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Raritan Basin
Central to New Jersey

The Basin Bulletin

Newsletter of the Raritan Basin Watershed Management Project

Ground Water In View

On April 30, the North & South Branch Watershed Management Area Committee hosted a highly informative program on ground water issues in the watershed management area. The event, held at Hunterdon County's Echo Hill Park, featured two speakers from the NJ Department of Environmental Protection and a local hydrogeologist. Robert Oberthaler, Bureau Chief for water allocation at NJDEP, talked about the laws and process for allocating water supplies among competing users. He also spoke about the current drought and its effects on water management. NJDEP regulates all water users who have the capacity to pump more than 70 gallons per minute (100,000 gallons per day). In New Jersey, all surface and ground waters are owned by the public and managed for them by the State. No user is allowed to harm the interests of other users, including the natural ecosystem, and the NJDEP water allocation system helps ensure that. Increasing attention is being paid to the interaction between ground water uses and stream flow, and to the impacts of depletive uses (water is transferred out of a watershed) and consumptive uses (water is evaporated).

In the Raritan Basin, surface water uses are about 25 percent greater than ground water uses. Over the last ten years, reported withdrawals for industrial/commercial uses have been five to six times as great as either mining or irrigation uses; all three have remained fairly stable. Power generation uses have fallen over the years, down to the levels of irrigation and mining. However, public water supply system withdrawals are by far the dominant water use in the Raritan Basin at approximately 10 times all other uses combined, averaging 80 billion gallons per year. Oberthaler predicted that competition among water uses, and especially between ecological and human uses, will increase over the years, requiring more careful allocations. Regarding the drought, Oberthaler noted that the 6-month precipitation period from September 2001 through February 2002 was the lowest since records began in 1895. Less than half the normal precipitation was received, resulting in winter and spring reservoir levels that were unusually low and will be further stressed by warm weather in upcoming months. Ground water is also stressed, with a far higher pace of domestic well replacement caused by lower ground water levels. NJDEP now manages droughts using a system of indicators, instead of just watching reservoir levels, and the record-low ground water levels in some parts of the state are a concern.

Jim Boyle, hydrogeologist with the NJ Geological Survey of NJDEP, addressed the ground water situation in the North & South Branch WMA. He provided extensive details on the ground water issues noted by Oberthaler, and provided technical insights into why these issues exist. Boyle also noted two Web sites with good information on the drought: a USGS site with hydrologic data (http:/nj-usgs.gov) and the NJDEP Drought site (www.njdrought.org). Hydrographs (water level graphs) from the Readington School observation well clearly show the impacts of droughts, including the 1998, 1999 and current drought periods. Boyle noted that the water levels never really recovered from 1998/99, indicating that perhaps we are really in a continuation of the earlier drought periods. Well replacements in this drought are at a level similar or higher to the late 1998 and mid-1999 levels, but these high levels are continuing for more months. Boyle noted that clusters of replaced wells exist in Mount Olive Township (Morris County) and Franklin Township (Hunterdon County). A majority of well replacements were in the crystalline bedrock of the Highlands area, and most of the others were in dense rock aquifers of the Lockatong and Stockton formations. All three aquifers are considered poor water supplies. Many of these wells were probably marginal (defined as wells depending on too few fractures for their water). The cumulative impacts of development on domestic wells are difficult to determine (unlike the large wells), with little research completed on these conditions.

Peter DeMicco, a local hydrogeologic consultant and former mayor of Franklin Township (Hunterdon), provided an example of water supply planning that seeks to provide water without harm to other systems. The Ridge at Back Brook golf course has developed a system that relies partly on stream water that is "skimmed" off into ponds during high-flow periods. They needed to take this step because a proposed well caused significant impacts to other wells over an unusually wide radius and would not have been approved at the proposed pumping rate. Back Brook is a "flashy" stream – much of its annual flow is naturally from stormwater runoff rather than ground water flow. Therefore, the golf course proposes to retain some of that flow to reduce harm to the stream's low flow, while using the well less often. DeMicco also showed a hydrograph for a Hopewell Township observation well where water levels never recovered from the 1998 drought, similar to the Readington Well discussed by Jim Boyle. Thanks again to Robert Oberthaler, Jim Boyle and Peter DeMicco, who provided ample information to keep people talking right through dessert!

