

# Whippany River Watershed Action Committee



## Visions for the Whippany Watershed

### 2010/2011 Annual Report

#### Better Stormwater Management in Parsippany

The Whippany River Watershed Action Committee (WRWAC) has been awarded an \$185,000 grant for the design, engineering and monitoring of improvements to stormwater run-off at the Parsippany-Troy Hills Township Police Station and Municipal Court complex.

The coveted Green Infrastructure Grant, under the auspices of the New England Interstate Water Pollution Control Commission (NEIWPC), was applied for by several state organizations.

The WRWAC's winning proposal will retrofit the existing parking lot with three Filterra units. These units will be inserted into the existing stormwater collection system and will filter runoff before it reaches Troy Brook. This is a green infrastructure stormwater management technique, designed to better manage and improve stormwater runoff making it more efficient and green-friendly. The parking lot is located on Route 46 East in Parsippany.

"The WRWAC's mission is to preserve, protect and maintain the land and water resources of the Whippany River Watershed and to enhance the quality of this valuable resource," states WRWAC Facilitator Art Vespignani. "The Whippany River Watershed supplies drinking water to hundreds of thousands of people downstream and also aids in the replenishment of local aquifers."

"The Township of Parsippany-Troy Hills is honored that the NEIWPC grant will be used to remedy stormwater runoff at our police station and municipal court complex," states Mayor Jamie Barberio. "We are always looking for ways to make our township more ecologically friendly."

The project, scheduled for completion in the summer of 2012, is a joint cooperative effort of the WRWAC, the Township of Parsippany Troy-Hills, Princeton Hydro, and the Rutgers Cooperative Extension of Morris County.

- The Whippany River serves the only significant unconsolidated aquifer in northern New Jersey, the Buried Valley Aquifer system.
- WRWAC has been recognized with the USEPAs 2001 Environmental Quality Award and NJDEPs 2002 Environmental Excellence Award

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#### New Look to the Annual Report

Our yearly two page 8"x14" folded brochure of bullet points has grown to eight pages of news and highlights of the past year. Readers can easily learn about the efforts of the past year and get a good sense of the role of our watershed organization in Morris County, New Jersey.

This report gives a summary of WRWAC's program to our members, made up of governing bodies of member municipalities and their representatives,

and to residents of the 16 municipalities that make up the Whippany River Watershed, as well as to other non-profit watershed organizations and funding agencies.

The annual report describes how the efforts of WRWAC are making a difference through broad based community action, implementation of projects, ongoing assessment and promotion of resource conservation.

## Reducing Non-Point Source Pollution

### Program Committee:

George Van Orden, chairman,  
Madison

Sal Iannaccone, Hanover

Brian Marshall, Mountain Lakes

Ralph Rhodes, Mendham Town-  
ship

Hank Sawoski, Morris Plains

Understanding the cause and source of bacterial contamination in the Whippany River is a goal of the program committee. In 2008, the New Jersey Department of Environmental Protection (NJDEP) awarded a \$617,100.00 grant to the WRWAC to study non-point source pollution in the Whippany River and to implement a project designed to reduce fecal coliform concentrations.

In December 2009, the DEP approved retrofitting sites located in Morris Township and Parsippany as bioretention basins. These sites are located on W. Hanover Avenue at the county owned Morris View Nursing Home and the Morris County Public Safety Training Academy.

Starting in early 2010, work began to implement these projects. The WRWAC's consulting firm, Princeton Hydro of Ringoes, New

Jersey, prepared cost estimates and conducted field sampling.

The Morris County Board of Chosen Freeholders, historically strong supporters of the WRWAC's mission and projects, gave preliminary approval. Princeton Hydro prepared designs. Meetings were held with County officials to work out details of the project. It is anticipated that bids will be taken in early 2011, a construction contract awarded, and the project well on its way to completion.

Wet weather water testing and sampling at the eight assessment sites are still underway through the remainder of the grant cycle. Information gleaned from the reports will supply the committee with more data to combat fecal coliform concentrations in the river system.

The Whippany River Watershed Management Group is recognized by NJDEP as the entity representing the various interests within the Whippany Watershed whose purpose is to improve the condition or prevent further degradation of the watershed.

