



**MINUTES  
MIDDLESEX COUNTY  
WATER RESOURCES ASSOCIATION/WATERSHED MANAGEMENT GROUP MEETING  
HELD AT THE  
MIDDLESEX COUNTY BOARD OF CHOSEN FREEHOLDERS MEETING ROOM  
September 12, 2016  
1:30 P.M.**

The meeting was called to order by Mr. Williams at 1:30 p.m. Notice of this meeting, pursuant to the Open Public Meetings Act, N.J.S.A. 10:4-10 and the NJ Water Quality Management Planning Rules, N.J.A.C. 7:15-9.3(b)7, have been complied with and are entered into the minutes of this meeting. A salute to the flag was observed prior to the start of today's meeting.

**I. Roll Call**

Attendance was as follows:

William Robins	Borough of Dunellen	Not present
Theodore Chase, Jr.	Township of Franklin	Present
Freeholder Charles Tomaro	Middlesex County Board of Chosen Freeholders	Not present
Alan Godber	Lawrence Brook Watershed Partnership, Inc.	Not present
Will Sigle		Not present
Sewell Peckham	Borough of Helmetta	Not present
David Hall	Township of Old Bridge	Not present
Dawn Mc Donald	Borough of Spotswood	Not present
Margaret Drozd		Not present
Michael Hill	Freehold Soil Conservation District	Present
Brandon Goldfine	Middlesex Water Company	Present
Stephen Pospiech	City of Perth Amboy	Not present
Leigh Anne Hindenlang		Not present
Andrew Toth		Not present
William Kurzenberger		Present
Donald Newton	Borough of Sayreville	Present
Tim Eppinger		Not present
Dawn Corcoran-Gardella	Township of Piscataway	Not present
Vincent Martino	Middlesex County Planning Board	Not present
Siegfred Hubak	Township of Woodbridge	Not present
Alice Tempel	Borough of South Plainfield	Present
Brian Racin	Borough of South River	Present
Bryan Bidlack	Township of South Brunswick	Present
Leigh Jones	Township of East Brunswick Water and Sewage	Not present
Anne Zeman	League of Women Voters	Not present
Ron Yake	Township of Plainsboro	Present
Les Varga		Not present
John Riggs	Township of Monroe	Not present
Dorian Kerber	Borough of Milltown	Present

**I. Roll Call (continued)**

George Ververides Mirah Becker Laurie Sobel Nicholas Tufaro Alexander Zakrewsky	Middlesex County Office of Planning	Present Present Present Present Present
Sharon Martens Gary Rojek	Middlesex Cty. Dept. of Public Health – Environmental Division	Not present Not present
Ken Klipstein Kathy Hale Bob O’Neil	NJ Water Supply Authority	Not present Not present Present
Richard Fitamant Kevin Aiello	Middlesex County Utilities Authority	Not present Not present
Daria Ludas	Borough of Jamesburg	Not present
Doug Robertson Glenn Sandor	Township of North Brunswick	Not present Not present
Allan Williams	Highland Park Environmental Commission	Present
Rick Lear	Middlesex County Parks and Recreation Department	Not present
Michele Bakacs	Rutgers Cooperative Extension	Not present
Sara Malone	Rutgers Sustainable Raritan Initiative	Not present
Denise Nickel	Middlesex County Improvement Authority	Present
Suzan Colon	Old Bridge Twp. Environmental and Open Space Committee	Present
Heather Fenyk Brian Kempf	Lower Raritan Watershed Partnership	Present Present
Bill Schultz	Raritan Riverkeeper	Present

**II. Reorganization**

Mr. Williams indicated that Reorganization was slated to occur at today’s meeting. Ms. Becker asked for nominations for the office of Chairman. Mr. Yake nominated Mr. Allan Williams. There were no other nominations. Nominations were closed. All members were in favor of Mr. Williams continuing to serve as Chairman.

Mr. Williams asked for nominations for the office of Vice Chair. Mr. Williams nominated Ms. Suzan Colon. There were no other nominations. Nominations were closed. All members were in favor of Ms. Colon continuing to serve as Vice Chairperson.