What's Inside?

NJDEP Awards Nonpoint Source Pollution Control Grants

Commissioner Bradley Campbell of the NJ Department of Environmental Protection has approved four Section 319h grants for projects in the Raritan River Basin, based on recommendations of the Raritan Basin Council and a NJDEP proposal review team. The following projects were funded, and contracts are being developed this summer.

Cedar Brook Park, City of Plainfield, Union County ($110,000) – The Rahway River Association and its partners will implement a project including 2000 feet of stream stabilization and buffer and enhancement in the park, along a tributary that eventually drains to the lower Raritan River (see "Implementation Projects" in this Basin Bulletin for details).

Powder Mill Pond, Franklin Township, Somerset County ($47,225) – The Somerset County Parks Commission and its partners will implement a riparian restoration project around this pond, which flows into the Millstone River.

Stormwater Management Plan for the Mulhockaway Creek Watershed ($235,000) – The NJ Water Supply Authority will work with the Townships of Union and Bethlehem to develop a watershed-based stormwater management plan and model that meets all requirements of the anticipated Stormwater Management Rules (proposal expected this summer). The project will help protect the Spruce Run Reservoir.

Delaware & Raritan Canal Tributary Assessment and NPS Management ($61,215) – The NJ Water Supply Authority will work with the Township of Franklin and the Borough of South Bound Brook to identify significant NPS loads to the Canal (a major potable water supply) and design/implement remedial projects for the highest priorities.

What is the Future of New Jersey Watershed Management?

The new administration at the NJ Department of Environmental Protection is completely reexamining the watershed management process. Their direction and intent is not clear as of this writing, but many interests are weighing in and NJDEP has been changing its structure in anticipation of new directions. Here are some brief highlights of activities in and out of NJDEP through July 3rd.

In March, a few major environmental organizations called on NJDEP to scrap what they called "frivolous watershed management programs" and redirect the funds to monitor and enforce new water quality regulations. In response, over 30 environmental organizations, including most of the state's watershed associations, submitted letters to NJDEP stating their strong support for watershed management as a tool, while also noting that many improvements should be made in the existing process.

In early June, NJDEP reorganized some of its programs to consolidate functions. Of greatest interest to watershed managers was the decision to place the following programs under Ernest Hahn, Assistant Commissioner for Land Use: Water Supply, Land Use Regulation, NJ Geological Survey, Water Monitoring Management and Watershed Management. The last two units were components of the Division of Watershed Management. The Administrators for Watershed Management, Water Supply, Land Use Regulation and Water Monitoring Management all will be new to their posts this year (though all are likely to be career NJDEP employees).

The Raritan Basin Watershed Management Project completed Phase 1 (characterization and assessment) in August 2001 and started Phase 2 (development of the management plan) in early in 2002. As such, it has a significant difference from many other projects. The Raritan Project's Memorandum of Agreement with NJDEP extends to June 2003. The Raritan Project has developed a basin-wide vision statement and WMA-specific problem statements, goals and objectives, based on the seven Technical Reports. In addition, the development of implementation strategies to achieve critical objectives is well under way. NJDEP has not yet notified the WMA project managers of any changes, but changes are expected.

NJ Council of Watershed Associations

This organization coordinates the views and voices of watershed associations when addressing statewide issues. The Council developed a position paper for the new administration's transition team. They then received a foundation grant to survey watershed management interests (through the Rutgers Center for Environmental Communications) and to develop a formal position paper to NJDEP (now in draft). The Rutgers report, "Some Perceptions of New Jersey's Watershed Management Efforts," by Drs. Karen O'Neill and Caron Chess, is based on interviews with "opinion leaders" – major statewide stakeholders who were not involved in the watershed process; "contractors" – the lead project managers; and "committed participants" – stakeholders who are regularly involved in the

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Who's Who?