## Goose Damage Management Workshop

A Goose Damage Management Workshop sponsored by the Whippany Watershed Action Committee was held on March 25 at the Haggerty Education Center Auditorium located on the grounds of the Frelinghuysen Arboretum in Morristown, New Jersey. The workshop featured several prominent speakers and discussed goose damage management techniques that have proven to be successful. These included habitat modification, oiling and adding, dog patrols, no feed sign-

age and community-based education. The ultimate goal is to reduce goose damage to parks, campuses, water bodies and other public and private lands.

Many officials and employees from Morris County, and municipalities around Morris County attended. The workshop was open to the public, and included a continental breakfast.

## Volunteers Work Towards Sustainable Goose Populations

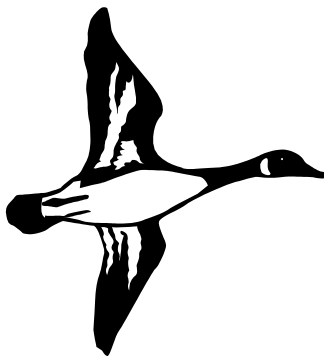
Action Committee volunteers are making a splash when it comes to goose management. A number of WRWAC members are trained by Geese Peace as egg addlers, and have actively managed many nesting sites in the Morristown area, using integrated strategies to keep the goose population at bay while respecting wildlife's right to life.

trained and join the pool of volunteers needed to control geese on a regional basis.

Another member reports regularly to the committee with goose counts taken at 17 different locations throughout the watershed. Big numbers have been showing up, as well as lower numbers where goose control methods are occurring.

Results of 2010 efforts: 62 nests were identified and 300 eggs were added. It is hoped that in the near future more volunteers from surrounding municipalities will become

The efforts of these volunteers are invaluable in our mission to understand and attempt to control non-point source pollution in the Whippany River Watershed.



Promote  
no-feeding  
of waterfowl

## Morris County Freeholders Continue Funding Trend Analysis

The Morris County Board of Chosen Freeholders allocated \$9,000 to WRWAC in 2010 to continue the trends analysis sampling and data collection project that has been ongoing since the 1990s. The information provided by this study will provide a continuous flow of important measurements to insure the improvement of the water quality of the Whippany River.

Water quality data was taken from 5 locations along the Whippany River in August during dry weather conditions. Two more sampling events were scheduled but postponed due to unfavorable weather conditions and will be scheduled for 2011. Water quality parameters analyzed include

temperature, dissolved oxygen, pH and conductivity which were determined in the field, and carbonaceous 5 day biochemical oxygen demand (CBOD-5), total Kjeldahl Nitrogen (TKN), ammonia nitrogen (NH<sub>3</sub>-N), nitrite nitrogen (NO<sub>2</sub>-N), orthophosphorus (ortho-P), total phosphorus (Total-P) total suspended solids (TDS), total alkalinity, chlorophyll A, fecal coliform and enterococcus.

Water quality improvements observed over time during dry weather conditions most likely reflect upgrades made in wastewater treatment and active watershed management techniques. The results of the sampling will be available in a report after completing and analyzing the sampling.

## Troy Brook Regional Stormwater Management Plan

The Troy Brook watershed, located within the larger Whippany River Watershed, is approximately 16 mi<sup>2</sup>, with 24 miles of river and more than 400 acres of lakes, including Lake Parsippany and Mountain Lake.

In 2007 a Regional Stormwater Management Plan was developed by Rutgers Water Resources Program (Obropta and Goodrow 2007) under the New Jersey Stormwater Rules (N.J.A.C. 7:8). Based upon the New Jersey Department of Environmental Protection's (NJDEP's) decision not to proceed with the regulatory components of the Regional Stormwater rules at that time, the Plan was divided into Plan A (Regulatory- still awaiting NJDEP review) and Plan B (voluntary – reviewed and approved as a watershed plan to address stormwater in the Troy Brook Watershed).

Under the approved Plan B, Rutgers Cooperative Extension has received grant funding from the NJDEP to begin to implement the Approved Watershed plan. The plan is prioritized based on those areas where the Regional Stormwater Management Planning Committee has identified the greatest need; where the modeling conducted during the development of the plan has identified the greatest reductions can be obtained; and those areas where implementation can be achieved in the most cost-effective manner. The following projects have been implemented:

At the Parsippany-Troy Hills Municipal Building two rain gardens were installed in September 2009 after training volunteers from the community and the Whippany River Watershed Action Committee about rain gardens and how they help address stormwater.

