



Sustainable Raritan River Collaborative
Action Report
2009-2010

RUTGERS

Edward J. Bloustein School
of Planning and Public Policy

RUTGERS

School of Environmental
and Biological Sciences

Credits

This report depicts a collection of efforts from individuals and organizations. Thank you to everyone who submitted reports on their work during the past year.

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The restoration and future protection of the Raritan River depends on a collective concerted effort by organizations, government decision-makers and the public to transform the river into a vital centerpiece of our future economy and our ecological wealth. Coming together in 2009, we formed the Sustainable Raritan River Collaborative, linking nearly three hundred people from academia, non-profit organizations, preservationists, boating enthusiasts, businesses and governments to create and implement an agenda for change.

In June 2010, over 150 people participated in the 2nd Annual Sustainable Raritan River Symposium. The people attended the conference to stand together for the restoration of the Raritan River and to keep the momentum of the collective efforts moving forward.

Thanks to the efforts of the groups highlighted in this report, the necessary change is starting to happen. The key for the coming year is to ensure continued progress, advance ambitious research, and facilitate greater engagement across the region. Those of us who work for and care about the Raritan commend efforts and welcome additional partners to make this restoration a reality.



Background

On May 15, 2009 an overflow crowd of people representing numerous interests in the Raritan Basin attended the inaugural conference for the Sustainable Raritan River Initiative (SRRI). The conference brought together stakeholders as the Sustainable Raritan River Collaborative to create the first annual action agenda and to work together to implement restoration and conservation of the Raritan River in 5 key areas within the Raritan River Basin. SRRI arose from the expressed need of stakeholders to coordinate, communicate, and expand efforts across the basin to enhance both the economic and ecologic value of the Raritan River Basin. The 5 areas of focus for SRRI are:

- Public Access
- Hazardous Site Remediation
- Water Quality
- Stewardship
- Balancing Redevelopment and Restoration

The conference created a dialogue among these stakeholders about how to identify and approach local and regional concerns within the basin in these categories. Working groups were established to develop white papers outlining objectives and tasks necessary to achieve this broad goal. These papers informed the production of the Sustainable Raritan River Action Plan. The Action Plan is the living document for guiding the SRRI that outlines 10 long-term goals with approaches to meet the current needs for the SRRI. In addition to the SRRI, the conference established the Sustainable Raritan River Collaborative (SRRC), an affiliation of organizations, businesses, and agencies interested in the preservation and protection of the river as a regional asset.

The Sustainable Raritan River Collaborative is an evolving network of these individuals, organizations and agencies that has formed in order to oversee and promote the ongoing efforts to restore and protect the future of watershed. In the past year, approximately 100 organizations, including governments, non-profits and business interests have joined the Collaborative. Since the 2009 meeting, these collaborating organizations have answered these concerns with progressive action. The formation of the Collaborative has increased communication opportunities and familiarity among these groups, enabling greater cooperation and expansion of efforts across the basin.

Members of the Sustainable Raritan River Collaborative

Environmental Organizations

American Littoral Society
 Association of New Jersey
 Environmental Commissions
 Conservation Foundation
 Conservation Resources, Inc.
 Conserve Wildlife Foundation
 Duke Farms
 East Coast Greenway Alliance
 Edison Wetlands Association
 Kingston Greenway
 Lawrence Brook Watershed
 Partnership
 New York/New Jersey Baykeeper
 Raritan Riverkeeper
 South Branch Watershed
 Association
 Stony Brook - Millstone Watershed
 Association
 The New Jersey Audubon Society
 Trust for Public Land
 Upper Raritan Watershed
 Association

Business Partners

American Water
 Bayshore Recycling
 Colgate Palmolive
 Commerce and Industry
 Association of NJ
 Gannett Fleming
 Great Ecology & Environments
 GEI
 J.G. Petrucci Co.
 Johnson & Johnson
 Middlesex Water Company
 MWH
 Princeton Hydro
 PSEG
 Rutgers Purchasing
 Sanofi-Aventis
 Somerset County Business
 Partnership
 The Louis Berger Group
 Vertices, Inc.

Foundation Partners

Mushett Family Foundation
 Geraldine R. Dodge Foundation
 PNC Foundation

Academic

Rutgers Preparatory School
 Rutgers Edward. J. Bloustein
 School of Policy & Planning
 The National Center for
 Neighborhood and Brownfield
 Redevelopment
 The Rutgers Center for Green
 Building
 Rutgers School of Environmental
 and Biological Sciences
 NJ Water Resources Research
 Institute
 Rutgers Cooperative Extension
 Rutgers Environmental Research
 Center
 Rutgers Institute of Marine and
 Coastal Sciences

Regional Organizations

Commerce and Industry
 Association of NJ
 Crossroads of the American
 Revolution
 NJ League of Municipalities
 Regional Planning Association
 RideWise
 Somerset County Business
 Partnership

State and Federal

(D&R Canal)
 (Green Brook Flood Control
 Commission)
 New Jersey Water Supply
 Authority
 NJ Department of Environmental
 Protection
 Stony Brook Regional Sewer
 Authority
 FEMA
 National Oceanic and Atmospheric
 Administration
 United States Geological Survey
 US Army Corps of Engineers
 USDA– NCRS - North Jersey RC&D
 US EPA

County

Somerset
 Union
 Hunterdon
 Morris
 Middlesex (Improvement
 Authority, Economic
 Development, Utility Authority)
 Monmouth
 (Mercer)

Municipal

Bernardsville
 Bound Brook
 Bridgewater
 Califon
 Chester
 East Amwell
 East Brunswick
 Edison
 Franklin
 Highland Park
 Hillsborough
 Manville
 New Brunswick
 North Brunswick
 Perth Amboy
 Piscataway
 Raritan
 South Plainfield
 Woodbridge

Introduction

This report details the accomplishments of SRRC members between May 2009 and June 2010 to coordinate, communicate, and expand efforts across the basin to enhance the economic and ecologic value of the Raritan River Basin. Using the Action Agenda as the guiding document for the SRRI, this report highlights the activities within the basin as they address the over-arching ten goals laid out in the Action Plan. These ten goals are:

1. Increase Awareness and Use of River Access Points and Trails
2. Upgrade Current River Access Points and Develop a Plan for Future Recreational Uses
3. Protect and Preserve Habitat and Biodiversity in Our River Ecosystem
4. Adopt the 3Rs: Restore, Rehabilitate & Regenerate
5. Maintain and Manage Preserved Open Spaces
6. Remediate Contaminated Sites
7. Prevent Future Pollution
8. Significantly Reduce Stormwater Runoff
9. Promote restoration and protection plans to address local sub-watersheds (HUC-14)
10. Balance Redevelopment to Sustain Ecological Values in the Raritan River Watershed

This report highlights the efforts of Collaborative organizations, providing examples for fellow stakeholders within the basin to follow in addressing key concerns within the region. In the year since the Collaborative first gathered, members have made significant progress in virtually every area. This snapshot offers a status report on the state of the watershed in 2010. Together with our initial report, *The Raritan River: A Work in Progress*, this document updates that report, and takes a basin level perspective on the progress in the region.

The final purpose of this report is to highlight needs and informs the future direction of the SRRI. Since its start much progress has been made, but new issues, such as those faced by the efforts to restore water quality through the reintroduction of oysters in Raritan Bay, continually surface. This report creates a forum to reflect on the Action Agenda and reform the tasks and objectives to satisfy current needs.

Members of the collaborative who contributed to this report provided summaries of their efforts to address the checkpoints on the Action Agenda. We also asked them to include any projects that addressed the broad goals of the SRRI, but were not reflected in the Action Agenda as a means of guiding priorities for the upcoming year. The body of the report summarizes these actions under the ten goals of the Action Agenda. These actions collectively create a complex and overlapping network of ideals to improve a large and diverse geographic area.

Many of the activities detailed in any given section of the report apply to more than one checkpoint on the Action Plan. For this reason the report is organized according to the ten broad categories. Following the report is a complete list of each checkpoint on the 2009-2010 Action Plan which lists the corresponding activities as indicated by the submitting organization. The individual submissions, as received, are listed alphabetically in the closing section.

Report on the Action Plan Goals

1. Increase Awareness and Use of River Access Points and Trails

A primary objective for members of the collaborative is to increase awareness and use of existing access points along the river. The Raritan River has a number of access points and trails along the corridor and to the water's edge, yet recreation on the Raritan, especially in the lower basin, appears notably lower than other regions in the state. One potential factor is a lack of public awareness. Enhancing public access and recreation awareness throughout the basin is a top priority for the collaborative. Increasing familiarity with available access points, trails and safety information encourages recreation and may foster a deeper connection between communities and the Raritan River. Increasing public awareness for recreating opportunities within the region may also have positive economic impacts. Recreation opportunities generate receipts from tourists and retain income from residents that previously left the region to recreate.

Over the past year members of the SRRC have advanced projects to achieve this critical goal. In Fall 2009 the Sustainable Raritan River Collaborative Public Access working group organized the first Fall Float on the Raritan River. This inaugural event brought over 60 paddlers of various ages and skill levels to a 6 mile calm water stretch of the river between Piscataway and New Brunswick. The event was coordinated by Rutgers, in cooperation with **Edison Wetlands Association (EWA)**, **The Raritan Riverkeeper**, and **the NY/NJ Baykeeper** who provided kayaks and canoes for those individuals who do not own their own boats to join in the float. The event demonstrated the ease and beauty of paddling on the Lower Raritan River.

Conscious of the need for continual and varied opportunities to get out on the river, the **NY/NJ Baykeeper** and the **Raritan Riverkeeper** launched a kayaking program. The 2010 program included a series of canoeing and kayaking trips in the region. Using a fleet of kayaks and canoes Baykeeper purchased with a grant from **EWA**, **The Raritan Riverkeeper** will lead beginners and experienced paddlers onto stretches of the river that feature vibrant wildlife populations including osprey, bald eagles, and peregrine falcons. The **NY/NJ Baykeeper** is also hosting two EcoCruises aboard a chartered fishing boat during Summer 2010. These trips offer an opportunity to witness and explore the natural resources in Raritan Bay.

The efforts to increase awareness of recreation opportunities extend beyond bringing individuals to the water for arranged tours. The Public Access Working Group supported efforts by the Raritan Riverkeeper to produce a trail guide focused on recreation opportunities on and along the water is critical to promoting recreation along the Raritan. The working group also recommended the river orientated trail guides have a web-based component. Creating a web-based application to inform the public about access and recreation opportunities including kayak and boat rental information will improve awareness in the basin of these opportunities.

In 2009 the **Raritan Riverkeeper** took the first steps towards fulfilling this need with the Raritan River Access program. This program provides information for on river recreation opportunities in the Lower Raritan both in paper and electronically. A trail map detailing Raritan River launching points and dams from the confluence of the North and South Branches and the mainstream of the Raritan River to Raritan Bay and from Branchburg to Perth Amboy. The map is tear-resistant and waterproof, designed for field use. The map includes GPS coordinates and landmarks to assist paddlers in navigating the river.

Additionally, the program features a twenty-four paged book that includes site photos and satellite images of each site, as well as key safety and emergency information. The access information and map are available electronically to the public through the Raritan Riverkeeper webpage on **NY/NJ Baykeeper** website (under Raritan Riverkeeper at www.nynjbaykeeper.org). The Raritan River Public Access program lays the foundation for future expansions in trail guides in the region and increasing awareness of the opportunities that currently exist in the basin.

Producing trail guides and providing resources on the internet to increase public awareness of recreation opportunities are key steps to enhancing community engagement with the river, but these efforts still require some initiative from the public to search and find the information. Recognizing the importance of reaching out to the public directly in order to bridge this potential communication gap, the Raritan Riverkeeper participated in river-oriented community events including the 2009 Raritan River Festival in New Brunswick and other festivals and fairs within the Raritan River Basin. Community events provide an opportunity to promote the achievements in increasing public access awareness made by members of the Sustainable Raritan River Collaborative.

2. Upgrade Current River Access Points and Develop a Plan for Future Recreational Uses

In addition to promoting the current access points, the Sustainable Raritan River action agenda calls for enhancing recreation opportunities and establishing a regional recreation plan focused on the river. The tasks outlined by the Public Access Working Group include improving signage to/from access points and trails and upgrading amenities along these areas to maintain and improve accessibility. The second part of this goal addresses the need for a regional planning approach to recreation within the Raritan Basin. The action agenda calls for an assessment of current land uses and coordinating a recreation plan for the entire corridor. During the 2009-2010 year, steps to address these tasks were taken by members of the Collaborative.

Among the highlights this year, the **Trust for Public Land** (TPL) initiated an inventory in the City of New Brunswick of existing parks and an evaluation of the need and opportunities to improve the network of parks within the city. This project is an example of the work TPL has done within the Lower Raritan Watershed to increase public recreation opportunities and connections within the region. The assessment recognizes the importance of planning a network to promote recreation, not to view parks as isolated pockets of recreational opportunities.

Somerset County Planning Board (SCPB) has published the County Park, Recreation and Open Space Master Plan. A key element is the Raritan River Greenway. The Somerset County Engineering Parks Section began working on the reconstruction and repair of the Raritan Power Canal, including the walking trail along the canal embankment. In addition to maintaining and improving the current parks and trails along the river, **Somerset County Parks** continues to work with partners in the region to expand the Raritan River Greenway recreation opportunities. This year, the county acquired three key properties along the Raritan River in Bridgewater Township, Raritan Borough and Somerville Borough. These key acquisitions of six and half acres created needed lots for the continuation of the Raritan River Greenway bikeway and trail system. The Bridgewater and Somerville parcels have river frontage while the Raritan parcel is in close proximity to a river access point and will expand on an existing park area along the river. Additionally, **Somerset County** moved towards connecting the Raritan River Greenway to the Peter's Brook Greenway path system. A consultant was hired to design a new half-mile length of the Raritan Greenway Bikeway in Somerville Borough from Route 206 to Peter's Brook. This section will bridge the two bike paths and extend opportunities to reach the Raritan River further north in Bridgewater Township.

This year also saw advancement on long-term expansion of public access in communities

previously walled off from the river. The **Bound Brook** Downtown Urban Design Plan, April 2010 drastically shifts the landscape and orientation of the town to embrace its proximity to the Raritan River. The proposed plan includes a boating and fishing access, pedestrian and bicycle pathways between the downtown area and the river, and other public amenities along the riverfront.

EWA and **Edison Township** also progressed in enhancing the public engagement with the recreation opportunities in the basin with the opening of a riverfront trail in April 2010. This project opens eight miles of the Raritan River that had previously been sealed from the public as landfills. The Raritan Landfill Walkway acts both as advancement in public access and a demonstration of innovative planning on brownfield and contaminated sites.

Assessing new access points demands accurate and complete spatial understanding of current landuses and their connectivity. **Somerset County** uses GIS technology to create and maintain a database of preserved lands for the entire county. The database includes federal, state, and local preserved lands, as well as deed-restricted farmland. Such efforts to compile and maintain regional spatial information records could be quite beneficial in future efforts to determine appropriate lands for expanding recreation opportunities and improving connectivity.

The **Edward J. Bloustein School** examined recreation opportunities in the Lower Raritan on a regional scale through the Sustainable Raritan River Studio. The studio course analyzed recreation opportunities and accessibility along the river corridor. The subsequent report detailed recommendations to Somerset and Middlesex counties as well as the local municipalities to develop a regional uniform sign ordinance that would establish an identity for recreation opportunities within the basin. In addition to improving signage, standardizing the signage fosters a familiarity and association of these access points and trails with the river and illustrates them as a recreation network instead of isolated points and locations.

An underlying purpose of this objective is to draw more community members to the water's edge. One means to achieve this goal is increase the vitality of commercial development along the river that provides opportunities for entertainment and enjoyment. To encourage water-related commercial development along the Raritan River, **Raritan Riverkeeper** commenting against the U.S. Coast Guard change in bridge regulation. The proposed change would allow the Raritan River Railroad Bridge between Perth Amboy and South Amboy to remain closed to marine traffic during commuter rush hours.

3. Protect and Preserve Habitat and Biodiversity in Our River Ecosystem

Preserving habitat and biodiversity with the region is a core priority for members of the collaborative. The biodiversity of the river ecosystem is critical for the appeal of the region as a beautiful, green, and thriving environment. Efforts of members in the collaborative to accomplish this goal have extended beyond the checkpoints laid out in the Action Agenda to include cleanup efforts throughout the basin to aid in the preservation of habitat, as well as educate and engage the public.

A key element to this goal is gathering baseline data of the biodiversity and habitat within the basin. This year members of the collaborative have collected significant data on the wildlife and natural resources across the region. **The Upper Raritan Watershed Association (URWA)** GIS staff completed an Environmental Resource Inventory (ERI) for the entire 194 square mile Upper Raritan Watershed Region. The inventory presents 28 data layers including Land Use-Land Cover, Steep Slopes, SSA's, HUC 14's, Surface Water Quality Standards, Contaminated Sites, Critical Sub-Watersheds with Impervious Surface Less than 10% and Highlands Water Availability. Upper Raritan Watershed GIS maps are available through the **URWA** website and provided to citizens and municipal partners upon request. Additionally, **NJ Audubon** conducted bird surveys along sections of the lower

Raritan River with transportation provided by the **Raritan Riverkeeper**.

Rutgers University continues to invest in research and the disseminate information to broad audiences. The **Edward J. Bloustein School of Planning and Public Policy** and the **School of Environmental and Biological Sciences** co-sponsored an event in April to showcase key research within the region and establish connections between the student community and practitioners. Several researchers presented findings and projects on stormwater, avian and wildlife populations, climate change and other relevant issues within the basin that directly correlate with the need to protect and preserve biodiversity in the basin. Using Rutgers as a vehicle to communicate with students offers an opportunity to engage a vibrant community of potential advocates and volunteers for the efforts of SRRI. The event in April created a networking opportunity for employers and students interested in jobs and internships.

In addition to assessing the status of biodiversity, land preservation is a critical component of the effort to protect habitat in the region. Many members of the collaborative have expanded their land acquisitions during the 2009-2010 year. A number of these projects are highlighted under other SRRI goals, as land preservation accomplishes several objectives for the initiative. **Somerset County Planning Board** implements the County Farmland Preservation Program. In the past year over 58 acres came under protection on the Maple Lane Farm in Hillsborough. **Lawrence Brook Watershed Partnership**, partnering with South Brunswick Township and Easter Villages Association successfully preserved 180 acres on the Van Dyke/Pulda Farmland from warehouse development. This critical site located next to Pigeon Swamp State Park, is adjacent to the only section of Category 1 waterway in the Lawrence Brook watershed.