Steve Barnes

Steve Barnes was recently selected to chair the Lower Raritan WMA Steering Committee for year 2 of the project. Steve is also a member of the Lower Raritan WMA's Education & Outreach, Stormwater, and Watershed Restoration subcommittees, and serves as one of the Lower Raritan's two representatives to the Raritan Basin Council. He is the Assistant Director of the Rahway River Association and a resident of Highland Park. After many years as a volunteer, he has been working professionally as an environmentalist since 1993, primarily in the field of watershed based habitat restoration and management. Steve is the New Jersey Co-Chairman of the Citizen's Advisory Committee of the NY/NJ Harbor-Estuary Program and a member of the Program's Habitat Work Group. He was a staff member of the NY/NJ Baykeeper Program of the American Littoral Society and since 1994 has served on the national board of directors of the Coalition to Restore Urban Waters. He is also actively involved with the watershed planning and management effort for the Metropolitan Watershed Area (WMA 7). Steve is a lifelong New Jersey resident and a graduate of Seton Hall University. He served in the US Navy during the Vietnam War and has been involved in environmental and conservation activities the first "Earth Day" in 1972.

Steve Barnes (standing) at early Project meeting

Leonard J. Buck Gardens, Somerset County

For information on meeting dates, please go to the project Web site at **www.raritanbasin.org** or contact Sally Kean at 732/356-9344 x23 or skean@raritanbasin.org

Bob Colburn

Bob Colburn rotated from the position of vice-chair to chair for the North & South Branch Raritan WMA Committee for year two of the project. He is also a member of the N & S Branch Raritan WMA's Education & Outreach work group and Basin Education & Outreach committee. Bob is currently Associate Professor of Biology at Middlesex County College, Edison NJ. He has thirty-five years experience teaching biology at the county college level. He has a M. S. degree with a concentration in Ornithology and Ecology. During his off teaching season he runs a landscape/excavating business.

Bob is currently president of the New Jersey Chapter of the Land Improvement Contractors of America. The Land Improvement Contractors of America is a national organization dedicated to the encouragement of high standards of workmanship in resource management, land improvement practices and promoting private enterprises in land improvement. This association of contractors brings together people having similar interests and opportunities in conservation and the wise use of our natural resources.

Bob is a NJ Division of Fish and Wildlife Conservation Corp volunteer and also Acting Secretary of the Waterbird Society. The Waterbird Society is an international scientific not for profit organization dedicated to the conservation of waterbirds.

In the past Bob has worked on research projects with Manomet Center for Conservation (Harbor Herons Project), the NJ Division of Fish & Wildlife (shorebird banding and horseshoe crabs) and the Philadelphia Academy of Sciences (mtDNA studies and shorebird banding), Florida Fish and Game (tern spoil island renesting project) and the 10,300 acre McArthur Agroecology Research Ranch-Florida (Wading bird Surveys).

Many thanks to our contributors to this Basin Bulletin:
Steve Barnes, Bob Colburn, Susan Endres, Heather Fenyk, Alan Godber, Kathy Hale, Deborah Newcomb, Robert Nargi, Dan Van Abs

Committee and Council Updates

North & South Branch Watershed Management Area
On April 30, 2002 the Watershed Management Area Committee celebrated its first year's successes. At that meeting, Bob Colburn of the NJ Land Improvement Contractors assumed the role of Committee Chair. Dave Peifer and Geoff Knapp will serve as the Committee's Vice-Chairs for the next year. The April 30th meeting featured two speakers from the NJ Department of Environmental Protection and a local hydrogeologist -- Robert Oberthaler, NJDEP Bureau Chief for water allocation; Jim Boyle, hydrogeologist with the NJ Geological Survey; and Peter DeMicco, a local hydrogeologic consultant and former mayor of Franklin Township (Hunterdon). See the article titled "Ground Water in View" in this edition for details.

The May 28th WMA Committee meeting featured a presentation by Ed Apalinski, GIS Specialist II of the NJDEP Source Water Assessment Program. Mr. Apalinski spoke to the committee about incorporating strategies into the watershed management plan to protect wellhead protection areas and other source water protection areas.