At the Parsippany-Troy Hills Department of Public Works Yard, Turfstone pavers were installed on an emergency road. The road previously allowed stormwater to flow directly to the Troy Brook.

At the Normandy Property office complex on Cherry Hill

Road, a portion of the upper parking lot was fitted with pervious pavement, surrounding the catch basins. This allowed drainage of the parking lot without the cost of retrofitting the entire parking lot.

In the Hills of Troy Neighborhood in Parsippany (across the stream from the Parsippany DPW) five residences were selected to have rain gardens installed. The neighborhood was canvassed and provided with educational literature on rain gardens and the Troy Brook stormwater plan and five residences were selected to receive the rain gardens. Maintenance manuals were developed specific to the project.

Work is scheduled to be completed at the Tivoli Garden Apartment Complex and The Parsippany-Troy Hills DPW in Spring 2011. The Tivoli Garden Complex will have rain garden and a step-drop bioinfiltration system installed this spring. The DPW will have a cascading set of rain gardens installed.



Parsippany-Troy Hills Municipal Building Rain Garden

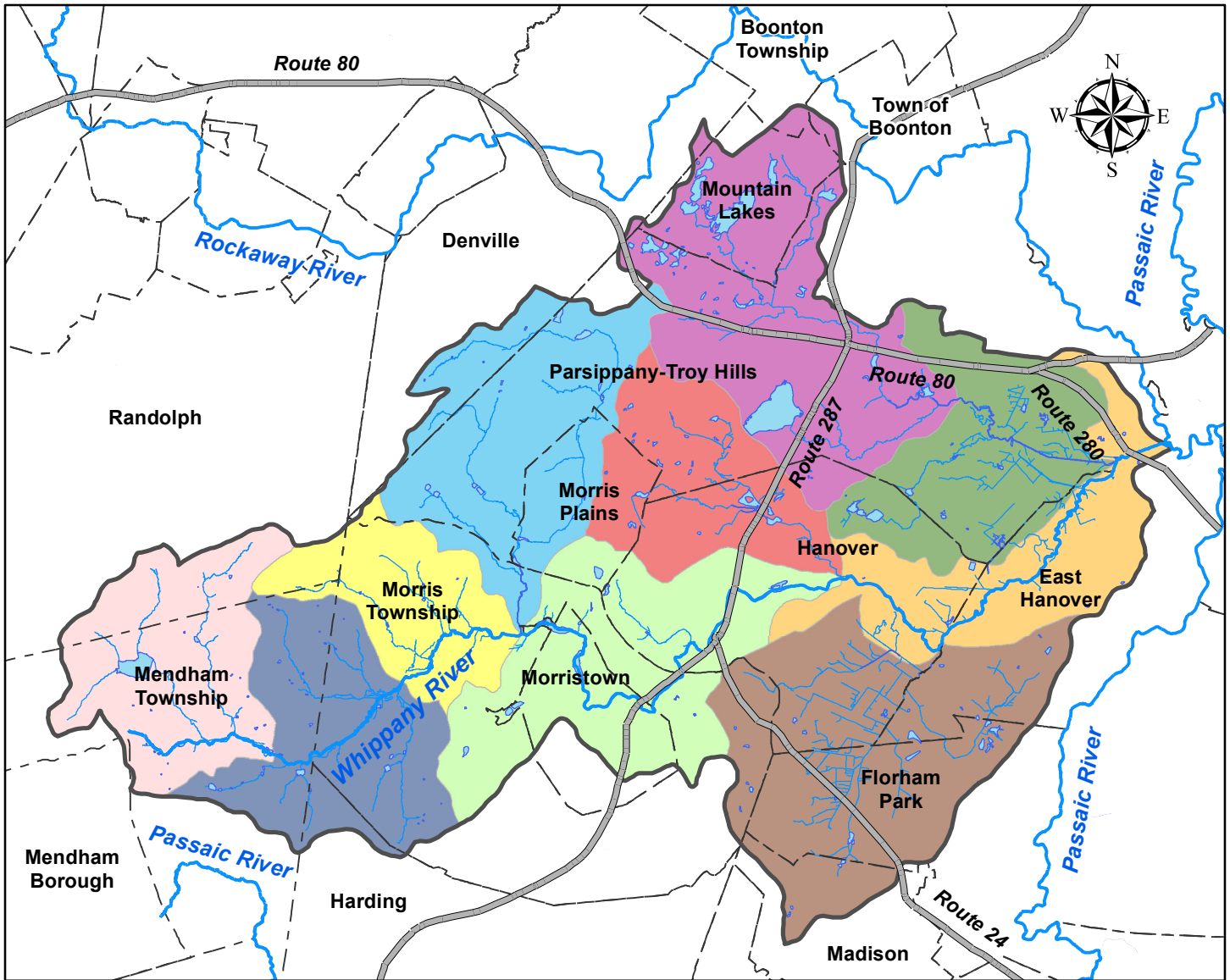
after a rain event, left

24 hours later, water has infiltrated into the ground, below



Photos by Pat Rector

# Whippany River Subwatersheds



## Subwatersheds

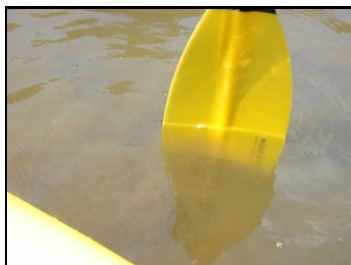
- (010) Whippany River (Above road at 74d 33m)
- (020) Whippany River (Washington Valley Road to 74d 33m)
- (030) Greystone / Watnong Mountain Tributaries
- (040) Whippany River (Lake Pocahontas to Washington Valley Road)
- (050) Whippany River (Malapardis to Lake Pocahontas)
- (060) Malapardis Brook
- (070) Black Brook (Hanover)
- (080) Troy Brook (Above Reynolds Ave)
- (090) Troy Brook (Below Reynolds Ave)
- (100) Whippany River (Rockaway River to Malapardis Brook)

0 1 2  
Miles  
1 inch = 2 miles

## Legend

- Municipal Borders
- Major Roads
- Rivers
- Lakes
- Tributaries

Map by William DiBartolo



This oar demonstrates the shallowness of Speedwell Lake