Mr. Williams asked for nominations for the office of Secretary. Ms. Suzan Colon nominated Ms. Doriann Kerber. There were no other nominations. Nominations were closed. All members were in favor of Ms. Kerber continuing to serve as Secretary.

**III. Approval of the Minutes of the Previous Meetings – March 14, 2016 and May 9, 2016**

The minutes of the meeting of March 14, 2016 were distributed prior to today's meeting. A motion was made, seconded and approved to accept the minutes as presented.

The minutes of the meeting of May 9, 2016 were distributed prior to today's meeting. Dr. Chase noted that the meeting was held at the Middlesex County Utilities Authority, but the heading on the minutes stated that the meeting was held at the Middlesex County Board of Freeholders Meeting Room. The minutes will be amended with this minor change. A motion was made, seconded and approved to accept the minutes as amended.

**IV. Presentation by Ms. Doriann Kerber – Implementation of Green Infrastructure Measures in Milltown**

Ms. Kerber made a presentation on her experience in implementing green infrastructure projects in the Borough of Milltown. Rain gardens to deal with stormwater runoff were installed at two schools. The projects were successful in reducing run off in the areas. Impervious cover assessments proved to be very helpful to Milltown when choosing sites and should be used by other towns. A copy of the presentation is attached.

**V. Middlesex County Wastewater Management Plan – Mirah Becker**

Ms. Becker distributed the Scope of Work for a \$100,000 grant which was submitted to NJDEP over the summer. The county is still waiting to receive the contract documents. Staff will not be working on the plan until the grant contract is executed and the rules have been adopted. The new rules are expected to be adopted no later than October 15, 2016. Many counties have voiced objections to NJDEP regarding some definitions in the rules. For example, New Brunswick and Woodbridge do not fit the current definition of urban, but Spotswood is classified as urban.

Office of Planning staff met with staff of the NJDEP over the summer to review the draft plan. There are analyses that must be updated. Mr. Tufaro will be working with NJDEP to update some tables in the plan.

**VI. Manalapan Brook Watershed Protection and Restoration Plan (Freehold Soil Conservation District (FSCD)/Middlesex County)**

Ms. Becker announced that the next project being funded is a stream bank stabilization project along Manalapan Lake in Thompson Park. There is a portion of the project that will use volunteers for planting after the grading is completed. A press event being planned for October. The WRA members will be invited to the event.

There is some funding from the original grant that will be available from one basin retrofit that is no longer viable in Middlesex County. The approximately \$80,000 may be reallocated by the committee for smaller projects such as tree and shrub plantings; rain gardens; and erosion control projects. These smaller projects would be conceived by the County Parks Department and the consultant for specific properties located in the watershed.

**VII. Lawrence Brook Watershed Partnership (LBWP)**

No report.

**VIII. Lower Raritan Watershed Partnership (LRWP)**

Ms. Fenyk distributed a handout which included event highlights of the LRWP for September and October 2016 (attached). On September 20 at the LRWP Meeting, a Green Infrastructure Tracking Presentation by CDM Smith is planned. She invited everyone to attend this meeting. Ms. Becker also distributed the LRWP minutes of the July 19 meeting.

The handout also included goals and objectives and current projects of the LRWP. Highlights included the Natural Assets Mapping Project, Project WADES, Watershed Sculpture Project, Water Quality Monitoring and Modeling, and the Raritan River Festival.

Lastly, the LRWP worked with a soils intern over the summer that has helped develop a soil research plan for the watershed. The LRWP also worked with Mr. Brian Kempf who developed a white paper on stormwater utilities at a regional non-state level implementation. Ms. Fenyk offered to speak with the WRA on any of the topics, as needed.

**IX. Sustainable Raritan River Initiative**

No report.

**X. NJ Water Supply Activities/Projects (NJWSA)**

- **Raritan Basin Watershed Plan/Raritan Basin Watershed Alliance**
- **D & R Canal Tributary (Franklin) Project**
- **Cedar Grove Brook (Franklin) Project**

Mr. O'Neil stated that in the spring there was a riparian buffer planting along Cedar Grove Brook in Franklin Township. It was a community outreach event where individuals from age 9 to 90 planted stakes along the stream.