All four WMA work groups have been busy developing strategies and action plans to be incorporated into the Basin Watershed Management Plan. In addition, the Education and Outreach work group had a table at the South Branch Watershed Association Watershed Festival on April 27th and is developing a list of upcoming opportunities to outreach to the public. The Headwaters & Stream Management work group planned a field trip to Union Township to see the Headwaters of the Mulhockaway Creek. That group is also in the process of finishing their Headwaters fact sheet and cover letter to be sent to municipal officials in the WMA. The Stormwater Management & Hydrology work group held a strategy development session with the Lower Raritan Stormwater subcommittee in May; a second joint meeting is scheduled for July. The Land Use & Open Space work group has been working with the Millstone Open Space and Riparian Areas subcommittee to develop open space and riparian area protection criteria for the Raritan Basin. In addition, that work group is developing a municipal survey to determine open space preservation efforts in the WMA. The WMA Committee and work group meetings are all open to the public. To join one (or more) of the work groups, please contact Debbie Newcomb at dnewcomb@raritanbasin.org or (732) 356-9344 x24.

Lower Raritan Watershed Management Area
The Lower Raritan WMA brought Year 1 of the project to a close with the selection of new leadership. Steve Barnes of the Rahway River Association was selected as Chair of the Steering Committee. Rich Weidman of Rutgers Cooperative Extension and Alan Godber, Lawrence Brook Watershed Partnership will serve as Vice-Chairs. Many thanks to our outgoing chair and vice-chair – Mike Rogers and Jeannine der Bedrosian.

The Lower Raritan's seven subcommittees have been busy! Goals and objectives for the WMA were approved by the Steering Committee and submitted to the Raritan Basin Council during the spring; the subcommittees are now developing strategies for the watershed management plan that will accomplish those goals and objectives. Development of goals, objectives, strategies and tasks (GOST) isn't all the subcommittees are working on – each group is looking at potential action items and GIS tools. Some highlights of subcommittee activities are detailed below:

- Education & Outreach – The subcommittee has been actively educating the public (see "Lower Raritan E&O Takes the Show on the Road" elsewhere in this Basin Bulletin).
- Stormwater & Flood Management – The subcommittee has been holding joint meetings with the Land Use subcommittee. The subcommittee also held a strategy development session with the North & South Branch Stormwater workgroup in May; a second joint session will be held in July.
- Watershed Restoration – The subcommittee is identifying current restoration projects in the WMA. They are also developing methods of identifying areas in need of restoration. A field trip to a restoration site is also in the works.
- Land Use Planning, Wastewater and Water Supply – The subcommittee has begun planning field trips – they hope to arrange opportunities for stakeholders to visit water treatment plants, sewage treatment plans, flood control projects and well-planned developments. Watch the Web site for information on these trips!
- Land Management and Open Space – The subcommittee has been participating in the development of the open space criteria for the Basin. In addition, members are assisting in the planning of the Land Use Impacts workshop scheduled for September (see related article in this Basin Bulletin).
- Water Quality Monitoring and Monitoring – The subcommittee is identifying resources for volunteer monitors in the WMA in an effort to expand the network of volunteers.
- Legal, Institutional and Implementation – The subcommittee is looking at issues related to the economic valuation of watershed resources and the economic benefits of watershed management. In addition, members are working to plan the Laws & Regulations workshop scheduled for October (see related article in this Basin Bulletin).

To learn more about opportunities for involvement in the Lower Raritan WMA, visit the Lower Raritan WMA web page on the Raritan Basin Project web site or contact Kathy Hale at NJWSA for more information. We're always looking for more participants!

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Raritan Basin Council

The Council recently selected five additional subwatershed projects for funding pending NJDEP approval of continued funding for the Raritan Project (see related articles in this Basin Bulletin). At their May and June meetings, the Council developed and approved by consensus a Vision Statement and rationale for the Raritan Basin Watershed Management Plan, which will now be reviewed by the WMA Committees. They also discussed methods of getting more stakeholder awareness, acceptance and endorsement of the management plan vision statement, goals and objectives this fall, by giving presentations to a wide variety of stakeholder groups who are not normally involved in the process. The Council will focus its July 30 meeting on funding sources, work plans and methods to continue the Raritan Project.

