MISSION STATEMENT

Our mission is to provide professional engineering and environmental services in a respectful and efficient manner, which safeguards the Township’s public infrastructure and natural resources for the well being of our residents.

I. Department Services and Programs

The Engineering and Environmental Services Department (EESD) provides engineering and environmental support to Bloomfield Township residents, local businesses, commercial developments, and other Township departments. The department manages Township capital improvement projects, provides construction administration, and coordinates a variety of services. The EESD also provides technical oversight and manages several programs that have a potential impact on our community’s public health and environment. Below are some of the services and programs provided this past year:

**General Services:**
- Perform site plan reviews for new developments
- Review wetland permit and right-of-way permit applications
- Construction administration for public improvements
- Provide technical support to Lake Improvement Boards
- Review and apply for grant funding opportunities
- Provide technical assistance for the National Flood Insurance Program (NFIP)
- Provide assistance for miscellaneous residential concerns (Emerald Ash Borer, flooding/drainage, natural features, etc)
- Coordinate projects with other public agencies

**Engineering Programs:**
- Water System Capital Improvement Program
- Sanitary Sewer Rehabilitation Program
- Safety Path Construction Program
- Road Improvement Program
- Coordinate data acquisition for utility mapping
- Manage/coordinate Special Assessment Districts (SAD)/Escrow Accounts (EA)

**Environmental Programs:**
- Manage Phase II Storm Water Permit requirements
- Gypsy Moth Management Program
- West Nile Virus Management Program
- Review of Wetland Permit applications
- Wetland inventory mapping updates
- Hazard mitigation planning projects
- Water Quality Monitoring activities
- Tree Preservation & Protection Ordinance management
- Fertilizer Ordinance drafting & management
II. Department Staff

The following are current EESD employees with their years of Township service included.

Wayne Domine PE, Director (18 years)
Department Head and Township Engineer, responsible for supervising the overall activities of the department in the implementation of engineering and environmental services, in conjunction with the Township’s water supply system, sanitary sewer system, watershed management, and other public works activities.

Lance Scram, Project Coordinator (12 years)
Coordinates the project administration and field oversight of Township contracted public works projects with consultants, contractors and customers including the Township safety path and concrete repair programs. Also, assisted the Department of Public Works with snow removal activities during winter 2009-2010.

Noah Mehalski, Environmental Specialist, Ordinance Officer (2 years)
Responsible for implementing the activities involving management of the Township’s environmental programs to meet regulatory compliance in conjunction with the Township’s Phase II Watershed-based Storm Water permit, wetlands, pest management, woodlands, and protection of other natural features. Also, was sworn in as an Ordinance Officer in 2009 to assist the Planning, Building & Ordinance Department.

Olivia Olsztyn-Budry, PE, Staff Engineer (2 years)
Coordinates engineering services with consultants, contractors and customers during the construction of public improvement projects. Provides technical support associated with the planning and construction of public improvements and review of site development projects submitted for Building Permits. Also, responsible for reviewing Building Permit applications on behalf of the D.P.W.- Water Division.

Colleen Rowland, Administrative Assistant (23 years)
Retired, December, 2009

From left to right; Lance Scram, Colleen Rowland, Wayne Domine, Noah Mehalski, and Olivia Olsztyn-Budry
III. Summary of Services

Support Services
The EESD supports other departments in the review of projects that seek permits from the Township. In cooperation with the Planning, Building & Ordinance Department and Department of Public Works, the EESD reviewed 50 applications for building permits, 11 applications for right-of-way disturbance permits, 5 applications for Wetland Permits, and 35 Tree Permit applications. The EESD also facilitates the Township Wetland Committee meetings and performs site inspections for these projects. In 2009, a staff member from the EESD was sworn in as an Ordinance Officer in order to assist the Ordinance Division with natural resource related enforcement concerns. Additionally, one EESD staff member was utilized in the winter of 2009 – 2010 by the DPW for snow removal activities.