**XI. Middlesex County Flood Control Commissions**

- **South Central Middlesex County Flood Control Commission**

No report.

- **Green Brook Flood Control Commission (Middlesex County)**

Mr. Ververides stated that Middlesex County has entered into a maintenance agreement with Somerset County to maintain the levees, pumps, and gates. There was a memorial service to remember those lost due to floods held in August.

**XII. Correspondence**

There was no Correspondence presented at today's meeting.

#### **XIV. Old Business**

- Presentation of Bylaws

At the March 2016 WRA Meeting, a subcommittee was formed to review the bylaws. The subcommittee met and made recommendations. The draft bylaws were distributed to the members in advance of today's meeting. The subcommittee recommended adding six groups who have had representatives regularly attending WRA Meetings.

The Chairman opened the meeting up to discussion on the bylaws. Mr. Hill asked if the groups that were deleted from page one are all now listed on pages five and six, which is the case. Ms. Nickel requested that an official letter be sent to the Middlesex County Improvement Authority requesting that they appoint a representative. Mr. Newton asked why the bylaws state that official municipal representative will be appointed for a minimum of three years and the other categories do not have a term limit. A recommendation was made to make all groups serve a three year term. It would be up to the municipality or group to decide if they wanted to change their representative after one year. Over the summer, staff wrote letters to the municipalities who did not have good participation in the WRA and asked them to appoint a representative. The response was poor. Staff will follow up with the towns who did not respond.

After a lengthy discussion, it was decided to give the members time to review the draft bylaws. Any suggestions should be submitted to Mirah Becker as soon as possible so they can be included and reviewed at the next WRA Meeting.

#### **XV. New Business**

- Presentation to the WRA Report

This item was tabled until the next meeting.

#### **XVI. Public Comment**

There was no Public Comment at today's meeting.

#### **XVII. Next meeting, date, time and place**

The next WRA meeting will be held on Monday, November 14, 2016 at 1:30 p.m. at the Middlesex County Administration Building, Freeholder Meeting Room.

#### **XVIII. Adjournment**

A motion was made, seconded, and approved to adjourn the meeting at 3:15 p.m.

lak

**Milltown Borough  
Parkview Elementary & Joyce Kilmer  
Middle Schools**

*Rain Garden Installation and Education*

Presentation by Sara Mellor and Doriann Kerber



Middlesex County  
Water Resources Association  
New Brunswick, NJ  
September 12, 2016



**Statement of Problem**

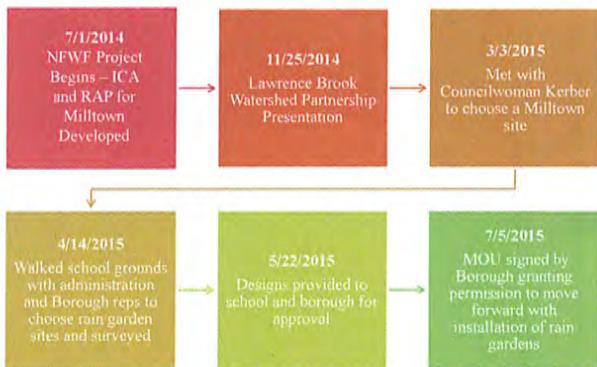
*Reduce impervious cover and help  
alleviate flooding within Milltown  
Borough.*