For the **URWA**, land preservation is a key component of the goal to protect habitat. **URWA** holds 33 conservation easements on 880 acres; owns and manages 11 preserves (450 acres). In 2009 **URWA** partnered to preserve 86 acres of open space along the Middle Brook in Bedminster and added 6 acres of grassland habitat that is contiguous with the Association's Fox Hill Preserve located in the Cold Brook Watershed, Tewksbury. Additionally, **URWA** is in the process of developing a conservation plan that identifies priorities and preservation goals for source water protection throughout the Upper Raritan Watershed.

TPL and the **New Jersey Land Conservancy**, in partnership with the **Morris County Preservation Trust**, secured a major 134-acre property near the headwaters of the South Branch Watershed in Mount Olive at the Washington Township border, in addition to protecting the land for habitat, they will restore wetland transition areas and streambanks to protect the stream from erosion and further protect the waters of the Raritan River.

Within the ecosystems of the Raritan, protecting biodiversity extends beyond land management. The **National Oceanographic and Atmospheric Administration (NOAA)**, the **New Jersey Department of Environmental Protection (NJDEP)**, the **Raritan Riverkeeper**, **U.S. Fish & Wildlife Service**, and others have partnered in the "Fish Passage Initiative" for the removal of dams impeding anadromous fish from reaching appropriate breeding areas. The Raritan River Fish Passage Initiative was conceived through a partnership between **NOAA** and **NJDEP** to make the Raritan River and its tributaries passable to anadromous fish and the American eel. The coordinated effort produced a restoration opportunities database and mapping product, and prioritized the lowest dams in the watershed for removal or passage. The priority dams are the Calco Dam at Bound Brook, the Nevius Street Dam at Raritan, and the Roberts Street Dam in **Hillsborough**. **Stony Brook Millstone Watershed Association** received funds to pursue a dam removal feasibility study for two dams on the Millstone.

Both of these efforts to protect habitat impact the landscape directly. Members of the collaborative also seek to protect habitat through the promotion of public education, awareness, and interest in preservation efforts. **URWA** continues to engage association members and the

public in stewardship efforts. A number of the organization's projects benefit habitat protection efforts. Member of the Keep It Green Committee that worked to educate the public about the need to vote "yes" on the ballot question to fund the Garden State Preservation Trust as well as. **URWA** also coordinated a fundraising event to support the public campaign, met with members of the legislature, wrote press releases and letters to the editor. Additionally, **URWA** has conducted workshops, volunteer trainings, and developed an interactive website to share information with project partners and the public to raise awareness about the need to protect native flora and fauna from new invasive plant species. **URWA** holds a monthly information breakfast called "Wake Up Call", which offers education and outreach on subjects that promote sound environmental planning and increase environmental awareness.

Members of the collaborative also continue to organize regular cleanups of the basin. **The Somerset County Park Commission** Ranger Department worked with **Raritan Borough** on an Earth Day cleanup along the river. **WildNewJersey.tv** partnered on over a dozen volunteer cleanups within the Raritan Watershed. **EWA** also worked with **Rutgers University** to coordinate a river cleanup event to mark World Water Day. In April 2010, the **Franklin Township Environmental Commission** co-sponsored, with the **Stony Brook- Millstone Watershed Association**, a cleanup of Mile Run, a tributary of the Raritan River. Mile Run forms the border between Franklin Township in Somerset County and the City of New Brunswick in Middlesex County. It is a relatively wild, natural area in the midst of urban development, with a steep ravine for most of its length. The cleanup was well attended with approximately 20 residents and students participating. A large quantity of litter and debris was collected and disposed of. These events protect habitat and engage the public, which furthers the effort to reconnect the community with the ecological value of the Raritan River Basin.

4. Adopt the 3Rs: Restore, Rehabilitate & Regenerate

The fourth objective of SRRI is to ensure the principles of restoration, rehabilitation and regeneration and prominent in development, redevelopment and preservation actions within the basin. The checkpoints listed on the Action Agenda under this broad objective focus on habitat and stewardship data compiled and for use by planners, land managers, and other organizations involved in these actions. Members of the collaborative have advanced these efforts throughout the region.

The first task outlined by the Action Agenda under the fourth goal is to use volunteers to verify critical habitat. **URWA** conducts a *Friends of the Preserve Program* that recruits neighbors of preserved parcels to monitor, inventory and conduct stewardship projects, including trail maintenance, invasive species removal, and riparian buffer plantings. Additionally, **URWA** staff members held an annual meeting to educate and train volunteers who essentially adopt and steward a preserve. In 2009 the Association focused on the Fox Hill Preserve (Tewksbury), the Rolfes Tract (Bernards Twp.) and the Burnt Mills tract (Bedminster). These programs leverage volunteer resources to ground-truth project efforts and efficacy and foster a connection between the public and the ecology of the region.

URWA also coordinates annual stewardship events through Corporate "Days of Caring", School Community Service Events, Scout Projects, Stream monitoring training workshops and Community Stream Cleanups. Each event includes an educational component, hands-on training and a take-away. Examples of this past year's stewardship events include: a riparian restoration project with Centenary College students; a 3- town stream cleanup (75 citizens); an invasive plant removal project with Johnson & Johnson; trail maintenance, invasive removal and water monitoring along the North Branch with Bernards High School students; establishing a rain garden with the Raritan Highlands Compact and scout volunteers. The **Somerset County Parks Commission** also utilizes volunteers, frequently Eagle Scouts and other community members, to install bird houses and bat houses,

remove invasive species, and other projects that aid in habitat restoration.

The **NJDEP Office of Compliance and Enforcement** made important strides on ensuring restoration, rehabilitation, and regeneration occurs on appropriate sites throughout the watershed. From May 1, 2009 to May 28, 2010, they required the restoration of 48,000 square feet of Flood Hazard Area Riparian Zone; the restoration of 103,735 square feet of Freshwater Wetlands; the restoration of 56,800 square feet of Transition Area; the contribution of \$2,850 to Wetlands Mitigation Banks; and the restoration/mitigation of 7,804 square feet of land area. These efforts are critical to the revitalization of the watershed's ecosystems and the future protection of the region.

Duke Farms, under a Natural Resource Conservation Service (NRCS) program, established a Wetland Preserve Program for 395 acres along the Raritan. In 2010 work began with planting of 16,000 native trees and shrubs and the removal of invasive species from the area. Duke Farms removes invasive species and plants natives throughout the property. Plantings of over 140,000 shrubs and herbaceous plants strengthen regional ecosystems, and a number of substantial lawns converted to pollinator meadows flush with deep-rooted warm season grasses and wildflowers increase potential for maintaining the prominence of native species. Additionally the installation of three vernal pools secure habitat for amphibian and insect species.

Duke Farms also ensures the lake system enhances the environment through the restoration of native species along the lakes, and installing floating vegetation on the waterways. The installation of 25 vegetation islands took place this past year. These islands and the other work performed by members of the collaborative demonstrate the efforts to restore the basin to a productive habitat, a healthy environment, and a stable floodplain. To this end, Duke Farms participates in the NRCS Emergency Watershed Protection Program designed to reduce impairment to the watershed during an emergency or disaster situations. Restoring the Raritan Basin to a functional watershed directly aligns with the natural capacity of the environment to rectify and protect against emergency events.

For members of the collaborative, efforts to address degradation and encourage restoration extend beyond the checkpoints of the action agenda. The principles of restore, rehabilitate, and regenerate are evident in a number of longterm and ongoing projects led by members of the collaborative. During the past year, one of these projects faced devastating obstacles. The reintroduction of oysters into the Raritan Bay is an endeavor designed by **NY/NJ Baykeeper**, with the assistance of the **Rutgers Environmental Research Clinic**, to enhance ecosystems within the bay and restore the ecological integrity of the region.

Since its inception, storms and strong currents have challenged the project, as well as the research efforts and the stability of the reef. In 2009 test cages were put into the water using 3 different structures. Baykeeper and its partners at Rutgers conducted monitoring for the first half of 2010 to determine which structure(s) are best suited for oyster restoration in high-energy systems.

Unfortunately, the NJDEP banned the use of oysters in research and restoration projects in areas of contaminated waters in June 2010 and ordered the removal of the Keyport reef. The Keyport Reef oyster cages were pulled in August 2010. In the limited experimental time during 2010 researchers observed increased invertebrate and finfish biodiversity associated with the experimental plots. The challenge now is to work with the USEPA and NJDEP to implement policies that protect the Bay waters from the continual contamination from point and non-point sources and to institute a Total Maximum Daily Load regulation for pathogens and nutrients that moves the region towards fishable and swimmable waters. The goal continues to be clean water and restored oyster fisheries.

5. Maintain and Manage Preserved Open Spaces

The Action Agenda recognizes protecting the ecological value of the land extends beyond the

acquisition of open space. Maintaining and ongoing stewardship efforts are critical to the protection and long-term restoration of habitat. The Action Agenda tasks under this objective promote active planning and cooperative efforts to incorporate long-term maintenance efforts in site management. Many of the acquisitions procured by members of the collaborative in 2009-2010, as well as acquisitions in previous years have plans or efforts to maintain the open space. A number of these projects are described in other sections of this report as they serve a dual purpose of sub-watershed protection planning, habitat, and pollution prevention.

On October 29, 2009, the Dismal Swamp Conservation Area (DSCA) moved one step closer to complete preservation. The Dismal Swamp State Preservation Committee formed after Governor Corzine visited the Triple C Ranch, the last remaining farm in northern Middlesex County, to sign the bill. This progressive bill recognizes DSCA as a vital ecological area and prioritizes the management and maintenance of the land beyond the initial point of preservation. The **Dismal Swamp State Preservation Committee** held their first meeting in March and will oversee all proposed development and planning in the swamp.

Another group in the region that takes a similar stewardship role in the management of open space is the **Raritan Piedmont Wildlife Habitat Partnership (RPWHP)**. **RPWHP** is a diverse group of organizations executing the goals of the New Jersey State Wildlife Action Plan in the Central Piedmont Plains. **RPWHP** has developed a Grassland, Forest and Wetlands/Riparian Conservation Plan for the region. **URWA** is an active member bridging the tenets of SRRI with the work of the **RPWHP**.

North Jersey Resource Conservation & Development (NJ RC&D) fulfills the tasks of this Action Agenda item through a different approach. They secured funding from three sources to develop the Stewardship of Open Space program. Work on the feasibility study and business plan is currently underway for this program, which will assist municipal and county governments to set and implement community goals for established open space. Through the program **NJ RC&D** will provide technical assistance with goal setting, planning, implementation, and maintenance. In contrast to other efforts that oversee certain areas, this program provides the capability for other stakeholders in the region to incorporate management and maintenance into their current and future land use planning processes. **Somerset County** has embraced this model of stewardship, and has fostered relationships with non-profit entities who will effectively manage county open space for habitat restoration and protection, trail development and other projects.

6. Remediate Contaminated Sites

The industrial history of the Raritan River region marred the landscape, leaving behind pockets of contaminated sites that damaged ecosystems, property values, and public perception within the Basin. These contaminated sites continue to cast negative shadows on the region, but remediation offers an opportunity to mitigate the damage and rejuvenate the area. Members of the Collaborative worked with **US Environmental Protection Agency (USEPA)** and **NJDEP**, and within the framework of the legal system to ensure the timely and effective cleanup of these sites and promote future uses that enhance habitat, enable sustainable recreation, and the restore the ecological function of the area. Furthermore, the Action Agenda addresses the importance of disseminating information to the public about contaminated sites and redevelopment opportunities.

In response to the need expressed by the Action Agenda **NOAA** is developing a Raritan River database and mapping project to track information on sites within the basin. **NOAA** partners with **USEPA** and **NJDEP**, to ensure efficient and accurate transmission of data on contaminants- based sediments, fish tissue, and toxicity from the Raritan River and its tributaries. The database project will post to NOAA's Damage Assessment Remediation and Restoration Program (DARRP) website

creating a direct vehicle for public and governmental access. In addition to providing the data, the project includes maps and mapping layers for GIS/Google programs. This project provides a clear example of centralizing and interpreting data to inform the public and decision makers about the ongoing improvement in the Raritan Basin.

A critical step in remediation is ensuring that future plans or uses promote ecosystem protection. **NOAA's Office of Response and Restoration** continues to develop and use tools that improve our ability to evaluate risk, and to develop protective remedies and restoration strategies for contaminated sediment sites in the Raritan River watershed. **NOAA** currently works in partnership with federal and state agencies on at least 6 federal Superfund Sites and one federal facility. At the American Cyanamid Superfund Site, located adjacent to the Raritan River in Bound Brook, NJ, NOAA works with EPA to develop remedies that will be protective of habitats (e.g., surface waters and sediments and biota (e.g., fish and invertebrates) they support.

Further downstream, at the Horseshoe Road/Atlantic Resources Corporation Superfund Sites, adjacent to the Raritan in Sayreville, NOAA and EPA strive for a remedy that will address metal and PCB contamination in the river and adjacent wetlands. PCBs and other contaminants are also the focus of an ecological assessment of the Cornell-Dubilier Electronics Superfund Site in South Plainfield, NJ, another partnership project between NOAA and EPA.

The Woodbrook Road Dump Superfund Site also in South Plainfield, is under a remedial investigation by these two agencies that will assess ecological risks in Bound Brook and adjacent wetlands. Another remedial investigation is ongoing at the Raritan Bay Slag Superfund Site in Old Bridge and Sayreville. This assessment will address metal contamination along the beach, jetty, seawall and adjacent wetland areas. Also within the region, **NOAA** partners with **NJDEP** and **USACE** on a remedy at the Former Raritan Arsenal Formerly Used Defense Site (FUDS) in Edison, NJ that will be protective of habitats in the adjacent Raritan River. These projects are critical to the effective remediation of severely contaminated sites. **NOAA** also continues to work with EPA on evaluating post-construction monitoring data in Edmonds Creek and Edmonds Creek Marsh at the Kin-Buc Landfill Superfund Site in Edison, NJ that will assess the efficacy of the remedy. This project demonstrates recognition of post-remediation monitoring in ensuring the long-term protection of habitat and ecosystems surrounding contaminated sites.

While the large brownfield sites capture attention, the basin suffers from the compounding impacts of hundreds of small sites. In **Bound Brook Borough** the former public works garage has undergone initial clean-up. Remediation and redevelopment of the site will provide future access and connection to the Raritan River Greenway. **Somerset County Planning Board** produced a report, available online, that details remediation and redevelopment efforts across the county. This report highlights the ongoing opportunities in the region to leverage brownfield sites to revamp the landscape in the region and reorient communities to the Raritan.

Members of the collaborative also work within the established legal framework to emphasize the importance of proper site remediation within the region. **EWA, NJ/NY Baykeeper**, and **the Raritan Riverkeeper** are encouraging timely and effective remediation of the National Lead site in Sayreville through the filing of a lawsuit for a failure to address contaminated river sediments in the Raritan. **Riverkeeper** has requested numerous times (via written and oral communication with **NJDEP** and **USEPA** officials) that Raritan River pollution sites and enforcement actions be addressed using a regional approach, and has testified numerous times in support of the remediation of contaminated sites along the Raritan.

7. Prevent Future Pollution

The Action Agenda lays out several tasks to prevent future pollution from both point and non-

point sources. These tasks focus on mobilizing volunteers and students to actively improve water quality monitoring, and to educate municipalities and the public about the impacts of behaviors such as fertilizing and applying pesticides. Additionally, the Action Agenda recognizes the importance of working within the regulatory process to ensure point source pollution continues to decline as a key determinant of water quality within the Raritan.

The local watershed associations, educational institutions and governmental agencies play a key role in monitoring water quality. Currently, **New Jersey Water Supply Authority (NJWSA)**, **NJDEP**, and a number of the regional watershed associations conduct monitoring along the waterways in the basin. **URWA**'s staff and trained volunteers collected habitat and biological data along Rockaway Creek, Peapack Brook and the North Branch of the Raritan River at 28 monitoring points, and in 2009, the monitoring program expanded to additional points along the Lamington River. The 2009 Stream Monitoring Report was published and posted on the Association's website.

Stony Brook Millstone Watershed Association established a volunteer water quality monitoring program in the watershed in 1992. Called SteamWatch, this program collects water quality data and publishes the information in StreamWatcher, available online. This year the organization added a new bacterial monitoring component at 13 sites of the water quality monitoring program. During this same period **NJWSA** partnered with the D&R Canal Commission to undertake data collection along an additional 14.5 miles of the canal. The canal is a critical component of the surface water system in the Raritan Basin that supplies drinking water to over 1 million residents. Collectively these organizations are broadening the breadth of data collected on water quality. The compilation of these programs aids in understanding trends within the watershed and the effectiveness of pollution prevention programs.

The individual homeowners that rely on the Raritan Basin for drinking water, recreation, and its ecological value are a critical component to pollution prevention. Increasing awareness among residents, businesses, and local governments of the detrimental effect of certain common behaviors on water quality is imperative to the prevention of future pollution. During 2009 **URWA** stepped up a campaign to reduce non-point source pollution from fertilizers, pesticides, herbicides and road salt, and continues to be a strong advocate for "less lawns." Education and outreach was conducted through community newsletters, **URWA**'s website & newsletter articles, press releases and presentations conducted by **URWA** staff and the Americorps Ambassador (hosted by **URWA**). The Association also partnered with the **NJWSA** to promote the River Friendly Programs for residents, businesses and golf courses.

NJWSA and **Stony Brook Millstone Watershed Association**'s River Friendly Programs have made significant progress on increasing awareness and shifting behavior to prevent future pollution. This year Stony Brook Millstone finalized certification for the Hopewell Valley Golf Club. The Stony Brook Millstone River bisects the golf course and therefore the club's actions have direct consequences on water contamination. The club reduced pesticide use by 71 percent, cut water usage by 50 percent and restored eight acres of habitat. These shifts in awareness and behavior are key to pollution prevention and source water protection within the basin.

Over the years, **NJWSA** has worked with other members in the collaborative to attract more than \$1.5 million new funds for source water protection projects within the basin. The Source Water Protection component of the **NJWSA** water rate funds numerous projects to improve water quality and promote effective source water resource management. The Authority leverages these funds to acquire other grants and funds from state and federal sources, increasing the capacity of organizations in the region to implement effective pollution prevention programs.

These efforts address the critical underlying concern that non-point source pollution threatens the ecosystems in the basin. **Somerset County** Public Works Department implements Best Management Practices in all of its road, bridge, and drainage projects. Non-point source pollution

demands all stakeholders actively recognize their contribution to water quality. Another effort to reach these audiences is the the Sustainable Raritan River Business Roundtable. Sponsored by the **Edward J. Bloustein School** in cooperation with **NJWSA** and **NJDEP Office of Compliance and Enforcement**, this group encourages and promotes sustainability through pollution prevention. The group met in June at Sanofi-Aventis where those in attendance learned about their efforts to improve stormwater management, adopt green business practices and make significant reductions in their waste stream (future meetings will be posted on www.blueraritan.org).