Technical Assistance
In 2009, EESD staff provided technical support to the DPW Water Division throughout several emergency water and sewer repairs. In addition, EESD staff provides assistance to residents regarding connection to Township water and sewer services, drainage concerns impacting their property, and natural resource development regulations. EESD staff also provided project management and technical direction during the replacement and upgrading of public utilities. The EESD also works collaboratively with other jurisdictions, including MDOT, DWSD, and the Water Resource Commissioner’s office.

Escrow Accounts
Escrow accounts are established to retain funds from applicants in the administration and construction oversight of private developments. In 2009, the EESD managed one escrow account for the reconstruction of a pond overflow structure to alleviate flooding concerns. While the economy has impacted the number of Escrow Accounts this year, projects have been focused on public infrastructure improvements brought about by A.R.R.A. funding.

New inlet and outlet structures installed at The Heathers to alleviate flooding

Capital Building Project
The EESD provided support in the completion of construction activities for the Senior Services Center and Public Services Building. This included management of the NPDES – Soil Erosion Permit for the site, connection to Township water and sanitary sewer systems, installation of a Township Hall Gateway sign, and municipal complex safety path improvements.
IV. Summary of Construction Projects

Construction Cost Summary: $5,852,000.00
The Engineering and Environmental Services Department provides construction oversight and management to a variety of projects. Some key programs include: safety path construction and replacement, water system improvements, special assessment district project oversight, and tri-party road construction projects. The EESD managed approximately $5,852,000.00 in project funds during 2009.

Safety Path Program: $1,700,000.00
In 2009, 3.6 miles of new safety paths were constructed as part of the master plan approved with the 2008 millage renewal:

- Squirrel Road - Westview Road to Square Lake Road 0.5 Miles
- 14 Mile Road – Wing Lake Road to Saxon Drive 0.4 Miles
- Wing Lake Road – Lake Crescent Drive to Lone Pine Road 0.3 Miles
- Bloomfield Township Campus 0.5 Miles
- Telegraph Road – Klingensmith Road to Target Store 0.8 Miles
- Long Lake Road – Franklin Road north to Franklin Road south 1.1 Miles
  (Removal and reconstruction)

An additional 0.8 miles of safety path was constructed along Square Lake Road as part of the capital improvement project and through coordination with the Michigan Department of Transportation using Federal funding.

Maintenance of the Township’s existing safety paths or sidewalks is an ongoing project. During 2009 a total of 14,000 sq. ft. of concrete was replaced or repaired on existing paths or sidewalks:

- Bloomfield Village Subdivision: 12,400 sq ft
- Various locations throughout the Township: 1,600 sq ft
PROJECT SPOTLIGHT: Square Lake Road Reconstruction

The Michigan Department of Transportation pushed ahead the reconstruction of Square Lake Road. Funding was provided through the American Recovery and Reinvestment Act of 2009. The project included new concrete curb and gutter, decorative stamped concrete medians, asphalt paving, and the removal of a dangerous slope in the westbound lanes.

Additionally, through coordination between the EESD, Planning, Building & Ordinance Department, and Michael J. Dul & Associates, MDOT financed and constructed improvements to the corridor including:

- 0.8 miles of safety path
- Decorative fencing and retaining wall
- Decorative stamped concrete in the medians and along the road edge to limit maintenance.

These improvements were detailed under the Township’s master beautification plan. The Township paid only the difference in the fence cost from chain link to the decorative upgrade.

Water System Improvements: $1,760,000.00
Projects constructed as part of the long-term capital improvement program for the public water supply system include the following:

- Completion of the Charing Cross Estates Subdivision Water Main Replacement
- Colberry Park Water Main Replacement
- Square Lake Road Water Main Replacement
- Planning for Woodward Water Main Extension

As part of 2009’s water system improvements, the EESD implemented a new water main installation method for replacement of the four-inch water main in the southerly right of way of Square Lake Road. Several utilities including a high-pressure oil pipeline, Bloomfield Township 20-inch diameter water supply transmission line, Consumer’s Energy gas line, and the existing four-inch diameter water main were located in the right of way, leaving no available space for a new water main. The method of “pipe bursting” allowed the new water main to be installed in the location of the existing pipe. The four-inch water main was split in two, in-situ and the new water main was pulled behind in the same space as the existing water main. This method was necessary and a success for the existing site conditions.
Sanitary Sewer System Improvements: $2,175,000.00
Projects constructed as part of the long-term capital improvement program for the public sanitary sewer system include the following:

- Completion of the Phase II SSSES in the Colberry Park/Holiday Hills/Hickory Grove Hills district, and the Bloomfield Highlands/Colonial Hills district,
- Maintenance Sanitary Sewer and Manhole Investigation and Rehabilitation
- Continuation of the Sanitary Sewer Pump Station Rehabilitation
- Forest Lake Emergency Sanitary Sewer Repair
- Completion of the Charing Cross House Lead Lining
- Lahser Road Emergency Sanitary Sewer Repair

PROJECT SPOTLIGHT:

Bloomfield Township Sanitary Pump Station Upgrades
$1,330,000.00

Bloomfield Township owns and operates nine sewage pump stations, transporting sewage from low areas within the Township to higher areas to flow by gravity into other parts of the sewage system. Using funds from the 2008 bond sale for capital improvements, the EESD proceeded with plans to upgrade all of the pump stations, which included replacement of parts over 40 years old. The upgrades and rehabilitation at the pump stations included new pumps at all the stations, new electrical and mechanical components and boxes, new programming equipment and software, and improvements to data collection and the communication system.

The goal of the project is to improve system reliability of the pump stations, reduce maintenance time, and simplify the operation so that additional DPW staff can be trained to troubleshoot issues with the pump stations.

Township Gateway Program
The Township’s Gateway Signage Program completed its third year with the installation of signs at the Township Hall and at Woodward Avenue and Hadsell Drive. These two gateway signs have a similar design that compliments the sign installed at 14-Mile Road and Telegraph Road in 2008. Each sign is constructed of condensed styrene foam with fiberglass coating meant to resemble natural stone. The landscaping at each site includes Ginko trees, Dawn Redwood trees, and clusters of daylilies, among others. Water and electrical services had to be brought to each site and many other technical challenges had to be overcome to create these new Bloomfield
Township landmarks. Township staff from Engineering & Environmental Services, Public Works, Planning, Building & Ordinance and Community Relations Departments directed the project.

Woodward Ave Gateway       Township Hall Gateway

**Telegraph Road Reconstruction – Planning Phase**
The Michigan Department of Transportation (MDOT) received funding through the American Reinvestment and Recovery Act for several projects, including the reconstruction of Telegraph Road. MDOT broke up the Telegraph Reconstruction within Bloomfield Township into two projects: 1) reconstruction of northbound and southbound lanes between Fourteen Mile Road to Long Lake Road, and 2) reconstruction of the northbound lanes and patching of the southbound lanes between Square Lake Road and Orchard Lake Road.

The EESD has spent a significant amount of time working with MDOT, providing updated water and sewer utility information and reviewing MDOT plans for conformance with Township utilities. In addition, the EESD coordinated with MDOT for the transplanting of existing Telegraph median trees to medians not impacted by the construction. Once the construction projects begin in 2010, the EESD will be coordinating construction and upgrades to the water and sewer systems with MDOT, the contractor, and Township DPW staff, utility inspection, and overseeing MDOT contractors on both projects with respect to Township utilities.

In addition, the EESD has asked MDOT to include several runs of safety path within the Telegraph Road right of way that are identified on the Township’s safety path master plan. MDOT has agreed to include several sections of safety path construction at no additional cost to the Township.

Finally, at MDOT’s expense, they will be including the relocation of a section of Township water main that is currently located under the paved lanes of Telegraph Road north of Square Lake Road. The water main work will include relocating the portion of water main to the medians of Telegraph Road, two new crossings of Telegraph Road and a new connection located within the median at Square Lake Road and Telegraph. EESD will provide inspection of the new connections associated with the water main installation.