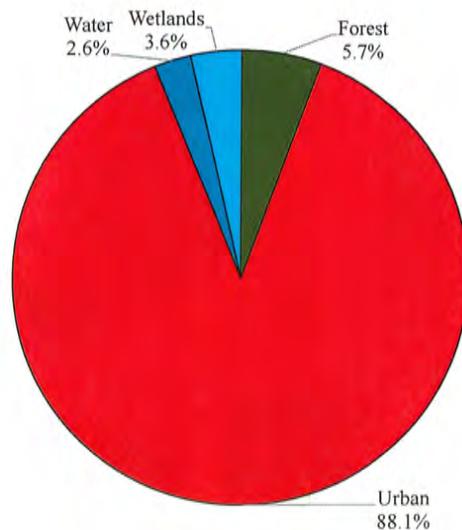
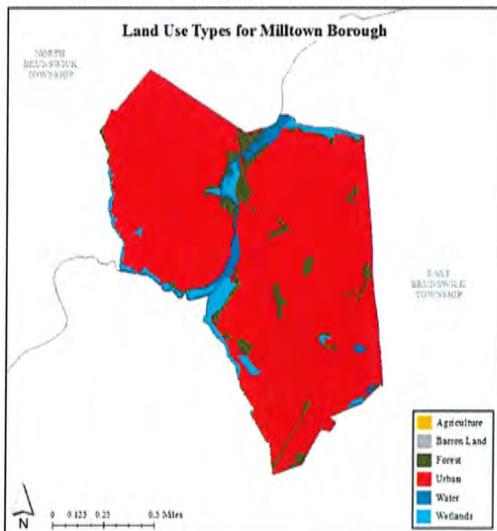
Aftermath of Hurricane Irene August 2011  
Images courtesy of StephanieNJRealtor

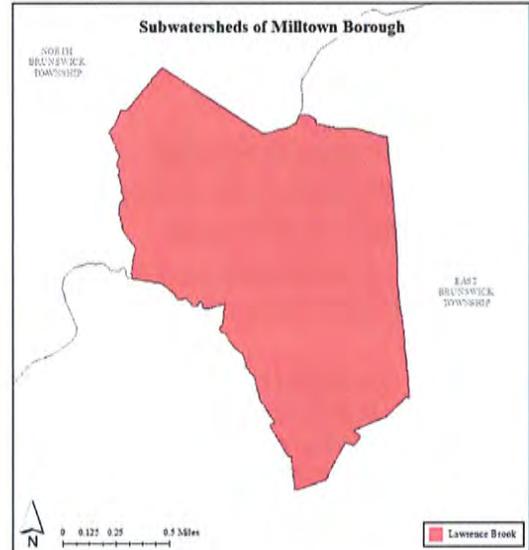
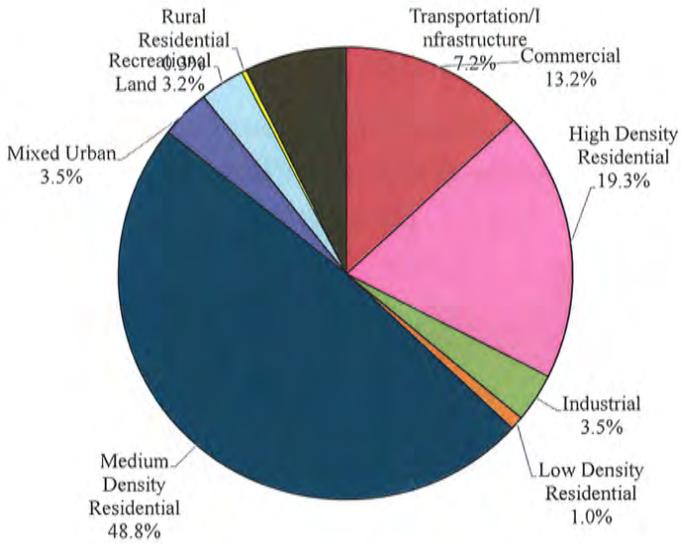


**Timeline of Process**



**Milltown Borough  
Impervious Cover  
Assessment (ICA)**





Watershed	Total Area (ac)	Impervious Cover (ac)	%
Lawrence Brook	1021.2	406.6	40.9%
Total	1021.2	406.6	40.9%

Subwatershed	NJ Water Quality Storm (MGal)	Annual Rainfall of 44" (MGal)	2-Year Design Storm (3.3") (MGal)	10-Year Design Storm (5.0") (MGal)	100-Year Design Storm (8.2") (MGal)
Lawrence Brook	13.8	485.8	36.4	56.3	94.9
Total	13.8	485.8	36.4	56.3	94.9



**Milltown Borough Impervious Cover Assessment**  
*Parkview Elementary School, 80 Ylote Terrace*

**PROJECT LOCATION:**

**SITE PLAN:**

**1 BIORETENTION SYSTEMS:** These rain gardens will capture, store, and infiltrate runoff from the roof and impervious paved or sealed surfaces. The existing catch basins will be replaced with rain gardens. The rain gardens will reduce surface runoff and reduce the total amount of runoff by providing natural storage for the runoff. The gardens will also provide habitat for birds, butterflies, and other wildlife. They also can be incorporated into the surrounding school grounds.