Technical Advisory Committee

The TAC is focusing on two aspects of water resources improvements. First, they are working with staff to develop scopes of work for three contracts that would provide important information for the TMDL process and for build-out analyses. These projects are dependent on continued project support from NJDEP. Second, the TAC is receiving presentations from experts in biological monitoring, to understand the potential for using these and related data to identify stream restoration needs and limitations.

Basin Education & Outreach Committee

The Basin Education & Outreach Committee has selected a series of outreach mini-grants, pending NJDEP funding. In addition, the committee is working on basin-wide education and outreach strategies for inclusion within the watershed management plan.

News of Watershed Improvement Projects

Peapack Brook Project (Susan Endres, URWA)

The Upper Raritan Watershed Association (URWA) received a NJDEP Section 319 grant for "Design and Implementation of Nonpoint Source Pollution Control Measures in the Peapack Brook Subwatershed." Peapack Brook flows through Chester Borough and Township, and Peapack-Gladstone until it meets the North Branch of the Raritan River in Bedminster. It is one of the few remaining streams in this area that is healthy enough to support a breeding population of trout, but it is threatened by development and nonpoint source pollution. The first phase of the three-year project involves a GIS assessment of the Peapack Brook subwatershed. After using this tool to help define the problems that the subwatershed is facing, URWA will work with several partners in order to correct the problems. Some of the tasks already identified are monitoring the water quality of Peapack Brook through chemical and biological sampling (already begun), planting trees along the banks of the brook, restoring eroded stream banks, and community outreach and education about nonpoint source pollution. Partners in this project include the Peapack-Gladstone Environmental Commission, North Jersey Resource Conservation and Development, USDA Natural Resources Conservation Service, and the Somerset-Union Soil Conservation District. If you would like more information about this project, contact Susan Endres at (908) 234-1852.

Union Township Adopts New Tree Protection Ordinance (Robert Nargi, Union Twp Environmental Commission)

Union Township possesses some of the highest quality streams and headwaters in the state. Union Township also provides habitat for a variety of wildlife species, including some that are listed threatened or endangered. Measures to provide continued protection of these resources for generations to come were needed. While our existing ordinances did an excellent job of protecting agricultural land, the Environmental Commission found that there was inadequate protection of our woodlands and large trees. Trees reduce stormwater runoff, soil erosion, assist in ground water recharge, save energy, provide food and shelter for wildlife, increase property values, provide a noise buffer, and most importantly help provide us with clean drinking water. A forest buffer along streambanks is of great value to stream life. Many organisms in crucial stream food chains depend on trees. The tree shade canopy also provides cooling shade and protects the stream from high light intensity that can promote growth of undesirable algae. Once these resources are disturbed it can take decades or centuries for the environmental effects to be mitigated. The Union Township Environmental Commission developed, and the Union Township Committee adopted a tree protection ordinance on April 17, 2002. This ordinance provides additional protection of woodlands and large trees. It encourages both the homeowner and developer to avoid clearing woodlands and large trees where possible. Where tree removal is unavoidable the ordinance requires replacement of trees consistent with both the size and number of trees removed. It's important to note that the ordinance doesn't prohibit tree removal or require Township approval for <u>all</u> tree removal, but rather encourages sound management practices, appropriate mitigation and Township oversight where tree removal could have significant impacts to the environment.