**Water Resource Commissioner (WRC) Flow Based Billing Method**
In 2008, the WRC’s office unveiled a new method of billing communities for sewage disposal to the Evergreen Farmington Sewage Disposal System (EFSDS). Historically, communities have been billed on sewage based on water consumption. The WRC’s office has installed approximately eighty sanitary sewer flow meters throughout the EFSDS with over a dozen meters located in the Township. The flow meters collect sewage flow data and through a mathematical equation known as “mass flow balancing” the WRC calculates the sewage flows from each community.
Although in theory this method sounds reasonable, the EESD is concerned about the implementation before this method has been proven to be reliable. In 2009, the EESD worked with other communities and the WRC’s office to refine and improve the metering system and calculations used to equate sewage flows to the communities. The EESD actively participates in the EFSDS Technical meetings, Flow Based Billing Workgroup meetings, CSO RTB Workgroup meetings, and general EFSDS meetings.

In 2010, the EESD continue to work with the WRC, and other governing authorities to ensure that the sewage billing method is as accurate as possible.

**PROJECT SPOTLIGHT:**

**Forest Lake Emergency Sanitary Sewer Repair**

During follow up of a sanitary sewer overflow, it was discovered that a portion of sanitary sewer around Forest Lake, behind Forest Lake Country Club, was crushed, restricting sewage flow through the system. The existing sewer pipe was 16” diameter steel pipe set on wooden piles 24 feet to 40 feet deep because of the surrounding poor soils. The original pipe was installed in 1968.

The proximity of the sewer pipe to Forest Lake (within 15 feet) and being on Forest Lake Country Club property approaching Memorial Day weekend warranted that a trusted and experienced contractor complete the repair. EESD oversaw the sewer repair, which included performing soil borings to determine the necessary equipment for the excavation, excavating to the existing sewer, approximately 10 ft deep, installing a trench box, removing the existing sewer pipe, inspecting the condition of the wood piles, collecting elevations for proper pipe slope, replacing the existing pipe with a new section of pipe, and restoration.

**V. Summary of Environmental Projects**

**Fertilizer Ordinance Drafting**

The Bloomfield Township Board of Trustees adopted a Fertilizer Resolution in 2001. The resolution was enacted to regulate fertilizer application by restricting the type, location, timing and quantity of fertilizer they applied to any property within the Township. The 2001 Fertilizer Resolution substantially lacked an enforcement mechanism to carry out the program. After many inquiries and requests from several residents, a draft Fertilizer Ordinance was developed in 2009.
to replace the current Fertilizer Resolution and provide the regulatory mechanism needed to ensure the provisions of the ordinance are enforced. Through a Registered Fertilizer Applicator Program, commercial fertilizer firms will agree to follow the requirements of the Fertilizer Ordinance for all fertilization done in the Township.

**NPDES Storm Water Permit Implementation**

On May 22, 2008 the Michigan Department of Environmental Quality (MDEQ) issued a new National Pollutant Discharge Elimination System (NPDES) General Permit for our Municipal Separate Storm Sewer System (MS4) that included new requirements, which would impact the Township. Following a Board resolution, Bloomfield Township, along with over seventy other public agencies in the State of Michigan, contested the permit as being unduly prescriptive and costly. On July 28, 2009 the Township applied for a Jurisdictional NPDES Permit. The Jurisdictional Permit limits permitting responsibilities to those areas owned by the Township while still allowing the Township to be an active member in the Alliance of Rouge Communities (ARC).

After discussions with the MDEQ and following Board Resolution, the Township withdrew itself from the contested case proceedings and a Certificate of Coverage (COC) was issued under the NPDES program. The COC outlines the Township’s permitting and reporting requirements and authorizes storm water discharge from Township-owned properties through April 1, 2013. EESD and DPW staff have begun to develop an implementation plan for the new NPDES requirements to ensure permit compliance and continued protection of our natural resources from harmful storm water discharges. In addition, EESD and DPW staff has recently taken and passed the Industrial Certified Storm Water Operator examination as required by the permit.

**Implementation of Tree Preservation & Protection Ordinance**

The EESD along with the Planning, Building & Ordinance Department developed a draft Tree Preservation & Protection Ordinance. The Ordinance was enacted in order to protect Bloomfield Township’s woodland areas and the quality and character of the neighborhoods within the community. After a two-year long drafting process, the Township Board of Trustees adopted the Tree Preservation & Protection Ordinance on March 29, 2009.