#### What is a watershed?

A watershed is the area of land that drains into a particular receiving waterbody (e.g., river, lake, stream, bay). For example, the watershed of a lake would include not only the streams entering to that lake but also the land area that drains into those streams and eventually the lake. The type of land use and its associated activities can have a direct impact on the water quality of the watershed. When it rains, stormwater carries with it the effects of human activities as it drains off the land into the local waterways.

## Speedwell Lake Sediment

WRWAC has been working on several water quality projects at Speedwell Lake since 2002 in partnership with Morristown, Morris Township, the Passaic River Institute of Montclair State University, and the New Jersey Department of Environmental Protection.

For shoreline restoration, an interceptor trench was installed and a native vegetation buffer was planted to help remove stormwater contaminants from entering the lake. The shore was stabilized by installing large boulders, which now serve as fishing platforms. A shoreline structure was rebuilt to prevent erosion and keep sediment from entering the lake.

Efforts are underway to investigate the

water quality of the lake itself, including measuring water depths, taking water samples, and estimating nutrient and sediment loading into the lake. In June 2010, representatives of the Action Committee toured Speedwell Lake in canoes and kayaks to visually assess the status of the lake.

A major continuing concern is that Speedwell Lake is extremely shallow throughout, averaging less than 2.5 ft. deep. Its shallow depth is primarily from the large amount (estimated 40 tons/month) of stormwater sediment entering the lake and from dead plant accumulation. It is considered a eutrophic lake, with excessive algae and rooted plant growth. Without additional active management steps, the lake will continue to age and fill in.

## Black Brook Subwatershed

WRWAC was asked in 2010 to participate in the Morristown Municipal Airport Master Plan update. WRWAC representatives attended a meeting of the technical advisory committee in January 2010 and again in November 2010.

As a result of discussions at these meetings, the WRWAC submitted comments in December 2010. The principal concerns

of the WRWAC center upon the Black Brook, a major tributary of the Whippany River, which forms the eastern boundary of the airport and the creation and implementation of a watershed restoration and preservation plan for this watershed.