8. Significantly Reduce Stormwater Runoff

When members of the collaborative came together to determine primary targets for the Action Agenda stormwater quantity and quality were highlighted as key concerns for the future of the basin. At the time, the focus was on stormwater utilities, an effective technique to manage the impacts of stormwater on the basin. Stormwater utilities, by capitalizing the contribution of impervious surfaces to the river, could resolve a number of quantity and quality concerns associated with stormwater runoff in the basin. A bill to institute the state's first stormwater utility was voted out of committee by the Senate and the Assembly on August 12, renewing hope that we would join the legion of municipalities across the country who have recognized the benefit of such a program – and the long term damage from neglecting this important resource. Collaborative members, including **Rutgers, Princeton Hydro**, and the **American Littoral Society** spoke in support of the bills at the session,

Despite the slow progress on the matter of stormwater utilities, members of the collaborative continue to increase efforts to reduce untreated stormwater runoff through Best Management Practices including installation of rain gardens and rain barrels. The chief champion of this effort is founding collaborator **Rutgers Cooperative Extension (RCE) Water Resources Program**.

RCE has several strong outreach programs that help stakeholders address stormwater management problems, build and install rain barrels, and implement various strategies to promote water conservations. These programs are very active throughout the Raritan River Basin. Through these programs RCE has trained over 100 individuals on how to build and maintain rain gardens. In 2009-2010 RCE also provided training to approximately 115 individuals on rain barrel design, creation, installation, and maintenance through the execution of the “Build your own Rainbarrel” demonstrations. These rainbarrels help reduce pressure on groundwater and surface water withdrawals as well as reduce the quantity of stormwater flushing into streams and rivers during periods of rainfall. Numerous organizations and localities sponsored these demonstrations for community members to attend. **Raritan Borough** was among the hosts for this important public information sessions.

In 2009 the **URWA** also developed a program on stormwater BMP's that includes hands-on workshops to teach students, scouts, service clubs, corporate volunteers and environmental commissions how to create onsite rain gardens and rain barrels. **NJWSA** pursued efforts to reduce the impacts of stormwater runoff on water quality in basin. Integrated stormwater management practices were implemented at the **Rutgers Preparatory School** and design work was advanced for projects in **South Bound Brook** and **Franklin Township**. Additionally, the Authority continues to implement Best Management Practices to reduce sediment and pollutant transport in the last 11 miles of the Delaware & Raritan Canal System above the intakes.

Middlesex County, in cooperation with **NJWSA**, **RCE**, **North Jersey RC&D**, and **Princeton Hydro** installed a demonstration rain garden in Thompson Park. This rain garden is designed to treat surface water runoff from a section of an asphalt parking lot before reaching the lake. The Thompson Park rain garden provides a model for counties to address stormwater concerns on public lands.

This project is part of the greater effort to restore the Manalapan Lake and Watershed. In 2010 the Manalapan Watershed Protection and Restoration Plan was completed, a project connecting the efforts of **NJWSA** and **North Jersey RC&D** to address water quality and environmental concerns within this local watershed.

On its own property **Duke Farms** has made substantial investment in green infrastructure practices. The construction of wastewater wetlands with native plantings, two bioswales with native plantings, and the installation of rain barrels and cisterns have reduced the impact of runoff from Duke properties into the Raritan. Duke Farms also has a grey water capture and re-use program in development as well as plans to reduce water use in irrigation through smart irrigation practices.

9. Promote Restoration and Protection Plans to Address Local Sub-Watersheds (HUC-14)

SRRI envisions stewardship and a shared interest across the entire basin; a goal achieved through the compilation of local restoration and protection efforts. Members of the Collaborative recognize the importance of effective management at the sub-watershed level. Protection, restoration, and management plans throughout the region foster improve the ecological function and value of the entire basin. Many of the projects described under this objective also satisfy the intention of habitat preservation, open space management, and the prevention of future pollution. This projects use planning techniques and tools to answer the need for management in several areas and allow SRRI to advance towards its general goal of enhancing the vitality of the watershed.

NJWSA continues to protect source water in the Raritan Basin through the development and implementation of sub-watershed plans. On the feeder end of the Canal, the **NJWSA** completed the Lockatong and Wickecheoke Creeks Watershed Restoration and Protection Plan. These watersheds in southwestern Hunterdon County are the largest watersheds feeding into the Canal other than the Delaware River itself. The Lockatong and Wickecheoke Creeks Watershed Plan was accepted by the **NJDEP** as eligible for implementation funding through the federal 319(h) Non-point Source Program. The Authority received an implementation grant through **NJDEP** in the amount of \$952,500 to begin work on restoring this watershed.

Work continues on development of the Neshanic Watershed Restoration and Protection Plan. Data documenting agricultural best management practices in use in the watershed has been provided to the project leader, **New Jersey Institute of Technology** for inclusion in the Soil Water Assessment Tool model under development for the project. State funding of \$750,000 and federal funding of \$616,000 was obligated this past year for farm practice implementation and other agricultural related projects in the Mulhockaway, Neshanic and South Branch of the Raritan watersheds.

Through the Walnut Brook Riparian Restoration Project, **North Jersey R&CD**, Raritan Township, the **Hunterdon Land Trust Alliance (HLTA)** and numerous local, county, state and federal partners are restoring natural stream function to improve overall water quality within Mine Brook Park. During 2009 three acres of forested and emergent wetland were created, 800 linear feet of severely eroding streambank was stabilized, invasive species were removed, and the riparian corridor enhanced by planting native trees and shrubs. Nearly \$100,000 of in-kind donated goods, services, and volunteer time was provided to the project, and grant funds of \$692,276 came from the **New Jersey Wetland Mitigation Council** and **NJDEP**.

10. Balance Redevelopment to Sustain Ecological Values in the Raritan River Watershed

The final goal of the Action Agenda addresses the need for economic growth in the region without compromising the ecological sustainability of the basin. The underlying purpose of this goal

is to enhance the Raritan River Basin as an attractive, vibrant, and healthy community. Across the country communities tout their accomplishments in sustainability and environmental sensitivity. It is imperative for a region to recognize the importance of preserving the ecological value of the area. Many of the activities already included in this report champion this ideal, exemplified by the work performed by **NOAA** on future redevelopment plans for Superfund sites within the area.

One task laid out in the Action Agenda is to identify development or redevelopment models within the basin that promote ecological sustainability. The Brownfield Development Area in the Keasby section of **Woodbridge Township** could provide such a model. **EWA** partnered with Woodbridge, **Bayshore Recycling**, other businesses, and landowners to achieve the State Brownfield Designated Area (BDA) status for this industrial site. This designation brought state funding to complement the work of the Contaminated Site Responsible Parties to remediate many of the riverfront polluted sites, such as El Paso Energy, while creating public access, a nature area encompassing over 100 acres of restored land, and tidal wetlands. The Keasby BDA remains an integral part of the industrial **Woodbridge** economy, but the oversight and management of the redevelopment plan promises renewed prioritization of the ecological areas on the site. **Somerville Borough** was also awarded BDA status in 2009 enabling priority clean-up and redevelopment that includes planned access between downtown and the Raritan River Greenway.

The Somerset County Planning Board is working to refine its Draft Smart Growth Strategic Plan to enhance its incorporation of sustainability objectives. Somerset County's approach includes reducing greenhouse gas emissions throughout the region. The county Energy Audit Program in the past year identified key opportunities to reduce energy impacts on the environment, climate, and consequently local ecosystems. These planning mechanisms espouse the principles outlined in this objective. Somerset County Planning Board's efforts include solar arrays, implement a renewable energy program, and disseminate solutions to residents to address excess energy expenditures and their impacts on the environment.

Another approach to encouraging the balance between economies and ecologies is through promoting sustainable business practices. **North Jersey RC&D**, in partnership with the **NJWSA**, NJ Department of Agriculture, and **NJDEP** was approved for funding from the USDA-Natural Resources Conservation Service through the Agricultural Water Enhancement Program. This funding supports implementation of farm best management practices in four watersheds within the Raritan Basin Watershed. Through this project agricultural producers will implement BMPs that will measurably reduce total suspended solids, phosphorous, temperature and bacteria.

In addition to its critical role in prevention of future pollution, River Friendly Programs espouse this goal of balancing development and the environment. The River-Friendly Farm Program administered by **NJ RC&D** and funded in part through the **NJWSA** Source Water Protection Fund, works with farmers to reduce the environmental impacts of their operations. To enhance the effectiveness of this program **NJ RC&D** and **NJWSA** have identified funding for practice implementation designed to broaden farmer participation. State funding of \$750,000 and federal funding of \$616,000 was obligated this year for farm practice implementation and other Agricultural related projects in the Mulhockaway, Neshanic and South Branch of the Raritan watersheds. Through the end of 2009 the River Friendly Farm Program has more than 41 farm tracts totaling 2,054 acres participating in the program. Additionally, the **NJWSA** River Friendly outreach program reached more than 500 individuals during 2009.

The **Edward J. Bloustein School** established the Sustainable Raritan River Business Roundtable to draw greater attention to existing programs within the region that encourage ecologically responsible business practices. The first meeting occurred in Spring 2010 and will continue to meet on a quarterly basis. Included in the group are state agencies, corporate businesses,

and not-for-profit entities seeking to bridge the gap between businesses and their environmental impact. The Bloustein School also looks to encourage balance through increased awareness among local government bodies. To this end, the **Bloustein School**, co-sponsored by **Middlesex County**, **Somerset County** and the **Association of New Jersey Environmental Commissions**, brought representatives of the eighteen corridor communities along the Lower Raritan together to talk about the initiative and the vision for a regional corridor plan. This meeting laid the foundation for the subsequent graduate studio vision plan that was published in May 2010. Each of these events and programs emphasizes the need to weave ecological sustainability and economic growth to ensure the vitality of the Raritan River Basin in the future.

Going Forward

This report details activities performed by members of the Sustainable Raritan River Collaborative from the first symposium in May 2009 through the second symposium in June 2010, organized by the tenets laid out by the 2009-2010 Action Agenda. From inception the SRRI has brought together stakeholders in the region that have an interest in the protection and enhancement of the natural, social, and economic environments within the Raritan Basin Watershed. In the past two years these stakeholders have come together to discuss and address concerns in the region, building a coalition and a foundation to improve communication and cooperation in order to manage issues that demand collaboration. To develop this report, members of the collaborative were invited to submit their top three individual priorities for the 2010-2011 year, using the Action Agenda checkpoints as a guide to specify these priority areas.

These efforts will continue to advance the checkpoints on the agenda as outlined in the missions of the individual organizations and agencies. What these individuals programs cannot achieve is the broader concerns that call for collective action. SRRI offers a mechanism by which to fill those gaps with collaborative efforts and an organized approach to address the more complex concerns. The Sustainable Raritan River Collaborative has the capacity to leverage the resources needed to accomplish tasks that any single organization would struggle to complete alone. The 2009-2010 year was critical for organizations to familiarize themselves with the issues in the basin and initiate open communication between groups across the region.

With the collaborative continuing to garner support and awareness from organizations, agencies, and businesses within the basin, SRRI should be structured to reflect the current issues and maximize the resources available within the region. A key purpose to this report is to highlight the items on the Action Plan that remain unaddressed by the current individual and partnership efforts within the basin. Stormwater management stands out as an example of where the Action Plan and actual approaches diverge significantly. The Action Plan needs to continually evolve to reflect feasible objectives to meet the stated goals of the SRRI. By continuing to adapt the Action Plan on a yearly basis, members of the collaborative have the opportunity to progress on selected tasks to achieve targets within the five key areas of concerns.

The breadth of the 2010 Action Plan checklist challenges the process. It may benefit from careful review of its function and scope. Potentially, the Action Plan has a key role as a long-term guide for SRRI, while annual goals and objectives dictate the yearly agenda for the initiative. Going forward this planning process will dictate the success of SRRI as a cooperative effort to restore the watershed or determine if it will remain a collection of individual efforts within the region.

1. Increase Awareness and Use of River Access Points and Trails

- 1.1 Produce a Raritan River Trail Guide to the Lower Raritan with map and information for boaters, hikers and bikers and include historic and other significant sites along river with information about sites.
 - Raritan Riverkeeper has published a map that details launching points and dams along the Raritan River from the confluence of the North Branch, South Branch and the mainstream of the Raritan River to Raritan Bay or Branchburg to Perth Amboy. The map is printed on tyvek material so it is tear-resistant, waterproof and designed for field use.
- 1.2 Promote use through an interactive webpage showing access points and trails, with information about canoe and kayak rentals.
 - A more detailed access project is web based and is accessible as a link from the Raritan Riverkeeper page of the NY/NJ Baykeeper web site. Also published was a twenty four page book that included specific site images as well as satellite images of each site.
- 1.3 Arrange tours to familiarize residents and regional leaders with the benefits of the River
 - Raritan Riverkeeper, in collaboration with NY/NJ Baykeeper, has purchased 15 kayaks and canoes that will be based on two trailers, and made available for paddle trips on the Raritan River. We have scheduled three trips on the Raritan River through summer 2010.
- 1.4 Plan and implement river-oriented events such as the Raritan River Fall Float, and promote the River via local festivals and contests
 - Raritan Riverkeeper played a leadership role in the Sustainable Raritan Collaborative Fall Float with responsibility for planning, safety considerations, formatting a safety plan, providing boats for participants and patrol personnel along the route.
 - Raritan Riverkeeper has participated in river-oriented events such as the Raritan River Festival in New Brunswick and other festivals in the Raritan River Basin.

2. Upgrade Current River Access Points and Develop a Plan for Future Recreational Uses

- 2.1 Improve signage to/from access points and trails, and at access points. Install safety signage on or near water regarding obstructions, fishing, swimming advisories. Identify primary needs and plan for investment in access points.
- 2.2 Improve/upgrade accessibility to launch sites and walking trails and add amenities to current access points (parking, restrooms, tables, etc.). Identify logical and needed sites for new boat launches and canoe/kayak access.
 - A consultant has been retained to prepare the design for a ½ mile length of the Raritan River Greenway Bikeway in Somerville Borough from Route 206 to the Peter's Brook. The design calls for a hard surface bike path and a bridge crossing the Peter's Brook. This section of bikeway will connect directly with Somerville Borough's Peter's Brook Greenway path system that runs north into Bridgewater Township.
- 2.3 Encourage commercial support and investment. Local businesses can promote entertainment and enjoyment along River and also invest in businesses that promote the river, such as riverfront restaurants or boat rentals.
 - Raritan Riverkeeper worked to encourage water-related commercial development along the Raritan River by commenting against the U.S. Coast Guard change in bridge regulation. The proposed change allows the Raritan River Railroad Bridge between Perth Amboy and South Amboy to remain closed to marine traffic during commuter rush hours.
- 2.4 Assess current land uses along the Raritan and determine future development and preservation goals. Develop a regional coordinated plan for the recreational use of the Raritan River Corridor. Identify logical

and needed sites for new boat launches and canoe/kayak access. Identify areas for trail development and investigate acquisition or easement needs and alternatives.

- Raritan Riverkeeper has numerous times written and/or spoken with NJDEP and USEPA officials to request that they regard the Raritan River with a regional approach with respect to pollution sites and enforcement actions.

2.5 Assemble local open space plans and proposals for expanded greenways or trails. Consider improving access from D and R Canal towpath. Investigate acquisition or easement needs and alternatives. Develop educational materials on benefits of greenways and river trails.

- Raritan Riverkeeper has printed and distributed materials encouraging the use and development of river walkways and water trails

3. Protect and Preserve Habitat and Biodiversity in Our River Ecosystem

3.1 Assemble a team of municipal and county experts to coordinate development of a 'Regional' approach to Raritan River Basin Master Planning.

3.2 Involve municipal and county governments, Rutgers University, and watershed groups who support stewardship of Raritan River resources, as well as planners, and NGOs who are knowledgeable about the critical habitats in the Basin.

- Over the past year the Trust for Public Land (TPL) has extended our outreach in local communities within the Raritan River Watershed. TPL has initiated an assessment in the City of New Brunswick to inventory existing parks and to evaluate the needs and opportunities for an improved network of parks within the city limits. This study, funded by the Robert Wood Johnson Foundation, is affording us the opportunity to cultivate important relationships both at the City and County level to assist in furthering their open space protection goals.
- Riverkeeper has cooperated and consulted with NOAA, U.S. Fish & Wildlife Service, as well as private partners in the "Fish Passage Initiative" for the removal of dams impeding anadromous fish from reaching appropriate breeding areas.
- Edison Wetlands Association and WildNewJersey.tv partnered on over a dozen volunteer cleanups within the Raritan Watershed. EWA also worked with Rutgers University to coordinate a river cleanup event to mark World Water Day.

3.3 Raise Public Awareness of the Raritan Basin Natural Resources. Integrating public access opportunities with stewardship awareness and training benefits both initiatives.

- WildNewJersey.tv continued its growth as the only daily nature and conservation news source in New Jersey. WNJ and NewGreenMedia.tv videos also provided close-up looks into dozens of environmental issues in New Jersey.
- Upper Raritan Watershed Association (URWA) conducts a Friends of the Preserve Program that engages neighbors of preserved parcels to monitor, inventory and conduct stewardship projects such as trail maintenance, invasive species removal, and riparian buffer plantings. URWA staff members hold an annual meeting to educate and train volunteers who essentially adopt and steward the preserve. Volunteers upload monitoring and natural resource data along with activity reports to a central database maintained by URWA. In 2009 the Association focused on the Fox Hill Preserve (Tewksbury), the Rolfes Tract (Bernards Twp.) and the Burnt Mills tract (Bedminster).

3.4 A series of public access/stewardship events needs to be developed and implemented on a sustainable basis. Raising awareness of the importance of habitat ecological functions and values is crucial to obtaining support for stewardship, and multiple media that can reach municipal residents should be employed. Newsletters, web sites, and local access cable channels can 'showcase' species and habitats and provide residents with information to protect their natural resources.

- The Somerset County Park Commission Ranger Department worked with Raritan Borough on an

Earth Day cleanup along the river. Somerset County Park Commission Rangers continue to perform maintenance on existing trails within the Raritan River Greenway.