During the inaugural year of the ordinance, the EESD worked with the Planning, Building & Ordinance Department as nearly one hundred (100) residents and contractors sought to put the new ordinance into practice. Much of this assistance was in the form of pre-application meetings, site visits, plan evaluation and phone conversations with prospective applicants and interested residents. The data below provides an overview of the impact the ordinance is has had on tree removal within the Township during the first year of its enforcement.

- **35 Tree Permits Issued**
- **1,139 inches DBH of required tree replacement**
- **380 Trees required to be planted as a result of the ordinance**
- **$2,660.00 in required contributions to the Woodlands Trust Fund**

**West Nile Virus Management**

In 2009, the Township West Nile Virus Management Program continued to address the WNV problem through an integrated pest management program that consisted of identifying and prioritizing approximately 1900 catch basins and detention basins. Public areas found to be in high priority of mosquito control treatment are sampled and treated on a monthly basis.

The Township program began in June and was completed in early October. Throughout the year the EESD provided public education and community outreach activities through the WNV hotline, Township newsletter articles, and printed materials. The website provides additional information, such as the modes of virus transmission; means of prevention; and how to reduce the risk of
exposure. There were no reported cases of the WNV in the Township for 2009. However, the risk for contracting the disease is still present in Southeast Michigan.

**Gypsy Moth Management**

Since 1993 Bloomfield Township, together with the National Gypsy Moth Management Group, has implemented an integrated pest management approach to reduce and contain the Gypsy Moth problem. Components of the program include: public education, intensive biological monitoring and treatment plus evaluation.

In 2009, the National Gypsy Moth Management Group personnel collected data from biological surveys at permanently established survey locations to determine Gypsy Moth population, density and health, susceptibility and vulnerability of trees and infestation trends. In the spring, fungus inoculations were applied to 46 locations throughout the Township. Three of the highest infestation sites were treated with a natural bacterium, *Bacillus thuringiensis* which specifically targets the gypsy moth, for control purposes.

A final report from the company was submitted in the winter for review and determination of future actions. The report outlined the program’s effectiveness including such issues as treatment timing, control measures and identification of improvement. Results from the 2009 assessment have indicated that egg mass density has decreased 29% from 2008 levels and therefore the treatment program will need to be adjusted to reflect this. In 2010, the Township will again be using a combination of biological control (fungal inoculation) and targeted ground-based spraying to control the expanding Gypsy Moth populations.

**SOCWA Greenscaping Seminars**

The Southeast Oakland County Water Authority (SOCWA), Bloomfield Township, and the Bloomfield Township Public Library co-sponsored two free seminars for home gardeners in February 2010. The events focused on greenscaping home landscapes, along with producing mulch and rainwater recycling options. The two events featured different expert speakers and each event drew over seventy-five (75) residents from throughout the Township and surrounding communities. These events focused on the initiatives and experiences of environmental gardeners and how to do these projects at their own homes. Specifically, how well planned landscapes with native plants, rain gardens, rain barrels, natural mulches, and compost can be attractive and cost-effective for the environmentally minded homeowner.

**VI. Grant Projects**

EESD staff continues to research grant opportunities to benefit Bloomfield Township. Initial steps were taken this year to obtain grants for separated and combined sewer inflow and infiltration inspection and rehabilitation from the WRC’s office, but the Township’s projects were not selected. EESD staff then applied for Rouge Program Office (RPO) grant funding for both project areas. At this time, the EESD is awaiting the decision of the RPO on the Township’s grant application for investigation and rehabilitation of sanitary sewers within the Hickory Heights subdivision in an area suspected to contribute inflow and infiltration into the system. The RPO will award the selected grant recipients in 2010.
The Bloomfield Township Engineering and Environmental Services Department partnered with the Bloomfield Hills Public Schools to host this year’s Rouge Rescue Event at the E. L. Johnson Nature Center. The event, which took place June 6, 2009, involved the installation of a 1.0 acre prairie planted with native seed mix by over thirty (30) volunteers. The planting was funded by a grant from the Alliance of Rouge Communities. The event also allowed participants to enjoy the grounds of the Nature Center through service-learning projects such as invasive species removal, and tree plantings. Bloomfield Township DPW & EESD staff also assisted the Nature Center with preparation of the prairie planting site and project management responsibilities. Through this event, participants learned how the Township plays an important role as a headwaters community in the Main 1-2 Subwatershed of the Rouge River.