The WRWAC will continue to be involved as the process continues.

### Make a difference, make a donation.

Please join the Whippany River Watershed today with a donation of:

- ( ) \$500 Gold Sponsor (name on sign) ( ) \$250 Silver  
 ( ) \$100 Bronze ( ) \$50 Patriot ( ) \$32 Pindar ( ) Other \_\_\_\_\_

Send your check to: WRWAC, Inc. PO Box 223 Morristown, NJ 07963-0223

The Whippany River Watershed Action Committee is a 501(c) 3 non-profit corporation and is registered with the State of New Jersey Division of Consumer Affairs as a charitable organization. We are organized for the purpose of preserving, protecting, and maintaining the land and water resources of the Whippany River Watershed.

## Troy Brook Clean Up In Parsippany

The Parsippany Veterans Park cleanup was a huge success! A dedicated group of volunteers were able to pick up approximately: 208 pounds of garbage, 32 pounds of recyclables, 1,792 pounds of solid material and one wheel. Also found were numerous pieces of large concrete debris, too large for volunteer hands which require Parsippany's heavy equipment for removal.

The benefits to the town of Parsippany include a cleaner Troy Brook, a cleaner Veterans Park and New Jersey state NJPDES credit, three points worth, for partnering in this WRWAC sponsored river clean up!



### Outreach Committee:

- Jim Baranski, Chairman
- Rich Taubald, Hanover
- Len Cipkins, Parsippany
- Douglas Vorolieff, Morristown
- Amy DiBartolo, East Hanover
- Pat Rector, Rutgers

## Earth Day

The cold and wind didn't deter either Action Committee volunteers or attendees to the Annual Earth Day event hosted by the Morris County Park Commission. For the fourth year in a row, the WRWAC "Watershed Jeopardy" game kept all ages entertained and informed of local and global environmental issues at our booth on the beach of Sunrise Lake in Mendham Township, which is located in the

Whippany River Watershed.

Also on display was information about proper disposal of medicines, informing people that the widespread idea of flushing pharmaceuticals down the toilet is no longer valid, and there are proper ways of disposal. The same drugs that may harm humans and animals on land can harm aquatic fish and animals as well.

## Fall Hike on Watnong Mountain



WRWAC hosted an educational fall hike at Mountain Way Park in Parsippany on Saturday, October 23 from 1-3 PM. Two guided 1-mile trails took hikers thru native flora and fauna while they viewed indigenous glacial rocks. The hikes followed significantly historical foot-paths including stone steps,

photo by Mary O'Keefe

believed to have been built by the Continental Army during the revolutionary war.

Mountain Way Park is located on Mountain Way between Meadow Bluff and South Powder Mill Roads in Parsippany and is in the Whippany River Watershed.

### 2010 WRWAC Municipal and County Members

- Denville Township
- East Hanover Township
- Florham Park
- Hanover Township
- Madison Borough
- Mendham Borough
- Mendham Township
- Morris Plains Borough
- Morris Township
- Town of Morristown
- Mountain Lakes Borough
- Parsippany-Troy Hills Township
- Representatives of the Morris County Board of Chosen Freeholders

### Support and Funding in 2010:

- In addition to its member municipalities and the Morris County Freeholders, WRWAC received partner support and/or funding from:
- NJ Department of Environmental Protection
- Rutgers Cooperative Extension
- Morris County Park Commission; Department of Planning and Development; MCMUA; Mosquito Commission
- New England Interstate Water Pollution Control Commission
- Trout Unlimited

## Watershed Signage Program

You have probably seen this sign throughout the Whippany River watershed. It is a symbol of the widespread and numerous brooks, streams and rivers that are tributaries of the Whippany River. The Whippany flows into the Rockaway and eventually the Passaic, a major source of industrial power in the 19<sup>th</sup> century. Today it is a major source of drinking water for numerous communities in northern New Jersey.

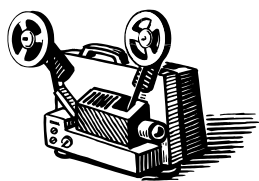
This sign represents the wildlife found in the river, on its surface and along its banks. It is meant to make people aware of the river's meandering ways as it flows through almost

70 square miles of Morris County. Its motto "Protect and Preserve" is a reminder that preserving this valuable resourceful is a responsibility of all the people who drive or walk along (and over) this river on a daily basis.