- Through the Central Jersey Invasive Species Strike Team (CJISST), URWA raises awareness about the need to protect habitats of all native flora and fauna from new invasive plant species. Over the past year URWA has conducted workshops, volunteer trainings, and developed an interactive website to share information with project partners and the public.
- URWA holds a monthly information breakfast called “Wake Up Call”. The series offers education and outreach on subjects that promote sound environmental planning and increase environmental awareness. Notices go out to the mayors and environmental commissions from each of the watershed’s 23 municipalities and the event is well publicized in local newspapers, Constant Contact, URWA’s newsletter and website. In 2009 Judy Shaw spoke to the group on behalf of the Sustainable Raritan Initiative.
- URWA coordinates annual stewardship events through Corporate “Days of Caring”, school community service events, Scout projects, stream monitoring training workshops and community stream cleanups. Each event includes an educational component, hands-on training and a take-away. Examples of 2009 stewardship events include: a riparian restoration project with Centenary College students; a 3- town stream cleanup (75 citizens); an invasive plant removal project with Johnson & Johnson; trail maintenance, invasive removal and water monitoring along the North Branch with Bernards High School students; establishing a rain garden with the Raritan Highlands Compact and scout volunteers.

3.5 Complete Municipal Environmental Resource Inventories. Identify and ‘ground-truth’ critical habitat based on collected data. Each municipality in the basin needs to complete a thorough ERI. ANJEC is a potential source of partial funding for this task.

- URWA’s GIS staff has established an Environmental Resource Inventory (ERI) for the entire 194 square mile Upper Raritan Watershed Region. The inventory presents 28 data layers including Land Use-Land Cover, Steep Slopes, SSA’s, HUC 14’s, Surface Water Quality Standards, Contaminated Sites, Critical Sub-Watersheds with Impervious Surface Less than 10% and Highlands Water Availability. GIS maps are available through URWA’s website and provided to citizens and municipal partners upon request.
- Riverkeeper provided water transportation to NJ Audubon to do bird surveys along sections of the lower Raritan River

3.6 Engage in the Stakeholder Support Process. Partner with ANJEC to conduct workshops for municipal and county Environmental Commissioners could disseminate habitat information and BMPs to the local communities

3.7 Develop a Land Acquisition Funding Plan. Identify critical habitat parcels that remain unprotected and develop strategies to fund the permanent protection of these lands. Integrate this activity with existing NGO land preservation and stewardship activities that are currently ongoing in the Raritan River Basin.

- URWA holds 33 conservation easements on 880 acres, owns and manages 11 preserves (450 acres), and has partnered with others to preserve acreage that protects water supplies. This past year, URWA partnered to preserve 86 acres of open space along the Middle Brook in Bedminster and added 6 acres of grassland habitat that is contiguous with the Association’s Fox Hill Preserve located in the Cold Brook Watershed, Tewksbury. URWA is in the process of developing a conservation plan that identifies priorities and preservation goals for source water protection throughout the Upper Raritan Watershed.
- URWA is a member of the Keep It Green Committee that worked to educate the public about the need to vote “yes” on the ballot question to fund the Garden State Preservation Trust. The organization coordinated a fundraising event to support the public campaign, met with members of the legislature, wrote press releases and letters to the editor.
- On October 29, 2009, the Dismal Swamp Conservation Area (DSCA) moved one step closer to complete preservation. Governor Corzine visited the Triple C Ranch, the last remaining farm in

northern Middlesex County, to sign the bill establishing the Dismal Swamp State Preservation Commission, and to recognize the DSCA as an ecologically sensitive and valuable ecosystem in New Jersey. This governing body, with representatives from the grassroots environmental non profit Edison Wetlands Association (EWA), the towns of South Plainfield, Edison, and Metuchen, and Middlesex County, will oversee all proposed development and planning in the swamp.

4. Adopt the 3Rs: Restore, Rehabilitate & Regenerate

4.1 Securing volunteers to verify the status of critical habitats. Using the identified parcels in need of remediation/protection, organize volunteers to verify the accuracy of the data/assumptions based on actual site conditions.

4.2 Coordinate the efforts of the watershed NGOs and house the field data in an online database for use by local managers and planners.

4.3 Assemble a comprehensive habitat Rehabilitation Plan. Based on actual on-site conditions, develop a basin-wide plan to rehabilitate preserved and/or critical habitat parcels. Identify funds to conduct rehabilitation efforts.

4.4 Rehabilitation Evaluation Criteria. Develop measurable success criteria and long-term monitoring plans to ensure accurate evaluation of rehabilitation strategies through outreach to local and county governments throughout the watershed. Post outcomes of rehabilitation initiatives (both positive and negative) on the Sustainable Raritan web site and on local web sites.

- From May 1, 2009 to May 28, 2010, NJDEP Compliance and Enforcement Programs have required the following mitigation actions within the Raritan River Watershed:
 - The restoration of 48,000 square feet of Flood Hazard Area Riparian Zone;
 - The restoration of 103,735 square feet of Freshwater Wetlands;
 - The restoration of 56,800 square feet of Transition Area;
 - The contribution of \$2,850.00 to Wetlands Mitigation Banks; and
 - The restoration/mitigation of 7,804 square feet of Land Area.

4.5 Coordinate Stewardship Activities with the Hudson River Estuary Comprehensive Restoration Plan (HRE CRP). Access this data and information to identify viable restoration sites and potential restoration funding sources for the estuarine portion of the Raritan River watershed.

4.3 Somerset County closed on three (3) key property acquisitions along the Raritan River in Bridgewater Township, Raritan Borough and Somerville Borough. Although the parcels were small in size (6.5 acres total), they are key connectors in the continuation of the Raritan River Greenway bikeway and trail system. The Bridgewater and Somerville parcels have river frontage while the Raritan parcel is in close proximity to a river access point and will expand on an existing park area along the river.

5. Maintain and Manage Preserved Open Spaces

5.1 Require a site management and maintenance funding plan for Green Acres and Open Space funding support.

5.2 Amend the state, county, and municipal requirements for obtaining open space funding to include an on-going Site Management and Maintenance Plan (SMMP), including a detailed description of funding sources to support these activities and maintenance of preserved properties.

5.3 Integrate BMPs in the SWAP with both protected and critical wildlife habitats. Require adoption of Best Management Practices (BMPs) for maintaining the various types of habitat as detailed in the State Wildlife Action Plan (SWAP).

5.4 Complete the system wide maps and link the habitats identified on the maps with the appropriate BMPs in the SWAP. Make the completed maps available to local managers through the Rutgers Sustainable Raritan website.

5.5 Identify opportunities for Public-Private partnerships. Create partnerships that couple private monies with public maintenance. Secure endowments to maintain preserved land through the land acquisition transaction. NGOs play a key role in securing this long-term funding.

5.6 Develop model management and funding plans. Providing models of site management plans appropriate for critical habitat types that include estimated costs. Provide these to local managers to aid with acquisition and/or site restoration project. Post model plans on the Sustainable Raritan web site.

6. Remediate Contaminated Sites

6.1 Provide Meaningful and Useful Data on the Full Extent of Contaminated Sites in the Raritan basin. Through the Sustainable Raritan River website, provide GIS maps and GIS data layers to regional agencies and develop data layers where needed.

6.2 Foster use of geographic information systems by regional government agencies. Encourage local links to maps at the Sustainable Raritan River website.

6.3 Encourage and promote the remediation and reuse of contaminated sites. Work with municipalities and NGOs in the region to expedite remediation and sustainable reuse plans for Superfund sites and other brownfield sites in the region. Encourage enhancements of ongoing regulatory programs.

- Riverkeeper is encouraging the proper remediation of the National Lead site in Sayreville by virtue of a law suit filed for a failure to address river sediments in the Raritan.
- Riverkeeper has testified numerous times at various venues encouraging the remediation of contaminated sites along the Raritan.

6.4 Work with EPA and NJDEP to publicize data and to prioritize cleanups closest to the Raritan River and establish protocols for public assessment of agency data. Specifically assemble a comprehensive report on current sediment data on Raritan area sites. Identify partners to develop a review protocol for NJDEP groundwater data files to establish where information on contaminants is insufficient and to estimate the potential contribution from unremediated sites, including any information regarding contributions to sediments in the river.

- NOAA currently works on at least 6 federal Superfund Sites and one federal facility within the Raritan River Watershed. Working with USEPA and NJDEP, remedies that will be protective of habitats (surface waters, wetlands, and sediments) and biota (fish, invertebrates, and humans) are being developed for:
 - 1) the American Cyanamid Superfund Site, located adjacent to the Raritan River in Bound Brook, NJ;
 - 2) the Horseshoe Road/Atlantic Resources Corporation Superfund Sites adjacent to the Raritan River in Sayreville, NJ, that will address metal and PCB contamination in the river and adjacent wetlands;
 - 3) assessing ecological risks from PCBs and other contaminants in the Bound Brook Corridor adjacent to and downstream of the Cornell-Dubilier Electronics Superfund Site in South Plainfield, NJ;
 - 4) remedial investigation of the Woodbrook Road Dump Superfund Site in South Plainfield, NJ, that will assess ecological risks in Bound Brook and adjacent wetlands;
 - 5) evaluating post-construction monitoring data in Edmonds Creek and Edmonds Creek Marsh at the Kin-Buc Landfill Superfund Site in Edison, NJ that will assess the efficacy of the remedy;
 - 6) remedial investigation of the Raritan Bay Slag Superfund Site in Old Bridge and Sayreville, NJ that will address metal contamination along the beach, jetty, seawall and adjacent wetland

- areas;
- 7) development of a remedy at the Former Raritan Arsenal Formerly Used Defense Site (FUDS) in Edison, NJ.

6.5 Promote creation of contaminated site database through municipal websites. Master lists of contaminated site can foster remediation and reuse both for sustainable economic redevelopment and for open space greenfields.

- NOAA is developing a Raritan River database and mapping project in response to a need expressed by the Raritan River collaborative. In collaboration with EPA and NJ DEP, NOAA coordinate receipt of electronic data related to contaminants, sediments, fish tissue, and toxicity data in the Raritan River and its tributaries. The information will be posted to NOAA's DARRP website. GIS/Google layers and maps will be developed as part of this effort. The database and mapping project is a visual tool useful for management of contaminated sediments and for restoration planning.

7. Prevent Future Pollution

7.1 Track and address local sources of non-point pollution. Work with colleagues at the School of Environmental and Biological Sciences (SEBS), Rutgers Cooperative Extension, the NJ Water Supply Authority and other Collaborator organizations to promote stormwater reduction and to promote water stewardship projects. Develop training protocols on how to review agency files and develop reports on contributions of point sources – any permitted industrial and stormwater discharges; existing industries, landfills, sewerage authorities, etc.

7.2 Address on-going discharges from unremediated contaminated sites. Work with regulatory agencies to ensure any ongoing discharges are addressed and that cleanups are moving forward in a thorough and timely manner.

7.3 Strengthen overall water quality and contamination tracking data through additional sampling and monitoring. Work with local educational institutions to monitor the River through the science curriculum and post data online.

- Between June 15th and 30th, URWA's staff and trained volunteers collect habitat and biological data along Rockaway Creek, Peapack Brook and the North Branch of the Raritan River at 28 monitoring points. In 2009 the stream monitoring program expanded to additional points along the Lamington River. The 2009 Stream Monitoring Report was published and posted on the Association's website. Annually and in preparation for this year's monitoring, URWA submitted a Quality Assurance Project Plan to the NJDEP Division of Watershed Protection.

7.4 Develop Best Remediation and Reuse Planning Practices for Municipalities. Identify best practices to manage contaminated properties and establish strategies to prioritize reuse as open space or sustainable development.

7.5 Promote Sustainability with regulated Raritan businesses. Work with NJDEP Compliance and Enforcement on compliance and settlements; encourage pollution prevention practices by regulated industries and zero-discharge stormwater practices. Encourage regional businesses to promote sustainability and work with local NGOs to adopt "River Friendly" practices

7.6 Promote Sustainable State and Green Buildings. Work with the Rutgers Center for Green Building on promoting zero-net energy infrastructure improvements and water conservation practices. Engage the Rutgers Sustainable State Institute to foster remediation and pollution prevention related practices in their 'Sustainable Jersey' initiative.

7.7 Reduce Fertilizers and Pesticides. Work with municipalities to establish strategies to reduce contributions to the river from applications of fertilizers, local agriculture and general maintenance practices.

- During 2009 URWA stepped up a campaign to reduce non-point source pollution from fertilizers, pesticides, herbicides and road salt and is a strong advocate for “less lawns.” Education and outreach was conducted through community newsletters, URWA’s website & newsletter articles, press releases and presentations conducted by URWA staff and the Americorps Ambassador (hosted by URWA). The Association also partnered with the NJWSA to promote the River Friendly Programs for residents, businesses and golf courses.
- In 2009 the URWA developed a program on stormwater BMP’s that includes hands-on workshops to teach students, scouts, service clubs, corporate volunteers and environmental commissions how to create onsite rain gardens and rain barrels.

8. Significantly Reduce Stormwater Runoff

8.1 Educate local, county, and State stakeholders on the need for Stormwater Utilities. Assemble a team of experts to deliver education and outreach programming on stormwater utilities to stakeholders and the public in the pilot area. This will require assistance from individuals in local government, Rutgers University, and watershed groups who support the program and are knowledgeable about the pilot area, stormwater utilities, or both.

8.2 Develop a pilot program for the implementation of Stormwater Utilities. Identify a pilot area in the Raritan River Basin where a stormwater utility program could be formed and assess community stormwater needs. An ideal pilot area would be a municipality in which existing data related to their stormwater needs is easily gathered. Sources of this data include complaint records, stormwater and maintenance staff experience, previous studies, and field measurements. This information allows for the identification of problem areas for priority listing.

8.3 Engage in the Stakeholder Support Process. A stakeholder committee that includes public, commercial, governmental, and environmental groups or individuals affected by the program is vital to the implementation of the program. The stakeholder committee is facilitated to achieve consensus on the goals of the program, as well as each product of the community acceptance process. With the stakeholders, map out the rate structure for the pilot area, billing structures, economic analysis, credit assessments, collection methods, enforcement, and identifying sources of technical assistance.

8.4 Develop a Public Awareness and Acceptance Plan. Develop public educational materials that target specific groups which include elected officials, focus groups, and the news media. Develop a draft marketing plan and education outreach program including editorials for local papers, speaking at public events, and using the connections of University faculty and watershed groups to educate local officials and politicians on the benefits of stormwater utilities.

9. Promote Restoration and Protection Plans to Address Local Sub-Watersheds (HUC-14)

9.1 Compile a list of completed and on-going restoration plans and implementation projects within the Raritan River Basin. Work with watershed NGOs and the Raritan Basin Alliance on educational and stewardship activities relating to the Raritan River Basin to attract resources and implement programs (see The State of the Raritan River: A Work in Progress 2009 for list of plans and projects).

- Upper Raritan Watershed Association (URWA) participates in the Raritan Piedmont Wildlife Habitat Partnership (RPWHP), a diverse group of organizations executing the goals of the New Jersey State Wildlife Action Plan in the Central Piedmont Plains. RPWHP has developed a Grassland, Forest and Wetlands/Riparian Conservation Plan for the region.
- Upper Raritan Watershed Association (URWA) participates in the Raritan Piedmont Wildlife Habitat Partnership (RPWHP), a diverse group of organizations executing the goals of the New Jersey State Wildlife Action Plan in the Central Piedmont Plains. RPWHP has developed a Grassland, Forest and Wetlands/Riparian Conservation Plan for the region.

9.2 Assemble a list of other identified watershed areas in need of a restoration or protection plan. Using

GIS HUC-14 data compiled by the Raritan Basin Watershed Alliance and the NJWSA prioritize the identified areas.

9.3 Host technical workshops on the development of watershed restoration plans. Through a series of workshops and/or presentations by Rutgers Cooperative Extension Water Resources Program provide technical knowledge and skills to those interested in developing watershed restoration plans.

9.4 Identify priority implementation projects from all plans that can be implemented by stakeholder groups. Organize groups of community volunteers and stakeholders to complete necessary plans.

- Through the Walnut Brook Riparian Restoration Project, North Jersey RCD, Raritan Township, the Hunterdon Land Trust Alliance (HLTA) and numerous local, county, state and federal partners are working to restore natural stream function and improve overall water quality within Mine Brook Park. The site is owned by Raritan Township and the Dvoor Farm, which is owned by HLTA. During 2009 three acres of forested and emergent wetland has been created, 800 linear feet of severely eroding streambank has been stabilized, invasive species have been removed, and the riparian corridor enhanced by the planting of native trees and shrubs. Nearly \$100,000 of in-kind donated goods, services, and volunteer time has been provided to the project, and grant funds of \$692,276 came from the New Jersey Wetland Mitigation Council and NJDEP.
- The Raritan River Fish Passage Initiative was conceived through a partnership between NOAA and NJDEP to make the Raritan River and its tributaries passable to anadromous fish and the American eel. A coordinated effort by NOAA and NJDEP produced a restoration opportunities data base and mapping product, and the lowest dams in the watershed were prioritized for removal or passage. The priority dams are the Calco Dam at Bound Brook, the Nevius Street Dam at Raritan, and the Roberts Street Dam in Hillsborough. Two dams on the Millstone River are currently under study by the Stony Brook Millstone Watershed Association. In 2009, the American Rivers/NOAA Community-based partnership grant program and NJDEP funded the Stony Brook Millstone Watershed Association feasibility study.
- Natural resource damages were settled at the Combe Landfill South Superfund Site in 2003 and 2009. During 2010-2011, NOAA will be developing the Combe Landfill South/Cornell Dubilier Restoration Plan with its natural resource trustees, the Department of the Interior (DOI) and NJDEP. Environmental liability with Dana Corporation was resolved for the Cornel Dubilier Superfund Site through a bankruptcy settlement in 2008. The Restoration Plan will identify restoration options and the agencies' preferred options for implementation.

10. Balance Redevelopment to Sustain Ecological Values in the Raritan River Watershed

10.1 Establish an Organization Structure. Establish an organizational structure to serve as a clearing house that will disseminate information to a diverse community of stakeholders to guide and facilitate their collaboration and to coordinate various funding sources that will support the balancing effort.

- The New Jersey Water Supply Authority invests in a broad range of strategies to manage source water protection in the Raritan River Watershed. Guided by the results of the Raritan Basin Watershed Protection Plan (for details see <http://www.raritanbasin.org/>) the Authority has been the lead or contributing partner in developing detailed protection plans for the priority sub-watersheds that provide water to the Raritan Reservoir System and the D&R Canal.
- Core watershed activities are funded in large part by the Source Water Protection component of the rate that the NJWSA charges for water. The Authority has the ability to leverage these dollars to attract other state and federal grant funds. Over the past year the Authority, working with collaborative organizations, has attracted more than \$1.5 Million in new funds directed to source water protection projects in the Raritan Basin.
- NJWSA continues to identify opportunities to improve and Delaware & Raritan Canal water quality. During 2009 NJWSA partnered with the D&R Canal Commission to undertake data collection along an additional 14.5 miles of the canal.

10.2 Conduct Research on Costs and Benefits. Research costs and benefits of sustainable practices to identify and support successful sustainable practices and the incorporation of environmental amenities/restoration as part of development and business activity on the river.