Environmental Cleanups in Lawrence Brook Watershed (Alan Godber, Lawrence Brook Watershed Partnership)

The waterways and riparian areas of the Lawrence Brook seem to attract litter — all kinds of foreign matter is found in these areas: bottles, cans, cigarettes, paper, tires, wheels, cans of oil, concrete, cut grass, leaves, large branches, tree stumps and many other items. These items are unsightly, often illegally dumped and discourage enjoyment of the area by people and animals. Most of these items do not return to nature in any reasonable time period and some may seriously pollute the waterways and damage the riparian area. In the past few years, the Milltown Environmental Commission has organized cleanups once or twice a year around some of its waterway mar-

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FIVE SUBWATERSHED GRANTS SELECTED

In May the Raritan Basin Council approved five proposals for subwatershed planning grants for funding under the Raritan Basin Watershed Management Project. Contracting for the projects (and the three others, see Basin Bulletin #4) will proceed once the NJDEP confirms that the watershed planning process will continue. Congratulations (and best of luck!) to the selected projects!

Watershed Restoration Planning for the Lawrence Brook Watershed

The Lawrence Brook Watershed Partnership is sponsoring the project, with Amy S. Greene Environmental Consultants. Based on the proposal and Council recommendations, this project would address the full Lawrence Brook Watershed (HUC-11 02030105130), covering 46 square miles. It will focus on the riparian areas in large part, through application of the Rapid Water Planning process (Center for Watershed Protection, 1998). The grant will fund a stream corridor analysis and identify, prioritize and suggest remedies for potential areas requiring protection or beneficial improvement of degraded stream corridor areas. Establishment and improvement of stream corridors and buffers can supply benefit such as reduction of erosion, water quality improvement, greater flood-flow protection, improved wildlife habitat and recreational opportunity. The focus issue is the rapid land usage shift from rural/agricultural to urban/suburban, accompanied by components of human usage and development. Stream corridors in the watershed have been degraded due to development pressure, loss of vegetation, increased runoff, increased impervious surface, subsequent erosion and excessive flows during storm events.

Beden Brook Subwatershed Nonpoint Source Pollution Control Planning Project

Montgomery Township and TRC Omni Corporation will focus on the Beden Brook watershed of 50 square miles within five municipalities, 58% of which is Montgomery Township, Somerset County. A region with currently diverse land uses of agricultural, wetlands, urban and forested areas, the key issue for this subwatershed is rapid urbanization and its effect on nonpoint source pollutant loading. The partners will develop local, site-specific nonpoint source pollutant loading coefficients from recently collected data, to determine effects on streams and lakes due to different types and locations of development, to set water resource goals with various stakeholders, and to initiate rapid watershed planning using the tools and techniques best suited to our issues. Finally, they will prepare and implement a Subwatershed Management Plan that will work toward sustainable growth in the Township, along with conservation of water resources and achievement of subwatershed goals. The plan will serve as an example to similar areas undergoing rapid suburban development.

Rapid Watershed Plan for Stony Brook Headwaters Subwatershed

This project, by the Stony Brook-Millstone Watershed Association, focuses on the Stony Brook Headwaters Subwatershed (Stony Brook upstream of Baldwin's Creek), which is approximately 21 square miles and includes three HUC-14 subwatersheds (02030105090010; -020; -030), located primarily in Hopewell, East Amwell and West Amwell. The area is currently not as highly developed as other portions of the Stony Brook watershed and offers a remarkable opportunity for proactive planning and preservation of natural habitat and recreational resources. SBMWA will first create a baseline assessment of existing conditions, focusing on impervious cover, land use changes and key natural resources. Second, SBMWA will convene a planning committee to refine the assessment with local knowledge and identify key water quality, water quantity and habitat issues that can be resolved in a timely and cost-effective fashion. Third, SBMWA will be responsible for writing and distributing a rapid watershed plan to reduce pollutants from identified sources. This process will be open, public and consensus-based. SBMWA will also outline key implementation tasks and track action even after the grant-has been completed.