**2 POROUS ASPHALT:** Porous asphalt, permeable interlocking pavers, and other materials will help infiltrate runoff from the parking lot and surrounding sidewalks.

**3 EDUCATIONAL PROGRAM:** The NJ Tree Rescue Program, Stormwater Management at the School will be utilized to provide educational material to students and staff.

**4 TRENCH DRAIN:** A trench drain will be installed to collect runoff from the parking lot and surrounding sidewalks.

**5 BIORETENTION SYSTEM** **6 TRENCH DRAIN** **7 POROUS ASPHALT** **8 EDUCATIONAL PROGRAM**

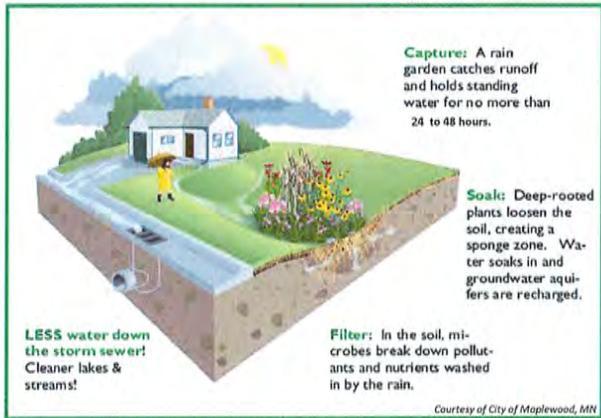


## Rain Gardens

A rain garden is a landscaped, shallow depression designed to intercept, treat, and infiltrate stormwater at the source before it becomes runoff. The plants used in the rain garden are native to the region and help retain pollutants that could otherwise harm nearby waterways.



## Rain Gardens



## Next Steps

- Councilwoman Doriann Kerber's persistence
- Met with Milltown School District personnel and Borough to determine best location for rain gardens
- RCE Water Resources Program surveyed site, compiled design, provided construction documents to Enviroscapes, rain gardens were built
- Entered Memorandum of Understanding with Milltown Borough and Milltown School District
- Funded by National Fish and Wildlife Foundation



## Parkview Elementary School Milltown, NJ



April 2015



August 2015



## Parkview Elementary School Milltown, NJ



June 2015



August 2015



## Installation

- Began 8/5/2015
- Complete 8/19/2015



## Parkview Elementary School Milltown, NJ



April 2015



August 2015



## EDUCATIONAL PROGRAM

October 14-15, 2015



## Educated 236 1<sup>st</sup>-3<sup>rd</sup> Graders



## Visual, Hands on Lesson



## Educated 15 Middle Schoolers



## Lessons Learned

- Make a connection with a “doer” engaged in the community – Thank you Doriann and the Milltown Borough School District
- Of course a collaborative effort means accomplishing more as a team and working on solving issues with stormwater runoff.



## Joyce Kilmer Plan List

Quantity	Size	Species
15	1 Quart	Butterfly Milkweed
15	1 Quart	Purple Coneflower
30	1 Quart	Blue Flag Iris
30	1 Quart	Softrush
15	1 Quart	Cardinal Flower
15	1 Quart	Blue Lobelia
10	1 Quart	Black-eyed Susan
6	#2 Container	Inkberry Holly



## Joyce Kilmer School



## Joyce Kilmer School



## Joyce Kilmer School



## Program Funding Provided by

National Fish and Wildlife Foundation



## Open Space Project - New Grant Source

- Behind the Lawrence Brook Watershed Partnership, Inc. seeking to collaborative on this open space project with the Environmental Commission, local businesses, Milltown Revitalization Committee, Master Gardeners, residents, NJ Shade Tree Federation and Lawrence Brook Watershed and others.
- To conduct FALL & Winter meetings throughout the Borough to be held at the Library and Senior Center and at Council meetings to keep communications open town wide as other cities, Monroe, Hoboken, Camden and Highland Park have accomplished in recent years.