- In 2009, refinements were made in the technical approach used to identify sensitive water resource areas to provide the best available data for decision-making. These refinements were adopted by the NJWSA Board. To date, the Authority and its partners have under contract or have closed on more than 2,600 acres of critical watershed property, valued at more than \$54,000,000. In addition, the Authority holds conservation easements on 316 acres, valued at nearly \$2,600,000. The Authority's contribution to these efforts totals more than \$11,000,000. The Authority has forged successful partnerships with more than 30 different entities, both for cost sharing and management responsibilities on preserved parcels.

Program Year	Acreage	Total Purchase Price	NJWSA Contribution
2003	677	\$5,644,000	\$879,922
2004	502	\$6,955,386	\$1,280,222
2005	590	\$21,842,934	\$3,985,734
2006	190	\$2,448,769	\$1,597,666
2007	289	\$5,417,500	\$2,040,400
2008	286	\$11,000,000	\$1,410,000
2009	91	\$905,812	\$452,906
TOTAL	2625	\$54,214,401	\$11,646,850

10.3 Develop Successful Balanced/Sustainable Models. Identify local, state, or national examples of projects to serve as models for the basin.

- EWA partnered with Woodbridge Mayor John McCormac, Bayshore Recycling's Valerie Montecalvo, other businesses, and landowners to achieve the coveted State Brownfield Designated Area (BDA) status for the industrial Keasbey section along the Lower Raritan River. This prestigious State designation brought yearly state funding to complement the work of the Contaminated Site Responsible Parties in ensuring the timely remediation of many of the riverfront polluted sites, such as El Paso Energy, while also creating public access, a restored 100-plus acre nature area, and tidal wetlands in Woodbridge for the first time in a century. EWA serves as a vital partner of the BDA working group, providing valuable insight to the team in creating a balanced redevelopment plan.
- EWA's successful first phase of the Raritan Landfill Walkway in Edison now stands as a national model "garbage-to-gardens" project. For the first time in a century, families can safely enjoy the Raritan along Edison's eight miles of riverfront. Edison Township broke ground on this project in fall 2009, and the riverfront trail will open in the spring of 2010. Phases II and III include cleanup of all remaining garbage along the riverfront, closure of the landfill, restoration of wetlands, extension of the walkway, and construction of a kayak and canoe launch. The Walkway Project is a true "garbage to gardens" success story that sets a national model for environmentally friendly public reuse of landfills across the nation.

10.4 Focus on Education and Outreach. Throughout this action plan calls on the Collaborative to educate and conduct outreach. Develop a communications strategy to disseminate information on the research and model projects to government, NGO, business, community stakeholders and the general public.

- North Jersey Resource Conservation & Development (RCD), in partnership with the New Jersey Water Supply Authority (NJWSA), New Jersey Department of Agriculture, New Jersey Department of Environmental Protection was approved for funding from the USDA-Natural Resources Conservation Service through the Agricultural Water Enhancement Program. This funding supports implementation of farm best management practices in four watersheds within the Raritan Basin Watershed. Through this project we will work with agricultural producers to implement BMPs that will measurably reduce total suspended solids, phosphorous, temperature and bacteria.
- The River-Friendly Farm Program administered by North Jersey RC&D and funded in part through the NJWSA's "Source Water Protection Fund." works with farmers to reduce the environmental

impacts of their operations. To enhance the effectiveness of this program North Jersey RC&D and NJWSA and have worked to identify funding for practice implementation designed to broaden farmer participation. State funding of \$750,000 and federal funding of \$616,000 was obligated this year for farm practice implementation and other Agricultural related projects in the Mulhockaway, Neshanic and South Branch of the Raritan watersheds. Through the end of 2009 the River Friendly Farm Program has more than 41 farm tracts totaling 2,054 acres participating in the program.

- Work continues on development of the Neshanic Watershed Restoration and Protection Plan. As a member of the project team, North Jersey RC&D has focused our efforts on documenting agricultural best management practices in use in the watershed. Data has been provided to the project leader, New Jersey Institute of Technology for inclusion in the Soil Water Assessment Tool model under development for the project.
- The NJWSA continues to refine and expand our suite of River Friendly outreach programs tailored to urban/suburban land uses. The programs include outreach to business campuses, golf course operations, and residential communities, and seek to implement Best Management Practices (BMPs) and environmentally sound stewardship practices through an evaluation and certification process. Each land use type (business, golf course, and residence) has specific criteria that must be met in order to qualify for certification. Since the inception of these programs 7 business campuses and 7 golf courses are participating, representing approximately 3,754 acres of urban/suburban land. Additionally, our re-invigorated River Friendly Resident program reached more than 500 individuals during 2009.

10.5 Initiate a Regional Approach with Local Project Area. Develop a regional vision and approach that accounts for differences in the upper and lower river areas, then step down the planning effort to fit with local objectives.

- NJWSA has completed detailed sub-watershed protection plans for the last 11 miles of the D&R Canal, The Lockatong and Wichecheoke Creeks, and The Mulhockaway Creek and the Black River watersheds. Sub-watershed scale plans are still under development for the Neshanic River, the Cedar Grove Brook, the Peters Brook and the Manalapan Brook watersheds, focusing on understanding and designing programs that will be effective in mitigating impacts of urban/suburban stormwater runoff.
- As each of sub-watershed plans is completed, the NJWSA works with a variety of organizations to implement the recommended strategies.
- Best Management Practice implementation to reduce sediment and pollutant transport in the last 11 miles of the Delaware & Raritan Canal System above the intakes progressed slowly over the past year. Integrated stormwater management practices were implemented at the Rutgers Preparatory School and design work was advanced for projects in South Bound Brook and Franklin Township. The Cedar Grove Brook plan is near completion and the priority implementation projects identified in this plan will prove beneficial in reducing sediment loads in the Canal. The measurable effects of this work will be seen at the new gauging station planned for installation near the Landing Lane Bridge in New Brunswick and at the water company intakes.
- On the feeder end of the Canal, the NJWSA completed the Lockatong and Wickecheoke Creeks Watershed Restoration and Protection Plan. These watersheds in southwestern Hunterdon County are the largest watersheds feeding into the Canal other than the Delaware River itself. The Lockatong and Wichecheoke Creeks Watershed Plan was accepted by the Department of Environmental Protection as eligible for implementation funding through the federal 319(h) Non-point Source Program. This spring the Authority received an implementation grant through NJDEP in the amount of \$952,500 to begin work on restoring this watershed. Restoration projects identified in the plan total more than \$4.25 million.
- The NJWSA, working with municipalities and regional planning groups, has developed a municipal assessment methodology to evaluate opportunities to improve local land use decision-making framework to better protect the water supply. An initial municipal assessment report is developed for each target municipality, which becomes the starting point for mitigating the impacts of new development. This work complements the detailed planning recommendations in the Highlands

Regional Master Plan, and is a fundamental component of each of the watershed protection plans developed by the NJWSA.

Completed Municipal Assessments	Project Sponsor	Project
BEDMINSTER TWP	URWA	Raritan-Highlands 604(b)
BETHLEHEM TWP	NJWSA	USEPA TWG
CALIFON BORO	SBMWA	Raritan-Highlands 604(b)
CHESTER TWP	NJWSA	USEPA TWG
CLINTON TWP	Hunterdon Co.	Raritan-Highlands 604(b)
CRANBURY TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
DELAWARE TWP	NJWSA	Loc-Wic 319
EAST AMWELL TWP	SBMWA	USEPA TWG
EAST BRUNSWICK TWP	NJWSA	Manalapan 319
EAST WINDSOR TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
FRANKLIN TWP (Hunterdon)	NJWSA	Loc-Wic 319
FRANKLIN TWP (Somerset)	SBMWA	USEPA TWG
HELMETTA BORO	NJWSA	Manalapan 319
HILLSBOROUGH TWP	SBMWA	USEPA TWG
HOPEWELL BORO	SBMWA	William Penn and Geraldine R. Dodge Foundations
HOPEWELL TWP	SBMWA	William Penn Foundation
JAMESBURG BORO	NJWSA	Manalapan 319
KINGWOOD TWP	NJWSA	Loc-Wic 319
LAWRENCE TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
LEBANON TWP	NJWSA	USEPA TWG
MONROE TWP	NJWSA	Manalapan 319
MONTGOMERY TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
MENDHAM TWP	NJWSA	Raritan-Highlands 604(b)
PEAPACK-GLADSTONE BORO	URWA	USEPA TWG
PRINCETON BORO	SBMWA	USEPA TWG
PRINCETON TWP	SBMWA	USEPA TWG
RARITAN TWP (Hunterdon)	NJWSA	Loc-Wic 319
SOUTH BRUNSWICK TWP	NJWSA	Manalapan 319
SPOTSWOOD BORO	NJWSA	Manalapan 319
UNION TWP	NJWSA	USEPA TWG
WASHINGTON TWP	Morris County Planning	Raritan Highlands 604(b)
WEST AMWELL TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations

10.6 Identify Opportunities for Policy and Regulatory Support. Seek opportunities to propose new or amended policy and regulatory provisions that support balanced redevelopment and restoration.

Duke Farms 2009-2010

Habitat Regeneration

- Invasive plant removal on hundreds of acres
- Native plantings, over 140,000 trees, shrubs and herbaceous plantings
- Many acres of lawns converted to native pollinator meadows consisting of deep rooted warm season grasses and wildflowers
- 3 Vernal pools installed

Lakeshore Restoration and Floating islands

- Restoring the native vegetation along the lake system
- 25 floating native vegetation islands installed in the lake system

Wetland Reserve Program

- NRCS program, hundreds of acres conserved along the Raritan river

Emergency Watershed Protection Program

- NRCS program, land conserved immediately adjacent to the river

Green Infrastructure

- 2 Rain gardens and bioswales with native plantings
- Constructed wastewater wetlands with native plantings
- Stormwater management through rain barrels and cisterns (and the Rain Gardens)
- Gray water capture and reuse program planned
- Water use reduction program through smart irrigation strategies

Edison Wetlands Association

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

Toxic Cleanups

EWA worked with USEPA, NJDEP, federal, state, and local officials, community groups, and other environmental groups to expedite and strengthen the remediations of over 75 toxic sites in the Raritan Watershed.

Woodbridge Township awarded State Brownfields Designation

EWA partnered with Woodbridge Mayor John McCormac, Bayshore Recycling's Valerie Montecalvo, other businesses, and landowners to achieve the coveted State Brownfield Designated Area (BDA) status for the industrial Keasbey section along the Lower Raritan River. This prestigious State designation brought yearly state funding to complement the work of the Contaminated Site Responsible Parties in ensuring the timely remediation of many of the riverfront polluted sites, such as El Paso Energy, while also creating public access, a restored 100-plus acre nature area, and tidal wetlands in Woodbridge for the first time in a century. EWA serves as a vital partner of the BDA working group, providing valuable insight to the team in creating a balanced redevelopment plan.

Edison opens Raritan Riverfront Walkway

EWA's successful first phase of the Raritan Landfill Walkway in Edison now stands as a national model "garbage-to-gardens" project. This story dramatically captures the essence of our unique Brownfields to Greenfields work. EWA is transforming sites that have long harmed the environment and nearby families and recreational users, into positive resources that offer environmental restoration, safe passive recreation, and new public access to rare open space and nature. For the first time in a century, families can safely enjoy the Raritan along Edison's eight miles of riverfront.

EWA's Robert Spiegel conceived the idea for a landfill walkway project along the Edison Landfill in 2002 – and our vision is now a reality. Edison Township broke ground on this project this fall, and the riverfront trail opens in the spring of 2010.

Phases II and III include cleanup of all remaining garbage along the riverfront, closure of the landfill, restoration of wetlands, extension of the walkway, and construction of a kayak and canoe launch. The Walkway Project is a true "garbage to gardens" success story that sets a national model for environmentally friendly public reuse of landfills across the nation.

Dismal Swamp

The long-overlooked Dismal Swamp Conservation Area (DSCA) in highly developed Middlesex County was recently recognized with New Jersey's newest State Preservation Commission. This designation places regional protection on the DSCA for the first time in history. Known as "the Everglades of Central Jersey," the 1,240-acre DSCA is the largest nature area remaining in northern Middlesex County, spanning portions of Edison, Metuchen and South Plainfield.

On October 29, 2009, the DSCA moved one step closer to complete preservation. Governor Corzine visited the Triple C Ranch, the last remaining farm in northern Middlesex County, to sign the bill establishing the Dismal Swamp State Preservation Commission, and to recognize the DSCA as an ecologically sensitive and valuable ecosystem in New Jersey. This governing body, with representatives from the grassroots environmental non profit Edison Wetlands Association (EWA), the towns of South Plainfield, Edison, and Metuchen, and Middlesex County, will oversee all proposed development and planning in the swamp.

"The State of New Jersey has done remarkable things. You think about the Pinelands, you think about the Highlands, you think about the Great Swamp and other areas-and now we're adding to that legacy for future generations with the Dismal Swamp," said Governor Corzine. "Bob Spiegel rightly said 10,000 years ago this area was the place where our wildlife thrived, where Native Americans thrived, and we want to return and move forward with this to preserve it for future generations accordingly. I'm pleased that I can sign the authorization of this commission."

The DSCA wildlife refuge serves as a natural oasis holding United States Environmental Protection Agency Federal Priority Wetlands. The DSCA is home to over 175 species of birds, and two dozen species of mammals, amphibians and reptiles, as well as a dozen threatened and endangered species, such as the American bittern, bald eagle, and spotted turtle. The DSCA also provides natural flood control and wildlife habitat, while its forests produce oxygen, and its wetlands clean and purify water.

“We’ve been working for 20 years now on the preservation of the Dismal Swamp,” said EWA Executive Director Bob Spiegel. “For the first time, the state is recognizing this critically important regional resource that serves as the lifeblood of Central Jersey. The formation of this Commission with its hard-working members and public involvement guarantees a legacy that future generations can cherish.”

EWA plays a crucial role in preserving the Dismal Swamp by helping to preserve more than half of the remaining DSCA to date. EWA recently worked with NY-NJ Baykeeper, New York-New Jersey Port Authority, and the Middlesex County Freeholders to purchase the Adams Farm and South Plainfield Holdings properties for preserved greenspace and prevent them from being developed. EWA is now fighting the proposed construction of a building on an environmentally sensitive area of land in Edison known as the Visco property, one of the last privately owned sections of “The Diz”. With the Commission in place, the DSCA has a bright future and should be preserved for many future New Jersey generations to enjoy.

Volunteer Cleanups

Edison Wetlands Association and WildNewJersey.tv partnered on over a dozen volunteer cleanups within the Raritan Watershed. EWA also worked with Rutgers University to coordinate a river cleanup event to mark World Water Day.

Public Outreach

WildNewJersey.tv continued its growth as the only daily nature and conservation news source in New Jersey. WNJ and NewGreenMedia.tv videos also provided close-up looks into dozens of environmental issues in New Jersey.

2. Name your organization’s top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

Stronger remediation; regional conservation plan; managed public access for conservation.

3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

More site specific support on EWA’s toxics, conservation, Brownfields-to-Greenfields, and public outreach campaigns.

Edward J. Bloustein School of Planning & Public Policy

As the conveners of the Raritan River Collaborative and the Sustainable Raritan River Initiative, The E. J. Bloustein School of Planning & Public Policy has championed the efforts to restore and protect the Raritan River in the areas of outreach, education, engagement and communication.

Municipal Outreach on the New View: the Sustainable Raritan River: November 2009

The Collaborative sponsored two programs this year. The first, co-sponsored by Middlesex County, Somerset County and the Association of New Jersey Environmental Commissions, brought representatives of the eighteen corridor communities along the Lower Raritan together to talk about the initiative and the vision for a regional corridor plan. In conjunction with this meeting, held in November 2009, one of the Bloustein School graduate planning studio courses was dedicated to the development of an initial plan for the regional approach to the restoration and protection of the corridor.

Raritan River Ecology: Reports from the Field: April 2010

The second program was the April 2010 Ecology of the Raritan River: Reports from the Field. This research symposium featured four prominent Rutgers scientists, Dr. Bob Chant from the Rutgers University Coastal Ocean Observation Lab (RUCOOL), Dr. Chris Obropta, RU Cooperative Extension, Dr. Beth Ravit, Director of the Rutgers Environmental Research Clinic, and Dr. David Robinson, NJ State Climatologist and Chairman of the RU Department of Geography. Their work on nutrient loading in the Raritan, stormwater management, oysters and climate change are major contributions to the improving ecology of the Raritan. The staff from Rutgers Public Safety program also presented their work on stormwater management for the New Brunswick Campus, focused on the protection of the Raritan River.

Presentations

Outreach included presentations to the Middlesex County Water Resources Board, the Upper Raritan Watershed Association, the Association of Somerset County Government Officials, a presentation at the NJ Commerce and Industry Association's EPCON conference, and regional view of the Raritan River Initiative for the Northeast Sustainable Communities Workshop.

Other active engagement took Rutgers Staff to Woodbridge, Manville and Bound Brook to advise and consult on matters related to the river. In Woodbridge, the focus was on enhancing the ecology of the area and addressing stormwater runoff. In Bound Brook, the topic was green infrastructure and green buildings, while in Manville, the subject was flooding. Somerset and Middlesex Counties, as sponsors of the spring studio course, have invited Rutgers to present to their freeholder boards. The Middlesex meeting took place in June and the Somerset meeting will take place this summer.

Collaborative Partnerships

We have worked to build the collaborative and cooperate with members of the collaborative to support their efforts, lending letters of support for grant applications from NY/NJ Baykeeper and New Jersey Audubon and working with Edison Wetlands to secure a Technical Assistance Grant for the Woodbrook Road Superfund site in South Plainfield.

In early February, Collaborative members supported an application from the Bloustein School to the Geraldine R. Dodge Foundation to provide assistance with three underfunded elements of the Initiative:

- web-based inventories of local brownfield sites, completion of the Middlesex County Landscape Project wildlife inventory, and local sustainability Reports to address environmental quality, economic growth and climate change issues (e.g., corridor protections, stormwater management innovations). We will develop two pilots brownfield inventories, and the wildlife inventory will be done with NY/NJ Baykeeper, NJ Audubon, the Conserve Wildlife Foundation, the NJ Association of Environmental Commissions and Middlesex County.
- Rutgers University is also supporting this through the generous gifts of the Byrne Seminar.

Website:

We continue to develop and post information on the website, www.blueraritan.org. A central clearinghouse for information related to the Raritan, assembled from state, federal and organizational internet sites, the Blue Raritan website offers up-to-date news, data, information on events, and sources of additional information in all areas related to the future of the river.

