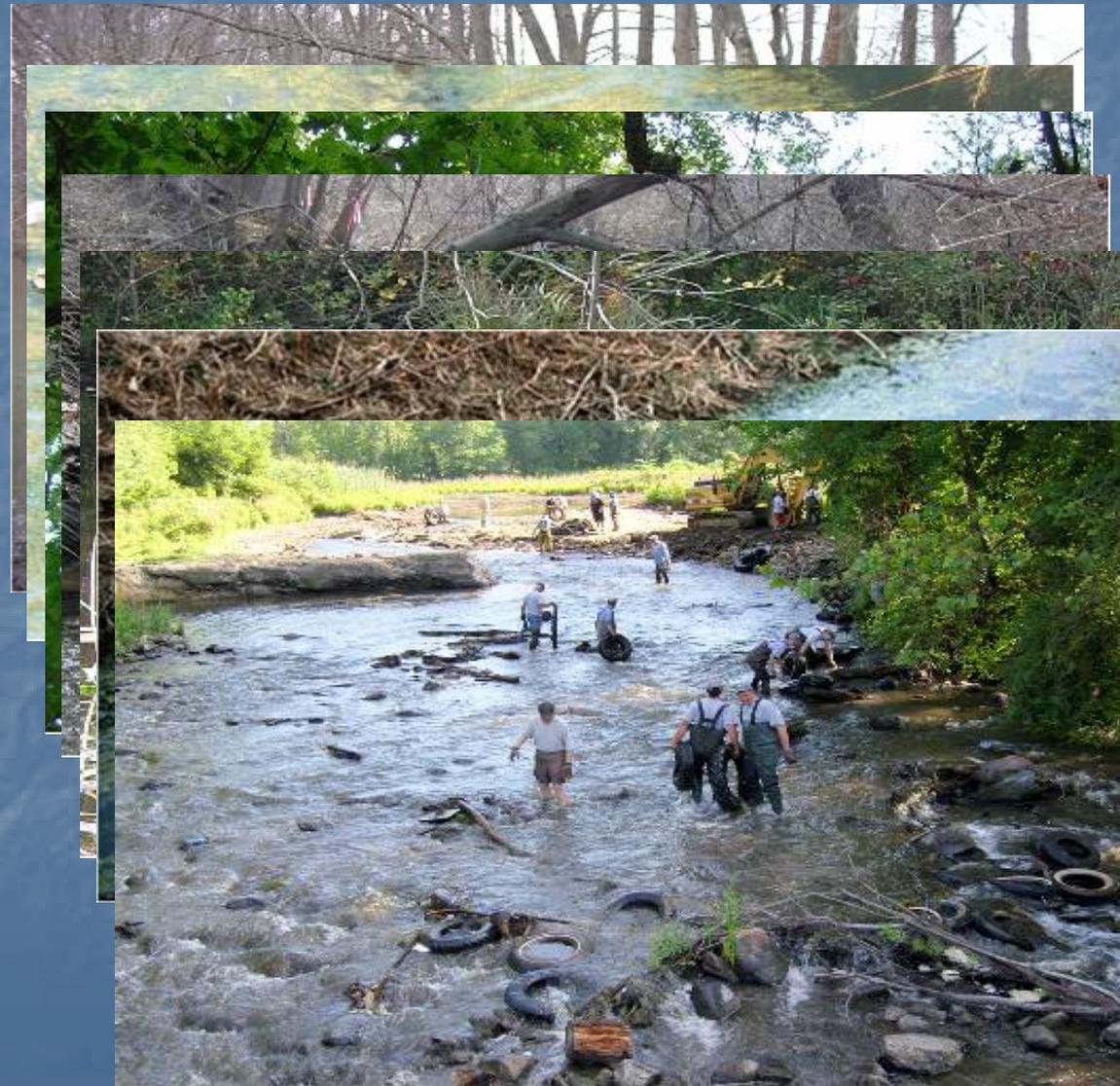
50 ASSESSMENTS

- **VISUAL**
 - general observations & measurements
- **BIOLOGICAL**
 - macroinvertebrate collection

VISUAL ASSESSMENTS

General Observations
Focus on:

- Turbidity
- Surface Coating
- Canopy Coverage
- Woody Debris
- Aquatic Vegetation
- Algae Growth
- Litter Concentration



VISUAL ASSESSMENTS

Measurements
include:

- Stream Depth
- Stream Width
- Stream Velocity



BIOLOGICAL ASSESSMENTS

Collection of benthic macroinvertebrates helps to determine the quality of water in our streams.

Two different sampling techniques are used based on where we are sampling.



BIOLOGICAL ASSESSMENTS: ROCKY BOTTOM STREAMS High Gradient Indices



- Choose a site with riffles
- Place kick seine at a 60 degree angle
- Rub rocks for additional macros
- Sort sample

BIOLOGICAL ASSESSMENTS: MUDDY BOTTOM STREAMS Low Gradient Indices

- Total of 20 scoops
- Sample multiple habitat types
- Sort sample



AmeriCorps Data

- All Data is Entered into the NJDEP's Publically Available WQDE Database at

<http://www.state.nj.us/dep/wms/wqde/>

- Trained Volunteers may Register to Become Part of the Watershed Watch Network at

<http://www.state.nj.us/dep/wms/bwqsa/vm/index.html>

AmeriCorps Data

AmeriCorps Data is Tier C used by NJDEP for Community Assessment:

- MST Work
- Temperature Investigations
- 319(h) grant Restoration Sites
- USGS Trend Sites
- Barnegat Bay Blitz – ID Cleanup Locations

Getting Things Done, In Your Watershed!