## Ideas?

- Green Walking Path
- Community Wild Flower Garden
- Vegetable Garden was mentioned
- Benches
- Butterfly Garden
- Trees
- Bushes



SEPTEMBER – OCTOBER 2016, EVENT HIGHLIGHTS, for more events: [www.lowerraritanwatershed.org](http://www.lowerraritanwatershed.org)

**September 20: LRWP Meeting + GI tracking presentation by CDM Smith**

**9:30-11:30 AM**

*CDM Smith Offices: 110 Fieldcrest Avenue #8 6<sup>th</sup> Floor, Edison, NJ 08837*

As part of the LRWP September 20 general meeting CDM Smith will provide a live overview of the NYC GreenHUB tool.

CDM Smith is working with the NYC DEP Office of Green Infrastructure to develop a Project Tracking and Asset Management System capable of compiling, mapping and reporting data from thousands of GI installations throughout their service life. This integrated system, named NYC GreenHUB, presents a user-friendly, multi-function interface that enables comprehensive data management and access control. NYC GreenHUB is a web-based system that automates the procedures used by OGI to collect, review, manage and report information. DEP utilizes its asset maintenance feature to manage and monitor maintenance activities such as repairs, replacement, pruning and replanting. The system provides geospatial visualization of GI assets with easy access to data throughout the asset lifecycle – from asset initiation, siting, design, and construction through operations and maintenance.

The CDM Smith presentation is an outgrowth of the LRWP's work with the Jersey Water Works Green Infrastructure sub-committee.

**Sept 25 – Raritan River Festival**

**12:00 pm - 6:00 pm**

*Boyd Park, New Street and Route 18 North  
New Brunswick, NJ 08901 United States*

**October 14-15: LRWP Stream School with Stroud Water Resources & NJDEP – at Rutgers Gardens**

**8:45 am-4:00 pm both days**

*Rutgers Gardens – Holly House, 130 Log Cabin Road  
New Brunswick, NJ, NJ 08901 United States*

\$15, RSVP by October 7 with Heather Fenyk: [hfenyk@lowerraritanwatershed.org](mailto:hfenyk@lowerraritanwatershed.org)

# GOALS & OBJECTIVES.



## 1 INSPIRE

### EDUCATION & OUTREACH

**Inspire** environmental appreciation and stewardship by staging and cultivating nature-centered activities and helping those in our communities be more effective actors in safeguarding the future of the watershed.

#### CURRENT PROJECTS

- Project WADES (schools-based)
- Watershed Sculpture Project
- Rutgers: -RU Environmental Stewards (Spring '16)  
-Raritan Scholars Interns (ongoing)
- Tracing the Raritan (Fall '16)
- Environmental History (Fall '16)

[www.lowerraritanwatershed.org](http://www.lowerraritanwatershed.org)  
Contact: [hfenyxi@lowerraritanwatershed.org](mailto:hfenyxi@lowerraritanwatershed.org)

## 2 INFORM

### WATER QUALITY MONITORING & MODELING

**Inform** relevant stakeholders in the watershed area through community participation and collaboration in science-based watershed activities, and build a trusted framework for the sharing of relevant data and knowledge about the watershed and its health.

#### CURRENT PROJECTS

- Visual Habitat + Macroinvertebrate Assessments
- Pathogens Monitoring (Perth Amboy + South Amboy) – Summer 2016
- Soil Moisture Active Passive (SMAP) study (ongoing)

Developing a notification system for communicating water quality status

## 3 INNOVATE

### WATERSHED RESTORATION

**Innovate** to improve watershed health responsibly, through collaboration with diverse partners, by disseminating research findings and by tracking the impacts of these efforts.

#### CURRENT PROJECTS

- Rail Arts River Raritan New Brunswick pilot
- Sculpture Installations at Boyd Park (frames)
- Library rain garden installation
- Buccleuch Park pollinator garden installation
- Municipal Public Access Plan
- Coastal Vulnerability Assessment
- Natural Assets Mapping / Green Infrastructure
- Watershed Approaches to Stormwater Management