This year, we added the Sustainable Raritan River Agenda and a special section for municipalities, populated by the materials developed in the Visioning the Raritan Corridor report developed by the graduate planning

students at the Bloustein School this spring.

Raritan River Collaborative Canoe Trip: October 2009

In October 2009, with the help of PSEG, Middlesex Water, Blue Mountain Sports and Wakefern Foods, the Collaborative hosted a paddle down the Raritan from Piscataway to New Brunswick's Boyd Park. Middlesex County provided transportation services and New Brunswick and Piscataway provided emergency crews who both helped with the event and practiced their water safety skills. Extra canoes and kayaks were from the new fleet of the NY/NJ Baykeeper and Edison Wetlands, both of whom will be featuring additional paddling opportunities this year. In addition, it was an opportunity to introduce the Raritan Riverkeeper's new Tyvak™ map of lower Raritan launch sites, dams and other information critical to recreational boaters.

2nd Annual Sustainable Raritan River Symposium: June 2010

In June, the Collaborative hosted the 2nd Annual Sustainable Raritan River Symposium at the Cook Campus Center of Rutgers University. Keynote speakers included NJDEP Commissioner Bob Martin, Congressman Frank Pallone, Caroline Ehrlich, Economic Development Director for Woodbridge township, and NJ State Climatologist, David Robinson. Morning panels highlighted the diversity of the Raritan: the first panel represented those branches of the River with the regions substantive source of drinking water and their program focused on non-point source pollution controls and stream-bank restoration and preservation. The second panel, from the Lower Raritan, highlighted the remediation and restoration activities, and efforts to enhance habitat through the introduction of oyster reefs in the regional bay waters.

Following presentations of the Wild New Jersey film on restoration of brownfields, Caroline Ehrlich spoke about the efforts of Woodbridge Township to remediate a major brownfield site in the Keasbey neighborhood, and Dave Robinson presented the most recent information on climate change in the region.

The afternoon panels drilled down on the matter of the river itself ranging from stormwater runoff to dam removal to the migration of anadromous fish populations such as shad. Wetland mitigation efforts in Black Creek and discussions of the NJDEP Office of Resource Restoration rounded out a challenging discussion on the need to address the future of the river as a whole, starting with a robust assessment of the Lower Raritan.

The closing panel brought Freeholders from six of the Raritan's seven counties together to share their experiences and to engage in discussions on how they could play a role in the future of the Raritan River in their region. Union County presented their bio-blitz programs, Hunterdon spoke of flooding and residential buy-outs. Middlesex County shared its success with Green Technologies and economic development, while Monmouth County focused on water quality and the robust testing program there. The report from Morris County covered their stormwater management programs and the improvements in reducing runoff and non-point source pollution.

The highlight of the program was the presentation of six outstanding service awards, which went to the following organizations:

Stewardship: [the Raritan Riverkeeper](#)

Leadership: [Henry Daaleman, President, Mushett Foundation](#)

Restoration: [Edison Wetlands Association](#)

Education: [the NJDEP AmeriCorps Program](#)

Balanced Development: [Woodbridge Township](#)

Habitat: [New Jersey Audubon](#)

Sustainable Raritan River Business Roundtable

To encourage and promote sustainable business practices, business development and business retention in the region, the Collaborative hosted the first sessions of the Sustainable Raritan River Business Roundtable, bringing yet more partners into the collaborative. These include regional pharmaceutical companies, consultants, planners, developers, realtors and other interested business groups. This will be an ongoing function of the Collaborative throughout the year, meeting quarterly to highlight successes in the region and provide a forum for discussion and collective improvements in environmental management and green business practices.

There were two special projects this year. They included an Assessment of Low- Moderate-Income Housing in the Raritan Region, funded by PNC Foundation, and the Raritan River Studio Course, funded by the E. J. Bloustein School of Planning and Public Policy.

PNC Foundation Housing Project

The PNC Foundation provided a small grant to the Center to study the interface between Low- and Moderate-income housing and environmentally sensitive lands, such as wetlands and floodplains. The funding covered research into Lo-Mod housing in Bound Brook with findings that housing in that area does exist in environmentally sensitive lands. Recommendations from this study will be provided to PNC for its use in deliberations on funding future requests in areas where environmentally sensitive lands are found.

The Sustainable Raritan River Studio Course Visioning the Future Raritan River

Sponsored by the E. J. Bloustein School of Planning and Public Policy, this graduate design studio course challenges students to apply their cumulative planning skills in a penultimate practicum to produce a deliverable for a client. In this case, the students worked on behalf of Somerset and Middlesex Counties to encourage them to adopt more ambitious stormwater runoff practices, to complete the corridor greenway from Branchburg to the Bay, and to work together to create an “identity” for the River along with a more focused effort to actively use the river for recreation and community events.

Franklin Township Environmental Commission

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

In April 2010, the Environmental Commission co-sponsored, with the Stony Brook- Millstone Watershed Association, a clean-up of Mile Run, a tributary of the Raritan River. Mile Run forms the border between Franklin Township in Somerset County and the City of New Brunswick in Middlesex County. It is a relatively wild, natural area in the midst of urban development, with a steep ravine for most of its length.

The clean-up was well attended with approximately 20 residents and students participating. A large quantity of litter and debris was collected and disposed of. This clean-up served as a follow-up to an earlier event in April 2008, in which over 6,000 pounds of debris was removed from the stream and its banks.

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

Development and implementation of a septic ordinance for Franklin Township.

Development of an integrated pest management plan for the Township

3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

NJDEP Compliance & Enforcement

Actions in WMA's 8-10:
May 1, 2009 to May 28, 2010

NJDEP's Compliance and Enforcement Programs are dedicated to ensuring that New Jersey's environment is clean, safe, enjoyable, preserved and enhanced for future generations. To illustrate the ways in which NJDEP's Compliance and Enforcement Programs have contributed to the protection of environmentally sensitive land (specifically within the boundaries of all those Municipalities that lie within the combined boundary of Watershed Management Areas 8, 9, and 10); we have compiled the following data.

From May 1, 2009 to May 28, 2010, NJDEP Compliance and Enforcement Programs have required the following mitigation actions within the geographic boundary described above:

- The restoration of 48,000 square feet of Flood Hazard Area Riparian Zone;
- The restoration of 103,735 square feet of Freshwater Wetlands;
- The restoration of 56,800 square feet of Transition Area;
- The contribution of \$2,850.00 to Wetlands Mitigation Banks; and
- The restoration/mitigation of 7,804 square feet of Land Area.

The New Jersey Water Supply Authority:

Watershed Planning - On an ongoing basis the New Jersey Water Supply Authority invests in a broad range of strategies to manage source water protection in the watersheds that more than 1.5 million residents rely upon for a clean water supply. Guided by the results of the Raritan Basin Watershed Protection Plan (see web for details at <http://www.raritanbasin.org/>), the Authority has been the lead or a contributing partner in developing more detailed protection plans for the priority sub-watersheds that provide water to the Raritan Reservoir System and the D&R Canal. Key partners include South Branch Watershed Association, Upper Raritan Watershed Association, County and Municipal governments and Rutgers School of Environmental and Biological Sciences. These more detailed sub-watershed protection plans have been completed for the last 11 miles of the D&R Canal, The Locketong and Wichecheoke Creeks, and The Mulhockaway Creek and the Black River watersheds. Sub-watershed scale plans are still under development for the Neshanic River, the Cedar Grove Brook, the Peters Brook and the Manalapan Brook watersheds. Also, it should be noted that additional plans have been developed or are under development in various sub-watersheds in the Millstone Basin by the Stony Brook Millstone Watershed Association. As each of these sub-watershed plans is completed the Authority works with a variety of organizations to implement the recommended strategies. These core watershed activities are funded in large part by the Source Water Protection component of the rate that the Authority charges for water. This gives the Authority the ability to leverage these dollars to attract other available state and federal grant funds. Over the past year the Authority working with collaborative organizations attracted more than \$1.5 Million in new funds directed to source water protection projects in the Raritan Basin.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 9.2, 9.3, 9.4, 10.1, 10.4, 10.5

Rural/Agricultural Impacts - Over the past year, the Authority put an emphasis on expanding programs that are designed to address agricultural runoff. Runoff from agricultural land use was identified in the Raritan Basin Plan and subsequent sub-watershed plans as a major contributor to exceedances in water quality standards. The centerpiece of this effort is the River Friendly Farm Program that is administered through North Jersey Resource Conservation and Development Council (NJRC&D) and funded in part through the Authority's "Source Water Protection Fund." To enhance the effectiveness of this program the Authority and NJRC&D have worked to identify funding for practice implementation designed to encourage farmer participation. State funding of \$750,000 and federal funding of \$616,000 was obligated this past year for farm practice implementation and other Agricultural related projects in the Mulhockaway, Neshanic and South Branch of the Raritan watersheds. Through the end of 2009 the River Friendly Farm Program has more than 41 farm tracts participating in the program totaling 2,054 acres.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 9.2, 9.3, 9.4, 10.1, 10.4, 10.5

Urban/Sub-Urban Impacts - Planning in the Cedar Grove Brook, the Peters Brook, and the Manalapan Brook is focused on understanding and designing programs that will be effective in mitigating impacts of urban/suburban stormwater runoff. The Authority continues to refine and expand the effectiveness of our suite of River Friendly outreach programs tailored to these urban/suburban land uses. These programs include outreach to Business campuses, Golf Course operations and Residential communities and seek to implement best management practices and environmentally sound stewardship practices through an evaluation and certification process. Each land use type (business, golf course, and residence) has specific criteria that must be met in order to qualify for certification. Since the inception of these programs 7 business campuses and 7 golf courses are participating in the programs representing approximately 3,754 acres of urban/suburban land uses. Additionally, our re-invigorated River Friendly Resident program reached more than 500 individuals over the past year.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 9.2, 9.3, 9.4, 10.1, 10.4, 10.5

D&R Canal Protection - Best Management Practice implementation to reduce sediment and pollutant transport in the last 11 miles of the Delaware & Raritan Canal System above the intakes progressed but more slowly than hoped over the past year. Integrated stormwater management practices were implemented at the Rutgers Preparatory School and design work was advanced for projects in South Bound Brook and Franklin Township. The Cedar Grove Brook plan is near completion and the priority implementation projects identified in this plan will prove very beneficial in reducing sediment loads in the Canal. The measurable effects of this work will be seen at the new gauging station planned for installation near the Landing Lane Bridge in New Brunswick and of course at the water companies intakes.

On the feeder end of the Canal, the Authority completed the Lockatong and Wickecheoke Creeks Watershed Restoration and Protection Plan. These watersheds located in southwestern Hunterdon County are the largest watersheds feeding into the Canal other than the Delaware River itself. The Lockatong and Wickecheoke Creeks Watershed Plan was accepted by the Department of Environmental Protection as eligible for implementation funding through the federal 319(h) Non-point Source Program and this spring the Authority received an implementation grant through NJDEP in the amount of \$952,500 to begin work on restoring this watershed. Restoration projects identified in the plan total more than \$4.25 million. We continue to work our way along the canal to identify opportunities to improve and protect water quality. To that end, during 2009 we partnered with the D&R Canal Commission to undertake data collection along an additional 14.5 miles of the canal.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 9.2, 9.3, 9.4, 10.1, 10.4, 10.5

Land Protection and Preservation - In watershed areas where water quality is of high quality and land use intensity is low the Authority applies a two-part strategy designed for the long-term protection of the source water. We work with local decision makers to strengthen municipal land use controls and we partner with other agencies and non-profit organizations to preserve critical water resource sensitive land.

Municipal Land Use Planning - The Authority, working with municipalities and regional planning groups, has developed a municipal assessment methodology to evaluate opportunities to improve the local land use decision-making framework to better protect our sensitive water supply. The methodology was adapted from similar efforts undertaken by the Stony Brook Millstone Watershed Association and expanded under the EPA Targeted Watershed Grant for the Raritan. An initial municipal assessment report is developed for each target municipality and is the starting point for mitigating the impacts of new development. This work also respects and complements the detailed planning recommendations found in the Highlands Regional Master Plan and is a fundamental component of each of the watershed protection plans developed by the Authority. A table of the completed municipal assessments is provided below.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 9.2, 9.3, 9.4, 10.1, 10.4, 10.5

Completed Municipal Assessments	Project Sponsor	Project
BEDMINSTER TWP	URWA	Raritan-Highlands 604(b)
BETHLEHEM TWP	NJWSA	USEPA TWG
CALIFON BORO	SBWA	Raritan-Highlands 604(b)
CHESTER TWP	NJWSA	USEPA TWG
CLINTON TWP	Hunterdon Co.	Raritan-Highlands 604(b)
CRANBURY TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
DELAWARE TWP	NJWSA	Loc-Wic 319
EAST AMWELL TWP	SBMWA	USEPA TWG
EAST BRUNSWICK TWP	NJWSA	Manalapan 319
EAST WINDSOR TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
FRANKLIN TWP (Hunterdon)	NJWSA	Loc-Wic 319
FRANKLIN TWP (Somerset)	SBMWA	USEPA TWG
HELMETTA BORO	NJWSA	Manalapan 319
HILLSBOROUGH TWP	SBMWA	USEPA TWG
HOPEWELL BORO	SBMWA	William Penn and Geraldine R. Dodge Foundations
HOPEWELL TWP	SBMWA	William Penn Foundation
JAMESBURG BORO	NJWSA	Manalapan 319
KINGWOOD TWP	NJWSA	Loc-Wic 319
LAWRENCE TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
LEBANON TWP	NJWSA	USEPA TWG
MONROE TWP	NJWSA	Manalapan 319
MONTGOMERY TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations
MENDHAM TWP	NJWSA	Raritan-Highlands 604(b)
PEAPACK-GLADSTONE BORO	URWA	USEPA TWG
PRINCETON BORO	SBMWA	USEPA TWG
PRINCETON TWP	SBMWA	USEPA TWG
RARITAN TWP (Hunterdon)	NJWSA	Loc-Wic 319
SOUTH BRUNSWICK TWP	NJWSA	Manalapan 319
SPOTSWOOD BORO	NJWSA	Manalapan 319
UNION TWP	NJWSA	USEPA TWG
WASHINGTON TWP	Morris County Planning	Raritan Highlands 604(b)
WEST AMWELL TWP	SBMWA	William Penn and Geraldine R. Dodge Foundations

Land Acquisition and Stewardship - Since 2003, the Authority has been a key land acquisition partner in the North and South Branch Raritan watersheds, leading the efforts to protect sensitive water resources and to maintain a clean source of water into the future. Land preservation is guided by the Authority's methodology for identifying sensitive water resource areas. The Authority's Land Acquisition Team works to identify critical water resource areas through a multifaceted methodology which includes GIS mapping of sensitive water resource areas, land use analysis, development vulnerability, connectivity to other preserved lands and several other factors. In 2009, refinements were made in the technical approach used to identify sensitive water resource areas. These refinements were adopted by the Board and were designed to provide the best available data for decision-making.

Once properties are identified through this methodology, the Authority works in partnership with State, County, municipal and non-profit partners to preserve the land in perpetuity. The Authority finances its share of land acquisition and management costs through the NJ Environmental Infrastructure Financing Program at very favorable interest rates.

To date, the Authority and its partners have under contract or closed more than 2,600 acres of critical watershed property, valued at more than \$54,000,000. In addition, the Authority holds conservation easements on 316 acres, valued at nearly \$2,600,000. The Authority's contribution to these efforts totals more than \$11,000,000. The Authority has forged successful partnerships with more than 30 different entities, both for cost sharing and management responsibilities on preserved parcels. A chart that details these acquisitions, as well as a list of partners, may be found below.

Program Year	Acreage	Total Purchase Price	Authority's Contribution
2003	677	\$5,644,000	\$879,922
2004	502	\$6,955,386	\$1,280,222
2005	590	\$21,842,934	\$3,985,734
2006	190	\$2,448,769	\$1,597,666
2007	289	\$5,417,500	\$2,040,400
2008	286	\$11,000,000	\$1,410,000
2009	91	\$905,812	\$452,906
TOTAL	2625	\$54,214,401	\$11,646,850

Municipal partners:

Borough of Califon (Hunterdon County)
 Borough of High Bridge (Hunterdon County)
 Township of Chester (Morris County)
 Township of Clinton (Hunterdon County)
 Township of Bedminster (Somerset County)
 Township of Bethlehem (Hunterdon County)
 Township of Delaware (Hunterdon County)
 Township of Franklin (Hunterdon County)
 Township of Lebanon (Hunterdon County)

Township of Mendham (Morris County)
 Township of Roxbury (Morris County)
 Township of Union (Hunterdon County)
 Township of Washington (Morris County)

County partners:

Hunterdon County Open Space Trust Fund Program
 Hunterdon County Department of Parks and Recreation
 Morris County Park Commission

Monitoring – The Authority supports a network of monitoring that includes:

- In-house Biological, Chemical and Visual Monitoring in support of the sub-watershed plans and as part of implementation efforts
- USGS Cooperative Gauging Stations at various locations throughout the Raritan basin

2010 SR checklist correlation: 7.3

2. Top Priorities for 2011:

- Urban Watershed Stormwater Mitigation – Peters Brook Model
- Agricultural BMP Implementation in Targeted Watersheds (Neshanic, Mulhockaway, South Branch)
- Sub Watershed Plan Priority Implementation (Lock/Wick, D&R Canal)

Checklist correlation: 3.1, 3.2, 3.3, 3.4, 3.6, 4.1, 4.3, 5.1, 5.5, 5.6, 7.1, 7.3, 7.5, 7.6, 7.7, 9.2, 9.3 9.4, 10.2, 10.4, 10.5

National Oceanic Atmospheric Administration (NOAA)

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

NOAA is developing a Raritan River database and mapping project in response to an expressed need of the Raritan River collaborative. NOAA's collaborative partnership with EPA and NJ DEP will allow for the coordinate receipt of electronic contaminants- based sediments, fish tissue, and toxicity data from the Raritan River and its tributaries. This project will be posted to NOAA's DARRP website which currently makes public other regional database and mapping projects including ones for the Newark Bay/ Berry's Creek and the Hudson River. GIS/ Google layers and maps will be developed as part of this effort. The database and mapping project is a visual tool useful for contaminated sediment management and restoration planning. - 6.1, 6.5

[http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY%28entry_subtopic_topic%29=entry_id,subtopic_id,topic_id&entry_id\(entry_subtopic_topic\)=378&subtopic_id\(entry_subtopic_topic\)=36&topic_id\(entry_subtopic_topic\)=2](http://response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY%28entry_subtopic_topic%29=entry_id,subtopic_id,topic_id&entry_id(entry_subtopic_topic)=378&subtopic_id(entry_subtopic_topic)=36&topic_id(entry_subtopic_topic)=2)

NOAA's Office of Response and Restoration has and continues to develop and use of tools that improve our ability to evaluate risk, and to develop protective remedies and restoration strategies for contaminated sediment sites in the Raritan River watershed. NOAA currently works on at least 6 federal Superfund Sites and one federal facility. - 6.1, 6.3

NOAA continues to work with EPA to develop remedies at the American Cyanamid Superfund Site, located adjacent to the Raritan River in Bound Brook, NJ, that will be protective of habitats (e.g., surface waters and sediments and biota (e.g., fish and invertebrates) they support. - 6.1, 6.3

NOAA continues to work with EPA to develop a remedy at the Horseshoe Road/Atlantic Resources Corporation Superfund Sites, located adjacent to the Raritan River in Sayreville, NJ, that will address metal and PCB contamination in the river and adjacent wetlands. - 6.1, 6.3

NOAA continues to work with EPA on assessing ecological risks from PCBs and other contaminants in the Bound Brook Corridor adjacent to and downstream of the Cornell-Dubilier Electronics Superfund Site in South Plainfield, NJ. - 6.1, 6.3

NOAA continues to work with EPA to develop a remedial investigation of the Woodbrook Road Dump Superfund Site in South Plainfield, NJ, that will assess ecological risks in Bound Brook and adjacent wetlands. - 6.1, 6.3

NOAA continues to work with EPA on evaluating post-construction monitoring data in Edmonds Creek and Edmonds Creek Marsh at the Kin-Buc Landfill Superfund Site in Edison, NJ that will assess the efficacy of the remedy. - 6.1, 6.3

NOAA continues to work with EPA to develop a remedial investigation of the Raritan Bay Slag Superfund Site in Old Bridge and Sayreville, NJ that will address metal contamination along the beach, jetty, seawall and adjacent wetland areas. - 6.1, 6.3

NOAA continues to work with NJDEP and USACE to develop a remedy at the Former Raritan Arsenal Formerly Used Defense Site (FUDS) in Edison, NJ that will be protective of habitats in the adjacent Raritan River. - 6.1, 6.3

The Raritan River Fish Passage Initiative was conceived through a partnership between NOAA and NJDEP to make the Raritan River and its tributaries passable to anadromous fish and the American eel and to provide a healthier habitat for all users of the river. In October 2008, NOAA and DEP held their first stakeholder meeting in Trenton.