Subwatershed Plan for the South Branch Rockaway Creek (SBRC)

The 12.4-square-mile SBRC (HUC 02030105050100) is located in Hunterdon County, New Jersey, in the Lamington River Watershed, part of the North and South Branch Raritan Watershed Management Area (WMA). Quest Environmental & Engineering Services, Inc., in partnership with Schnabel Engineering Associates, Inc., Clinton Township, Lebanon Borough and Readington Township, proposes to develop a Subwatershed Plan for the SBRC. This plan will be developed using the process described in the Rapid Watershed Planning Handbook published by the Center for Watershed Protection (CWP) to identify the critical water-related issues, to determine which of them can be addressed in a reasonably short time period, and to develop strategies to improve the current situation. The primary issues include: potable water quantity and quality; stream health as impacted by point and non-point pollution sources; loss or degradation of riparian areas and associated wetlands; stormwater management; and percent impervious cover. It is anticipated that other concerns will be raised during the public participation process. An Action Plan will be developed for the review and endorsement by the municipalities and other stakeholders. The Action Plan will focus on short-term, easily implementable recommendations.

Watershed Plan for the Upper South Branch of the Raritan River

The Township of Mount Olive, in partnership with South Branch Watershed Association, the Association to Protect and Preserve Beautiful Budd Lake, Inc. (APPBBL, Inc.) and Princeton Hydro, is sponsoring this proposed project. It focuses on the upper subwatersheds of the South Branch of the Raritan River (HUC-14's 02030105010030 and -040), which includes Budd Lake. The project will develop a watershed plan for that area through three main tasks. First, key land use, topographic and natural resource data will be collected, reviewed and analyzed and using Geographic Information System (GIS) methodologies. Second, stormwater outfall locations will be located using Geographic Positioning Systems (GPS), along the shoreline of Budd Lake and the main branch of the South Branch of the Raritan River, located within the municipal boundaries of Mount Olive. Third, a Watershed Plan for the area will be prepared. The plan will prioritize, as determined by the watershed data, implementation projects within the sub-watersheds to cost effectively reduce and manage non-point source pollution loads. In addition, the plan will also provide the information required for the Township to pursue State and Federal funds for the implementation of the recommended projects.

Education and Training Programs

Land Use Impacts Workshop (September 2002)
The North & South Branch & Lower Raritan WMA stakeholders are planning a land use workshop for September 30, 2002. The workshop, to be held at the Somerset County 4H Center in Bridgewater, will focus on how land use changes affect watersheds and how our management plan strategies can mitigate these changes. Planned topics include management of existing land uses, site design techniques and smart growth issues. BMPs will also be on the agenda – what they can and can't do, innovative BMPs, and successful local BMPs. The workshop is being designed to provide stakeholder participants with information that will assist them in writing better strategies for the management plan.

Laws, Regulations and Watershed Management Workshop (October 2002) (Heather Fenyk)
Interested in how to work with existing federal, state, county and local regulations to implement watershed management? Want to learn more about pertinent laws and regulations that affect the implementation of watershed management plans? Raritan Project stakeholders are planning a workshop in late October to discuss these topics and more! Please plan to join us and a cast of savvy experts on Wednesday, October 30th at the Somerset 4H Center in Bridgewater. Topics to be discussed include: the Clean Water Act, the NJ Stream Encroachment Regulations and how they impact restoration projects, new state stormwater rules, the county-level WQM Plan process, municipal land use law, local regulations regarding stream ordinances, and how to draft and pass ordinances or resolutions specific to watershed management. Details for both events will be on the Raritan Project website (www.raritanbasin.org), or call (732) 356-9344.

Lower Raritan E&O Takes the Show on the Road
The Lower Raritan Education & Outreach Subcommittee has been busy planning and attending education and outreach events. Members of other Lower Raritan subcommittees help staff the events. Examples include: Project WET Workshops: Project WET is an interdisciplinary teacher education program of that emphasizes awareness, knowledge and stewardship of water resources. The E&O subcommittee prepared a presentation about the Raritan Project and watershed management, and gave the presentation to teachers at workshops at the Somerset 4-H in Bridgewater, at Bristol Meyers Squibb in New Brunswick, and at Middlesex County Utilities Authority in Sayreville; Cook College Ag Field Day: The E&O subcommittee prepared a display for use at outreach events; the inaugural event was the annual Ag Field Day at Cook College. Subcommittee members staffed the booth throughout the day. Beth Sawickie, the Lower Raritan Watershed Ambassador, spent the day using the Enviroscape model to educate children (and their parents!) about the impacts of NPS pollution. Elizabethtown Water Company donated water conservation kits; Future Events. The subcommittee and the display will be at the Rutgers Garden Open House on July 27, the Middlesex County Agricultural Fair at the beginning of August, and possibly the Raritan River Fest in September. Look for subcommittee representatives at these and other events!