Each of the twenty four signs put up in 2009-2010 includes the website [www.wrwap.org](http://www.wrwap.org), which provides more information about the Action Committee's history, present activities and plans for the future. Businesses are invited to sponsor any sign. For more information, contact [info@wrwap.org](mailto:info@wrwap.org).



## Speaker's Bureau



As part of WRWAC's continuing effort of promoting watershed awareness, two presentations were

given to the public, one at the Whippanong Library and one to the Madison Rotary by Member Rich Taubald. Action Committee members are encouraged to enlist groups who would like to learn more about the clean water issues we all face.

## Waterbucks

The active volunteer efforts of the committee were once again recognized in December with the popular "waterbucks" program. Categories included: Perfect Attendance, Leadership, the Sign Team and Action Heroes (those members who earned over 50 waterbucks).

WRWAC received a generous donation for the event from REI located at 280 Route 10, East Hanover.



[WWW.REI.COM](http://WWW.REI.COM)

### 2010 Executive Committee:

Sal Iannaccone, Chairman,  
Hanover

Jim Baranski, Vice Chair,  
Hanover

Brian Marshall, Secretary,  
Mountain Lakes

Amy Di Bartolo, Treasurer,  
East Hanover

Peg Adams, At Large, Morris  
Township

Donna Bangiola, At Large,  
Morristown

Rich Taubald, At Large,  
Hanover

## Guest Speakers in 2010

- February: Jeff Hubert, Sierra Club - "Energy Saving at the Residential Level"
- March: Dr. Steve Souza, Princeton Hydro - Report on the 319h Non Point Source Pollution Grant
- March: Brian Marshall, WRWAC member reporting on the Great American Backyard Bird Count
- April: Tim Hill, Stop the Lines— Effect of the Susquehanna Roseland power lines on the watershed
- June: Dr. George Van Orden and William Hutchinson - "Where Our Drinking Water Comes From"
- September: Sal Mangiafico, Rutgers Cooperative Extension—"Turf Management for a Healthier Lawn"
- October: Dr. Steve Souza, Princeton Hydro—status reports on NEIWPPC and 319h grants
- November: Pat Rector, Rutgers Cooperative Extension and Ingrid Witty, Rutgers Environmental Steward - "Rain Gardens in the Troy Brook"

*The Action Committee holds nine public meetings a year at the Morris County Library on the first Wednesday of the month at 5:45 PM. Meetings are not held January, July and August.*



## Whippany River Watershed Action Committee

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Editor: A. DiBartolo

### WE'RE ON THE WEB!

**WWW.WRWAC.ORG**

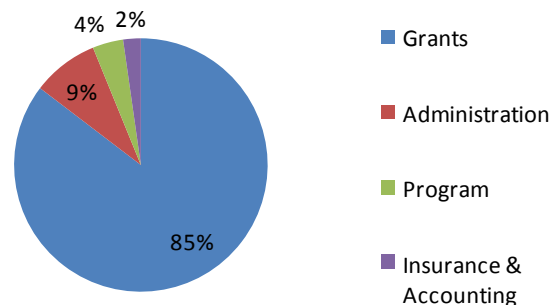
The Whippany River Watershed is an area of 69.3 square miles in north central New Jersey. It lies within Morris County and encompasses streams and lakes that flow into the Whippany River. This 16-mile long river is a tributary to the Passaic River and a sub-watershed of the Greater Passaic Watershed, one of the sources of drinking water for more than a million people in northern New Jersey.

The Whippany River  
Clean it! Protect it! Enjoy it!



Pervious pavement on this Normandy Property Office Complex parking lot infiltrates stormwater that would have been runoff. See Troy Brook RSMP, pg.3 Photo by Pat Rector

### 2010 WRWAC Expenditures



### The Committee

The Whippany River Watershed Action Committee is a 501(c)(3) nonprofit grass roots organization whose members represent twelve municipalities and the Board of Chosen Freeholders. Established in 1999 as a result of the NJ Department of Environmental Protection's first watershed management program, the committee is responsible for implementing the Whippany River Watershed Management Plan.

*This publication has been printed on 50% post-consumer recycled paper.*