NOAA and NJDEP coordinated initial effort resulted in the development of a restoration opportunities data base and mapping product. Subsequently, the lowest dams in the watershed were prioritized for removal or passage. Efforts have centered on locating funding for feasibility study of priority dams. The priority dams are the Calco Dam at Bound Brook, the Nevious Street Dam at Raritan, the Roberts Street Dam in Hillsborough and the two dams on the Millstone River currently under study by the Stony Brook Millstone Watershed Association. In 2009, American Rivers/NOAA Community-based partnership grant program and NJDEP funded the Stony Brook Millstone Watershed Association feasibility study. 9.1, 9.2, 9.3

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

During 2010-2011, NOAA will be developing the Combe Landfill South/Cornell Dubilier Restoration Plan with its natural resource trustees, the Department of the Interior (DOI) and New Jersey Department of Environmental Protection (NJDEP). Natural resource damages were settled at the Combe Landfill South Superfund Site in 2003 and 2009. Environmental liability with Dana Corporation was resolved for the Cornel Dubilier Superfund Site through a bankruptcy settlement in 2008. The Restoration Plan will identify restoration options and the agencies preferred options for implementation

North Jersey Resource Conservation & Development (RC&D)

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

Stewardship of Open Space

North Jersey RC&D has secured funding from three sources to develop the Stewardship of Open Space program. Work on the feasibility study and business plan is currently underway for this program which will assist municipal and county governments to set and implement community goals for established open space. Through the program we will provide technical assistance with goal setting, planning, implementation, and maintenance.

2010 SR checklist correlation: 5.1, 5.2, 5.3, 5.5, 5.6

Protection of Critical Source Areas for Achieving Long-term Sustainability of Water Resources

Through this project North Jersey RC&D is working with New Jersey Institute of Technology, New Jersey Water Supply Authority and the Municipal Land Use Center to develop innovative strategies to protect and preserve Critical Source Areas (CSA) at a municipal level through community-based land planning and ordinances. The project is being conducted in the 34.4 square miles Rockaway Creek watershed in the Raritan River Basin. Over the past year the project team has been collecting soil moisture data to calibrate the CSA model. Maps have been developed for each municipality in the project area to highlight where in the community CSAs exist that are not currently protected through either a federal, state, or local regulation.

2010 SR checklist correlation: 7.1, 7.3

Walnut Brook Riparian Restoration

Through the Walnut Brook Riparian Restoration Project, North Jersey Resource Conservation and Development Council along with Raritan Township, the Hunterdon Land Trust Alliance (HLTA) and numerous local, county, state and federal partners are working to restore natural stream function and improve overall water quality. The project site is located within Mine Brook Park, owned by Raritan Township, and the Dvoor Farm, owned by HLTA. Since May 2009, we have created three acres of forested and emergent wetland, stabilized 800 linear feet of severely eroding streambank, removed invasive species, and enhanced the riparian corridor with native trees and shrubs. Nearly \$100,000 of in-kind, donated goods, services, and volunteers have been provided to the project in addition to the \$692,276 in grant funds from the New Jersey Wetland Mitigation Council and the New Jersey Department of Environmental Protection. A video on the project was produced by the local high school, Hunterdon Central, and will be shown as part of the HLTA Land and Food Film Series. Macroinvertebrate monitoring has been conducted at the site prior to restoration and throughout construction.

2010 SR checklist correlation: 1.3, 1.4, 3.2, 3.3, 3.4, 9.4

River-Friendly Farm Program

North Jersey RC&D in partnership with the New Jersey Water Supply Authority, New Jersey Department of Agriculture, New Jersey Department of Environmental Protection and others was approved for funding from the USDA-Natural Resources Conservation Service through the Agricultural Water Enhancement Program to implement farm best management practices in four targeted watersheds within the Raritan Basin Watershed. Through this project we will actively work with agricultural producers to implement BMPs that will measurably reduce total suspended solids, total phosphorous, temperature and bacteria. The River-Friendly Farm Program administered by North Jersey RC&D and funded in part through the New Jersey Water Supply Authority's "Source Water Protection Fund." works hand and hand with farmers through cooperation and education to reduce the environmental impacts of their operations. To enhance the effectiveness of this program North Jersey RC&D and the Authority and have worked to identify funding for practice implementation designed to broaden farmer participation. State funding of \$750,000 and federal funding of \$616,000 was obligated this past year for farm practice implementation and other Agricultural related projects in the Mulhockaway, Neshanic and South Branch

of the Raritan watersheds. Through the end of 2009 the River Friendly Farm Program has more than 41 farm tracts participating in the program totaling 2,054 acres.

2010 SR checklist correlation: 3.1, 3.2, 3.3, 3.4, 4.3, 7.1, 7.3, 7.5, 7.7, 9.1, 10.4

Neshanic Watershed Planning

Work continues on development of the Neshanic Watershed Restoration and Protection Plan. As a member of the project team, North Jersey RC&D has focused our efforts on documenting agricultural best management practices in use in the watershed. Data has been provided to project leader, New Jersey Institute of Technology for inclusion in the Soil Water Assessment Tool model under development for the project.

2010 SR checklist correlation: 7.1, 7.3, 7.5, 7.7, 9.1, 9.4, 10.2, 10.4,

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

1. Agricultural BMP Implementation in Targeted Watersheds (Neshanic, Mulhockaway, South Branch)
2. Continued Riparian Restoration of the Walnut Brook
3. Finalizing the Neshanic Watershed Restoration and Protection Plan

*Developing the Stewardship of Open Space program is a major goal for the North Jersey RC&D, however it is not specific just to the Raritan.

3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

Coordinated assistance from Rutgers students/faculty for tasks relating to implementation, maintenance and monitoring of riparian and wetland restoration sites.

NY/NJ Baykeeper

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

In August 2009, NY/NJ Baykeeper, Edison Wetlands Association and Raritan Riverkeeper filed a federal lawsuit against eleven parties for violating the federal Resource Conservation and Recovery Act by polluting sediments of the Raritan River from the National Lead and nearby highways in Sayreville, New Jersey. The 400-acre National Lead site is surrounded on three sides by the Raritan River.

Baykeeper is assisting Bill Schultz, Raritan Riverkeeper, in launching a series of kayak and canoe trips down the Raritan River. Thanks to a grant from the Edison Wetlands Association, Baykeeper was able to purchase ten kayaks and five canoes for use on the Raritan River by members of the public. The trips are taking place May through September. Baykeeper is also hosting two EcoCruises on a chartered fishing boat this summer that will allow guests to experience the Raritan Bay and its natural resources.

This June Baykeeper is launching a new pumpout boat program for Raritan Bay. The "Head Mistress" will service recreational boats from Perth Amboy to Atlantic Highlands, providing a convenient way for boaters to pumpout their on-board toilets rather than dumping the waste overboard.

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

- Public Access
- Clean-up of contaminated sites and sediment
- Open Space Acquisition

3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

We are excited to begin our first intern program this summer at Baykeeper and were grateful for the assistance from Rutgers University and the collaborative in being able to connect with students for this program. These interns will be working on our public access and open space projects.

Raritan Riverkeeper

- Riverkeeper has published a map detailing launching points and dams along the Raritan River from the confluence of the North Branch, South Branch and the mainstream of the Raritan River to Raritan Bay or Branchburg to Perth Amboy. The map is printed on tyvek material so as to be tear resistant, waterproof and designed for field use. - 1.1
- A more detailed access project is web based and is accessible as a link from the Raritan Riverkeeper page of the NY/NJ Baykeeper web site. Also published was a twenty four page book detailed with site images and satellite images of each site. - 1.2
- Riverkeeper along with NY/NJ Baykeeper obtained 15 kayaks and canoes based from two trailers for paddle trips on the Raritan River. We have scheduled three trips on the Raritan River through the summer. 1.3
- Riverkeeper assisted in the Rutgers "Fall Float" with the planning, safety considerations, formatting a safety plan, providing boats for participants and patrol personnel along the route. - 1.4
- Riverkeeper participated in river-oriented events such as the Raritan River Festival in New Brunswick and other festivals in the Raritan River Basin. - 1.4
- Riverkeeper attempted to encourage water related commercial development along the Raritan River by commenting against the U.S. Coast Guard change in bridge regulation allowing the Raritan River Railroad Bridge between Perth Amboy and South Amboy to remain closed to marine traffic during commuter rush hours. - 2.3, 6.3
- Riverkeeper has numerous times lettered &/or spoken to DEP & EPA officials to look at the Raritan River with a regional approach in regards to pollution sites and enforcement actions. - 2.4
- Riverkeeper has printed & distributed materials encouraging the use & development of river walkways and water trails. - 2.5
- Riverkeeper has cooperated and consulted with NOAA, U.S. Fish & Wildlife Service and other private partners in the "Fish Passage Initiative" or the removal of dams impeding anadromous fish from reaching appropriate breeding areas. - 3.2
- Riverkeeper provided water transportation to NJ Audubon to do bird surveys along sections of the lower Raritan River. - 3.5, 4.1
- Riverkeeper is encouraging the proper remediation of the National Lead site in Sayreville by virtue of a law suit filed for a failure to address river sediments in the Raritan. - 6.3
- Riverkeeper has testified numerous times at various venues encouraging the remediation of contaminated sites along the Raritan. - 6.3
- Riverkeeper has attended meetings and disseminated information to the public on various cleanup sites effecting the Raritan River. - 6.4

Raritan Riverkeeper intends

To carry on the programs mentioned above and...

- Riverkeeper would like to establish a standard signage for a water trail along the area covered by the Raritan River Access Project. - 2.1
- Riverkeeper would like to work with the owners of existing launch sites to suggest improvements to those sites such as timbered platforms for boats to land on and vehicle access up to or near the riverbank. - 2.2
- Riverkeeper will raise public awareness of the Raritan River by virtue of the scheduled paddle trips through the summer and the distribution of the maps to other paddlers who may plan their own trips down the river. - 3.3
- Riverkeeper will help increase the biodiversity of the river inhabitants by assisting in programs such as "herring heaves" where herring are netted at the face of dams and relocated above the dams allowing these important species to reach their breeding areas. - 3.2

The Rutgers Cooperative Extension Water Resources Program

The Rutgers Cooperative Extension (RCE) Water Resources Program continues to focus on helping municipalities and non-governmental organizations (NGOs) address water quality and water quantity issues. We have several strong outreach programs that help stakeholders address stormwater management problems, build and install rain barrels, and implement various strategies to promote water conservations. These programs are very active throughout the Raritan River Basin.

Additionally, we are developing Watershed Restoration Plans in the Raritan River Basin to help stakeholder groups identify water problems and prioritize these problems for solutions. We are currently working with the New Jersey Institute of Technology and other partners to develop a Watershed Restoration Plan for the Neshanic River. We recently developed a plan for the Black River in Morris County that we are beginning to implement. Finally, we are attempting to work with various stakeholder groups to develop a Watershed Restoration Plan for the Lawrence Brook Watershed. Last summer we began to collect water quality data on the Lawrence Brook and hope to continue this effort this summer. We are also working with Duke Farms to sample their ponds to better understand how the elaborate pond system that was build on Dukes Farms helps reduce pollution in the Raritan River.

Finally, we are working with the Township of North Brunswick to evaluate their Public Works Yard to determine if there are cost effective ways to green this facility.

1. Listed below are other activities that the RCE Water Resources Program has been involved with in the Raritan Basin. Also below is a description of some of the activities of the local Environmental County Agents.

- Amy Boyajian, Program Associate for the RCE Water Resources Program, prepared rain garden designs for the Randolph Middle School and the Upper Raritan Watershed Association facilities as part of the Raritan Highlands Compact Black River Watershed rain garden implementation project in May 2009. The rain garden designs were used to install a demonstration rain garden at each facility in June 2009.
- Amy Boyajian and Jillian Thompson, Program Associate for the RCE Water Resources Program, presented “Duke Farms and Rutgers Cooperative Extension Water Resources Program: A Partnership in Water Resources Extension and Research” on July 27, 2009 for the Duke Farms July Informational Meeting in Hillsborough, Somerset County. Approximately 50 Duke Farms employees were in attendance.
- Amy Boyajian and Jillian Thompson presented “Stormwater Management in Your Backyard” with a focus on rain gardens on August 31, 2009 and September 4, 2009 at the Hunterdon County Complex in Flemington, Hunterdon County. Approximately 25 Master Gardeners from Hunterdon and Somerset Counties were in attendance.
- Amy Boyajian presented “Rain Garden Basics” on September 12, 2009 as part of the Rutgers Office of Continuing Professional Education Home Gardener’s School at Hickman Hall on the Douglass Campus in New Brunswick, Middlesex County. Approximately 25 interested stakeholders were in attendance.
- Amy Boyajian, Sean Walsh (Program Associate for the RCE Water Resources Program), and Cheryl Burdick (Program Coordinator for the RCE Water Resources Program) installed a demonstration rain garden at the Clawson Park on October 1-2, 2009 in Ringoes, Hunterdon County. Approximately 20 Master Gardeners of Hunterdon and Somerset Counties and East Amwell Environmental Commission members participated in the rain garden installation.
- Michele Bakacs, RCE Environmental County Agent for Middlesex and Union Counties, presented “Build a Rain Barrel Workshop” on October 19, 2009 at the Cook Campus Center in New Brunswick, Middlesex County. Mike Haberland (Environmental County Agent for Camden and Burlington Counties), Cheryl Burdick, and Amy Boyajian from the Water Resources Program provided assistance with this workshop. Approximately 15 interested Rutgers faculty and staff were in attendance.

- Mike Haberland presented “Build a Rain Barrel Workshop” on October 26, 2009 at the Cook Campus Center in New Brunswick, Middlesex County. Sal Mangiafico (RCE Environmental County Agent for Cumberland and Salem Counties), Pat Rector (RCE Environmental County Agent for Morris and Somerset Counties), Cheryl Burdick, and Amy Boyajian provided assistance with this workshop. Approximately 15 interested Rutgers faculty and staff were in attendance.
- Amy Boyajian presented “Rain Water Harvesting” on March 20, 2010 as part of the Rutgers Office of Continuing Professional Education Home Gardener’s School at Hickman Hall on the Douglass Campus in New Brunswick, Middlesex County. Approximately 45 interested stakeholders were in attendance.
- Michele Bakacs, Amy Boyajian, and Ben Pearson (Program Associate for the RCE Water Resources Program) installed a demonstration rain garden at Thompson Park on April 27, 2010 in Jamesburg, Middlesex County. Approximately 40 Rain Garden Certification training workshop participants as well as staff from the New Jersey Water Supply Authority and Princeton Hydro participated in the rain garden installation. This rain garden is part of the Manalapan Brook Watershed Restoration Plan, which has received 319(h) funding from the NJDEP.
- Michele Bakacs the Environmental County Agent for Middlesex and Union Counties has been providing numerous build a Rain Barrel workshops at the RCE EARTH Center in North Brunswick on 7/28/09, 8/29/09, 4/17/2010, 4/29/2010 with over 60 participants. Additionally, she has developed a Train-the-Trainer Program that was delivered on 10/14/2010 for 22 people. Several of these newly trained volunteers went on to deliver their own workshops:
 1. Highland Park School Gardens club meeting- 1/14/2010. Presentation by April Lippet, Middlesex Master Gardener. 10 participant
 2. Somerset County Parks Commission-3/3/2010. Presentation by April Lippet (Master Gardener) 8 participants
 3. Highland Park Earth Day Festival- 4/22/2010. Display and rain barrel demonstration by Jan Carrato, April Lippet and Sheila McRae, Middlesex County Master Gardeners
 4. Highland Park Build A Rain Barrel workshop- 5/3/2010. Conducted by Sustainable Highland Park. Presenter- Leigh Davis. 15 participants
 5. Somerset County Environmental Fair- April 25, 2010 Display and rain barrel demonstration by April Lippet and Pat Hudson, Master Gardeners.
- Michele Bakacs has been very actively involved in the RCE Rain Garden Certification Program. The RCE Water Resources Program working with the Michele and the Monmouth County RCE Office delivered this training to 35 people on April 26-27, 2010. Part of the training included building a Rain Garden in Thompson Park.
- Pat Rector is the Environmental County Agent for Morris and Somerset Counties. She recently received Grant for \$20,000 for evaluating stormwater best management practices on a watershed scale in the Peters Brook Watershed in Somerset County. As part of her work in Somerset County she is completing “build your own rain barrel” workshops and constructing a demonstration rain garden project at Van Derveer Elementary School in Somerville. The Van Derveer School project has a strong educational component that will be carried forth through the succeeding generations of students.
- Pat has also reached out to various companies in the region like Ethicon and the Bloomberg Corporation with Rain Barrel demonstrations, which will be followed up with “build your own rain barrel” workshops.
- Finally Pat continue to work with NJ Water Supply Authority and ANJEC to develop an educational program for the staff of the local Department of Public Works (DPW). Incorporating green practices into the DPW philosophy will help all municipalities throughout the Raritan River Basin.