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Future of Watershed Management (cont'd)

process. Nearly three-fourths "felt strongly the watershed management program should be continued in some form." However, there also was strong support from nearly all interviewees for changing the program in some way, but the suggested changes were often contradictory. Views of NJDEP's role varied considerably, with some having the view that NJDEP was "using watershed management to shirk responsibility for…generally making tough decisions."

The NJCWA recommendations, released on 17 July 2002, generally focus on improving NJDEP's efforts to develop policy, assess statewide conditions, establish thresholds and objectives for water resources management at the watershed scale, and link watershed management to smart growth initiatives. NJDEP would also identify model approaches to solving watershed problems and develop a "report card" approach to tracking outcomes. In addition, NJCWA recommends a major focus on implementing feasible ideas quickly, starting at the subwatershed scale but including broader projects where necessary. (See www.thewatershedinstitute.org for more information.)

What Next?
There is no certainty in the watershed process at this time. Budget constraints and a wide variety of views inside and outside NJDEP have combined to cloud the future. The NJ Water Supply Authority is committed to working with NJDEP and the Raritan Basin stakeholders as a partner to achieve watershed protection and restoration over time, and strongly supports an improved approach to watershed-based management as a tool to achieve those objectives.

Implementation Projects (cont'd)

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gins, focused on the most serious problems first. The Lawrence Brook Watershed Partnership started organizing cleanups two years ago in South Brunswick and East Brunswick along the eastern edge of Farrington Lake and Davidson's Mill Pond Park. This April, the Partnership and the NJ State Federation of Sportsmen's Clubs organized a much larger cleanup around all sides of Farrington Lake, which is almost 10 miles in circumference. More than a hundred people took part, including the public works departments of three communities and scout troops from two communities. A very large amount of trash was removed, a considerable portion of which had probably been there for many years. It is hoped to repeat this type of massive cleanup each year and maybe other areas of the watershed will be next in line. The next cleanups will be in October/November in South Brunswick and in Milltown.

Storm Drain Marking in New Brunswick

Approximately twenty 6th grade students from the Lord Stirling School in New Brunswick spent June 4th learning about nonpoint source pollution and doing their part to improve the watershed. The students spent the day with Beth Sawickie, the Lower Raritan Americorps Watershed Ambassador and other project representatives. Activities included an Enviroscape demonstration, storm drain marking in the Commercial Ave. area of New Brunswick around the school, and a litter cleanup that yielded six bags of trash. The storm drains were marked 'No Dumping, Drains to River' to remind people where their stormwater goes. The students spent the afternoon in Boyd Park along the Raritan River and D&R Canal. Our thanks to Beth for all her hard work in the past year! The Lord Stirling students were just one of the many groups she worked with. The 2002 watershed ambassador will be available for Enviroscape demonstrations and other projects with schools and community groups in late September.

Tom Baxter Retires

Thomas G. Baxter, Executive Director of the NJ Water Supply Authority since 1994, has announced his intention to retire this summer. Tom was one of the driving forces behind the Raritan Basin Watershed Management Project, helping to organize the initial project team in 1996 and spearheading negotiations with NJDEP in 1998 regarding the Phase 1 agreement . Prior to serving as Executive Director, Tom was Chief Engineer of the Authority under Rocco Ricci, the Authority's first Executive Director. Tom had a long career with Metcalf & Eddy before he joined the Authority, including projects to design and build the Manasquan Reservoir. Our many, many thanks and best wishes to Tom!!!!!!!

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GOT NEWS???

If you have an article for the next Basin Bulletin, please contact Christine Hirt @ 609/777-1406 or christine.hirt@dep.state.nj.us

To receive copies of this newsletter, please contact Sally Kean at skean@raritanbasin.org or call 732/356-9344 ext. 23.