Somerset County
June 2009 – June 2010

Commitment 1 – Increase Awareness and Use of River Access Points and Trails

Commitment 2 – Upgrade Current River Access Points and Develop a Plan for Future Recreation Uses

1. Somerset County Engineering Parks Section: Design is underway for a ½ mile segment of a bicycle path within the Raritan River Greenway. The path will connect US Highway Route 206 east to the Peters Brook Greenway in Somerville.
2. Somerset County Planning Board (SCPB): Comprehensive GIS preserved lands database completed and maintained on an ongoing basis for the entire county. This database includes Federal, State, County and Local preserved lands, and preserved (deed-restricted) Farmland.
3. CSPB, SCPC and County Engineering Parks Section: Ongoing implementation of the County Open Space Acquisition Program and Trust Fund. Four municipal open space acquisition applications were approved for funding in 2009 countywide, including BK 508; L 4 in Franklin Township. The County Park, Recreation and Open Space Master Plan Element promotes greenways along the Main Branch of the Raritan and its tributaries within which open space acquisition by the County has been a top priority throughout 2009. A portion of the Davis-Standard Site and the Habitat for Humanity project in Bridgewater located within the Raritan Greenway have been obtained as open space by the County in 2009. A new grand stand, concession stand, restrooms, locker room, press box and other facilities at Torpey Park in Bridgewater within the Raritan Greenway were completed in early summer 2010. The Somerset County Engineering Parks Section commenced work on repairs and reconstruction of the Raritan Power Canal near the beginning of the Canal in Bridgewater. This project includes restoration of the walking trail along the canal embankment.
4. Bound Brook Borough: Bound Brook Downtown Urban Design Plan, April 2010 includes the following proposals – 1) boating facility and fishing pier on the Raritan, 2) pedestrian and bicycle linkages between riverfront and downtown areas, 3) expansion of river front greenway and integrated open space network, 4) provision of picnic pavilions and other amenities along the river front.
5. Bound Brook Borough: The former public works garage was razed and clean-up of this brownfield site is underway during 2009 and 2010. This site is located within the Raritan Greenway and is designated for redevelopment with pedestrian linkages to the Raritan Greenway.
6. Somerville Borough: Site remediation and redevelopment issues are currently being addressed through coordinated efforts by the Borough involving the State's Brownfields Taskforce and the NJ Economic Development Authority. The site was designated a Brownfields Development Area by the State in 2009 which gives it priority access to state funding for clean-up.

Commitment 3 – Protect and Preserve Habitat and Biodiversity in Our River Ecosystem

1. SCPC: The County Parks Commission, on a small scale, works on evasive species removal, habitat restoration and other projects such as the installation of bird houses and bat boxes at various park facilities with assistance from Eagle Scouts and other volunteer groups on an on-going basis.
2. SCPC and County Engineering Parks Section: In 2010 the County Park Commission moved forward with initiatives to work with non-profit entities who will manage County Open Space areas for habitat restoration and protection, trail development and other projects.

Commitment 4 – Restore, Rehabilitate & Regenerate

1. The County Public Works Department implements Best Management Practices in all of its road, bridge and drainage projects.

Commitment 5 – Maintain and Manage Preserved Open Spaces

2. Duke Farms Foundation: Duke Farms located within the Raritan Greenway in Hillsborough entered into an agreement with the Natural Resource Conservation Council in April 2010 to establish a Wetlands Preserve Program. 395 acres of wetlands will be preserved and restored along the Raritan as a result of this initiative. Work commenced in 2010 with the planting of 16,000 native trees and shrubs, removal of invasive species and establishment of native plant species within the Raritan floodplain.
3. SCPB: the County Planning Board implements the County Farmland Preservation Program. The following farms have closed in the period between June 2009 and June 2010:

Non-Profit Applications

- Murphy Farm: Block 9/Lots 8, 9, 10&10.01 (Bedminster Township) – 86.0146 acres
- County-Held Easements (100% County-Funded)
- Stala Farm: Block 88/Lot 7 and Block 83/Lot 5 (Branchburg Township) – 31.1000 acres
- Farkas Farm: Block 14001/Lots 17&36 (Montgomery Township) – 25.000 acres

Municipal PIG

- Huebner Farm: Block 34001/Lot 43.05 (Montgomery Township) – 51.3729 acres

County PIG

- Vermeulen Farm: Block 88/Lots 4&5 and Block 13.01/Lot 3 (Branchburg Township) – 54.6450 acres
- Maple Lane Farm: Block 202/Lot 20 (Hillsborough Township) – 58.8550 acres
- Hoynes Farm: Block 62/Lot 4 (Bedminster Township) – 51.8210 acres

Of the above farms, the Maple Lane Farm in Hillsborough is within the Raritan Floodplain.

Commitment 6 – Remediate Contaminated Sites

1. SCPC and County Engineering Parks Section: The County Park Commission and County Engineering manage the Dukes Parkway Landfill in Manville, which has been capped, and presently serves as a passive open space area. This site was acquired for open space purposes by the County 2 years ago. The primary focus thus far has been on monitoring the site. Strategies to reduce the destructive impacts of illegal ATV activity on this site are being explored.
2. SCPB: The County Planning Board prepared a comprehensive report entitled, “Redevelopment in Somerset County: Current Status and Lessons Learned” dated April, 2010, which is posted on the County Website. The Planning Board also conducted a workshop promoting Sustainable Redevelopment Initiatives on May 26, 2010. The SCPB completed a comprehensive GIS “Targeted Growth and Redevelopment Areas” data layer which includes build out information for adopted redevelopment areas, Transit Oriented Development sites and other targeted growth sites countywide in 2010.

Commitment 7 - Prevent Future Pollution

1. SCPB: The Somerset County Energy Council implemented the Somerset County Energy Audit Program through 2009 and 2010 through which Level 2 Energy Audits were provided for 81 municipal and School District buildings throughout the County. Many of these buildings are located within This program promotes energy savings and green house gas reduction by identifying energy efficiency improvements and that enable public sector entities implemented these improvements by taking advantage of various state and federal incentive programs. The Board of Chosen Freeholders has commenced a new Renewable Energy Program this year. Solar arrays will be installed on 48 public facilities in central Somerset County, including many facilities in Raritan River municipalities as part of Tranche 1.
2. SCPB: The County Planning Board commenced preparation of a comprehensive update of the Circulation Element of the County Master Plan in 2010. This plan will include a section on greenhouse gas reduction strategies, and it builds upon the Greenhouse gas inventory being prepared for the North Jersey Transportation Planning Authority region of which Somerset is a part.
3. SCPB: The County Planning Board continued its work on a comprehensive update of the Wastewater

Management Plan for Somerset County in accordance with the WQMP Rules adopted July 2008. The deadline for completion of this complex planning process that addresses both wastewater and water supply is April 2011. To date, proposed updated SSA boundaries that exclude environmentally sensitive undeveloped lands have been identified in cooperation with NJDEP and Municipal WMP Committees for each community along the Raritan.

4. SCPB: The County Planning Board is presently refining the Draft Smart Growth Strategic Plan for Somerset County to enhance its Sustainability focus.
5. Somerset County Municipalities: Several Raritan River Municipalities are participating in the Sustainable Jersey Municipal Certification Program, including Somerville and Raritan Boroughs.

Commitment 8 – Significantly Reduce Stormwater Runoff

Commitment 9 – Promote Restoration and Protection Plans to Address Local Sub-Watersheds (HUC 14)

1. Somerville Borough: The NJ Water Supply Authority implemented Rain Garden Demonstration Projects in Somerville Borough during 2010.
2. Raritan Borough: The Borough hosted a Rain Barrel Workshop for its residents in 2010.
3. Somerset Raritan Valley Sewerage Authority and NJ Department of Environmental Protection: Engineering and planning for the removal of the Calco Dam is underway and substantially complete. It is anticipated the dam will be removed by mid-2011.
4. SCPC: The County Park Commission's Recreation Department works with various local businesses and non-profit groups on an on-going basis to sponsor various recreational and environmental education programs.

Commitment 10 – Balance Redevelopment to Sustain Ecological Values in the Raritan River Watershed

1. The County Planning Board, County Engineering Parks Section and Park Commission Staff joined the Sustainable Raritan Collaborative in 2009, hosted the Rutgers – Bloustein School's Sustainable Raritan Studio, and participated in various meetings, forums and events. The SCPB provides education and outreach support by routinely posting information about Sustainable Raritan initiatives on the County Website and issuing press releases about Sustainable Raritan initiatives. Sustainable Raritan Initiative updates are provided at the regularly scheduled monthly meetings of the County Planning Board and Bi-monthly Planning Chair Forums.

Somerset County Parks

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.
 - A consultant has been retained to prepare the design for a ½ mile length of the Raritan River Greenway Bikeway in Somerville Borough from Route 206 to the Peter's Brook. The design calls for a hard surface bike path and a bridge crossing the Peter's Brook. This section of bikeway will connect directly with Somerville Borough's Peter's Brook Greenway path system that runs north into Bridgewater Township. (checklist point 2.2)
 - Somerset County closed on three (3) key property acquisitions along the Raritan River in Bridgewater Township, Raritan Borough and Somerville Borough. Although the parcels were small in size (6.5 acres total), they are key connectors in the continuation of the Raritan River Greenway bikeway and trail system. The Bridgewater and Somerville parcels have river frontage while the Raritan parcel is in close proximity to a river access point and will expand on an existing park area along the river. (checklist point 2.5)
 - The Somerset County Park Commission Ranger Department worked with Raritan Borough on an Earth Day cleanup along the river.
 - Somerset County Park Commission Rangers continue to perform maintenance on existing trails within the Raritan River Greenway.
2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.
 1. Preserve key parcels that will fill in gaps along the Raritan River along the entire length of the river. (checklist point 2.5)
 2. Continue the implementation of the Raritan River Greenway Bikeway from the confluence in Duke Island Park to the Finderne Avenue Bridge in Bridgewater and Manville. (checklist point 2.2)
 3. Provide improved access to the river for a variety of water related activities. (checklist point 2.2)
3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

Continue to educate the public as well as government entities about the diverse habitat and recreational opportunities that the Raritan River provides by bringing all groups together to share information.

The Trust for Public Land

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

- The Trust for Public Land (TPL) has made good progress laying the foundation to extend our impact protecting land for the public's use and enjoyment in the Lower Raritan River watershed. The Raritan River Collaborative has been very helpful in maintaining focus by a diverse group of stakeholders on the key environmental issues within the Raritan River Watershed, and it has aided TPL in making important connections with partner organizations. Our staff played a role in two Collaborative working groups that met over three months during 2009, including the Public Access and Recreation Working Group, which culminated its work with a day of paddling on the Raritan River; and the Habitat Restoration and Resource Stewardship Working Group, for which Kathy Haake served as Co-Chair. Both groups prepared white papers that identify critical objectives for the future of the region.
- Over the past year we have extended our outreach in local communities within the Raritan River Watershed. For example, we have initiated an assessment recently in New Brunswick to inventory existing parks in the city and to evaluate the needs and opportunities for an improved network of parks within the city limits. This study, being funded by the Robert Wood Johnson Foundation, is affording us the opportunity to cultivate important relationships both at the City and County level to assist in furthering their open space protection goals.
- Land acquisition in the Harbor Estuary is complicated by a number of factors, including high land values, environmental clean-up issues and constrained public funding. Our efforts to secure purchase contracts for land in the region are advancing but they have been protracted. Two examples are located in the headwaters of Matawan Creek only three miles from the Raritan Bay in Monmouth County on the Middlesex County boundary. These parcels represent plans for over 500 new residential units and yet they contain prime wetland areas. We have also been monitoring several important parcels in Middlesex County within the Raritan River Basin and pending the availability of local funding in the year ahead, work to advance acquisition will move forward.

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

Municipal and County outreach and landowner outreach for the purposes of identifying and advancing acquisition of parcels that will increase public access to natural areas in the watershed and/or enhance protection of natural resources associated with Raritan River and the NY/NJ Harbor Estuary.

3. What, if anything, do you need from the collaborative in order to accomplish these tasks?

Information sharing about priority lands for acquisition and landowner introductions.

Additional information/Press releases

<http://www.njconservation.org/html/01-28-10MurphyFarm.htm>

<http://www.mycentraljersey.com/article/20100214/999999999/2140315/Invasive-plants-are-a-growing-problem-in-N.J.>

<http://www.urwa.org/news/details.html>

<http://www.urwa.org/stewardship/streammonitor.html>

http://www.nj.com/reporter/index.ssf/2010/01/watershed_association_to_host.html

The Upper Raritan Watershed Association (URWA):

Mission: To ensure the protection of the natural resources of the Upper Raritan Watershed through education, advocacy, land preservation and stewardship.

1. Please detail the Raritan-related activities your organization led since May 2009. When describing, please add details: if you conduct water monitoring, include the tests performed, etc. Note: If these activities correspond with points on the checklist, please list the number in the description but don't limit yourself to the checklist when listing the activities.

- URWA established a Friends of the Preserve Program engaging neighbors of preserved parcels to monitor, inventory and conduct stewardship projects such as trail maintenance, invasive species removal, and riparian buffer plantings. URWA staff members hold an annual meeting to educate and train volunteers that essentially adopt and steward the preserve. Volunteers upload monitoring and natural resource data along with activity reports to a central database maintained at URWA's offices. This past year the Association focused on the Fox Hill Preserve (Tewksbury), the Rolfe's Tract (Bernards Twp.) and the Burnt Mills tract (Bedminster). (3.4, 4.1)
- Through the Central Jersey Invasive Species Strike Team (CJISST), URWA raises awareness about the need to protect habitats of all native flora and fauna from new invasive plant species. Over the past year, the Association has conducted workshops, volunteer training and developed an interactive website to share information with project partners and the public. (3.4, 4.1)
- URWA holds a monthly information breakfast called "Wake Up Call". The series offers education and outreach on subjects that promote sound environmental planning and increase environmental awareness. Notices go out to the mayors and environmental commissions from each of the watershed's 23 municipalities and it is well publicized in local newspapers, Constant Contact, URWA's newsletter and website. In recent months, speakers included: Judy Shaw, Sustainable Raritan River; MacKensie Hall, Conserve Wildlife; Emile DeVito, NJCF; Tom Gilbert, Keep It Green; Julia Somers, NJ Highlands Coalition; Melissa Almendinger, CJISST, Julie Jurusz, NJ Beekeepers Association. (3.4)
- URWA coordinates annual stewardship events through Corporate "Days of Caring", School Community Service Events, Scout Projects, Stream monitoring training workshops and Community Stream Cleanups. Each event includes an educational component, hands-on training and a take-away. Examples of this past year's stewardship events include: a riparian restoration project with Centenary College students; a 3- town stream cleanup (75 citizens); an invasive plant removal project with Johnson & Johnson; trail maintenance, invasive removal and water monitoring along the North Branch with Bernards High School students; establishing a rain garden with the Raritan Highlands Compact and scout volunteers. (3.4, 4.1)
- URWA's GIS staff has established an Environmental Resource Inventory (ERI) for the entire 194 square mile Upper Raritan Watershed Region. The inventory presents 28 data layers including Land Use-Land Cover, Steep Slopes, SSA's, HUC 14's, Surface Water Quality Standards, Contaminated Sites, Critical Sub-Watersheds with Impervious Surface Less than 10% and Highlands Water Availability. GIS maps are available through URWA's website and provided to citizens and municipal partners upon request. (3.5, 6.1, 6.2)
- URWA holds 33 conservation easements on 880 acres, owns and manages 11 preserves (450 acres), and has partnered with others to preserve 100's more acres that protect water supplies. This past year, URWA partnered to preserve 86 acres of open space along the Middle Brook in Bedminster and added 6 acres of grassland habitat that is contiguous with the Association's Fox Hill Preserve located in the Cold Brook Watershed, Tewksbury. URWA is in the process of developing a conservation plan that identifies priorities and preservation goals for source water protection throughout the Upper Raritan Watershed. (3.7,)
- Member of the Keep It Green Committee that worked to educate the public about the need to vote "yes" on the ballot question to fund the Garden State Preservation Trust. Coordinated a fundraising event to support the public campaign, met with members of the legislature, wrote press releases and letters to the editor. (3.7)

- URWA participates in the Raritan Piedmont Wildlife Habitat Partnership (RPWHP) a diverse group of organizations executing the goals of the New Jersey State Wildlife Action Plan in the Central Piedmont Plains. RPWHP has developed a Grassland, Forest and Wetlands/Riparian Conservation Plan for the region. (5.3, 9.1)
- Between June 15th and 30th, URWA's staff and trained volunteers collect habitat and biological data along Rockaway Creek, Peapack Brook and the North Branch of the Raritan River at 28 monitoring points. This past year, the stream monitoring program expanded to points along the Lamington River. The 2009 Stream Monitoring Report was published and posted on the Association's website. Annually and in preparation for this year's monitoring, URWA submitted a Quality Assurance Project Plan to the NJDEP Division of Watershed Protection. (7.3)
- Over the past year, URWA stepped up a campaign to reduce non-point source pollution from fertilizers, pesticides, herbicides and road salt and is a strong advocate for "less lawns". Education and outreach has been conducted through community newsletters, URWA's website & newsletter articles, press releases and presentations conducted by URWA staff and the Americorps Ambassador (hosted by URWA). The Association also partners with the NJWSA to promote the River Friendly Programs for residents, businesses and golf courses. (7.7)
- This past year URWA developed a program on stormwater BMP's that includes hands-on workshops to teach students, scouts, service clubs, corporate volunteers and environmental commissions how to create onsite rain gardens and rain barrels.

2. Name your organization's top 3 Raritan-related priorities for next year and the checklist items that correspond with them.

- URWA's priorities for next year include the launch of a watershed-wide Conservation Plan (CP) to provide strategic guidance for the delivery of programs and activities. www.urwa.org will be upgraded to deliver the interactive components of the CP and improve the delivery of educational resources. The Association's strategic plan identifies an objective to establish monitoring points in each HUC 14, as well as a status report, photography, public access information, etc. to share with local citizens and municipalities (goal to engage stakeholders in watershed protection). Assessments of two HUC 14's are targeted for completion in 2011. (2.4, 3.3, 7.3)

Press releases:

http://www.urwa.org/news/newsletters/Summer_09.pdf