Additionally, the EESD has begun discussion with the WRC’s office in obtaining Recovery Zone bonds under Bloomfield Village Chapter 20 Drain to investigate and rehabilitate sewers in the combined areas within the Township. This work for obtaining funding will continue in 2010.

The EESD also applied for a tree-planting grant through DTE in 2009 to purchase trees for two of the Township’s old well sites. Although DTE awarded funding to the Township in 2008, the Township was not a recipient in 2009.

**Charing Cross Subdivision House Lead Grant: $445,000.00**
In an effort to reduce inflow and infiltration (I/I) to the sanitary sewer, the Township utilized a grant funded by the Oakland County Water Resource Commissioner’s (OCWRC) office. The area selected for the work was the Charing Cross Estates Subdivision. The Project included televising and inspecting the mainline sanitary sewer owned and operated by the Township, televising and inspecting house leads in the subdivision, performing rehabilitation to the mainline sewer as revealed by the inspection and lining the house leads. The report was finalized in 2009 and post metering of the project area shows a decrease in peak flows during wet weather events. Therefore, the pilot project has been shown to be effective at reducing inflow and infiltration into the sewer system.

**Energy Efficiency and Conservation Block Grant: $169,500.00**
As part of the American Recovery and Reinvestment Act (ARRA) of 2009, Bloomfield Township applied for and received funding in the amount of $169,500.00 from the Department of Energy to perform an Energy Efficiency Audit and Retrofit Program. The program will involve conducting comprehensive energy audits for all Township-owned facilities. The product of these audits will be used to determine and prioritize any and all recommended energy efficiency retrofits for the buildings. Township staff will then allocate the funds remaining after the audits to implement as many of the recommended energy efficient retrofits as possible. The EESD believes that using energy conservation measures will assist in achieving a goal of a 15% energy usage decrease.
Township-wide by 2012. Utilizing the energy audit as a framework allows quantification of currently unrealized energy losses. Additionally, the audits will be used to prioritize recommended energy efficient retrofits for maximum impact.

**Federal Emergency Management Agency - Hazard Mitigation Planning Activities**

Bloomfield Township, in partnership with Oakland County, developed a Hazard Mitigation Plan in 2004 that included a broad look at the hazards that may impact the County and the Township. Recently, FEMA guidelines have changed making it a requirement that Bloomfield Township have a Multi-Hazard Mitigation Plan before being eligible to apply for funding to prevent these hazards.

**Flood Mitigation Planning Grant: $15,900.00**

The EESD obtained a grant from the Federal Emergency Management Agency (FEMA) for the development of a Flood Mitigation Plan in 2006. This Mitigation plan is required by FEMA to demonstrate the Township’s commitment to reducing risks from natural hazards and will serve as a guide for future efforts and grant opportunities. The plan components include: 1) property inventory, 2) flood risk assessment, 3) risk reduction alternatives, and 4) potential mitigation projects. This grant project is a great opportunity to address flood-related issues and opens up resources for future funding to mitigate them. The plan is currently in the drafting phase and will be completed in July 2010.

**Multi-Hazard Mitigation Planning Grant: $21,700.00**

Recent changes in FEMA grant administration require that eligible communities also have a Multi-Hazard Mitigation Plan before applying for any additional FEMA funding. These new FEMA requirements have made it advantageous for Bloomfield Township to broaden the scope of the Flood Hazard Mitigation Plan that is currently under development, to include hazards other than flooding. These include disasters such as tornadoes, fire, and drought that may have impact on the Township. The production of these Hazard Mitigation Plans is a prerequisite to obtaining future funding from FEMA to mitigate these hazards.

**VII. Staff Development and Education**

EESD staff participate in regional meetings sponsored by professional organizations such as SOCME, SMU&SWA, APWA, MWEA and AWWA or trainings offered by public agencies such as MDNRE, DWSD, WRC, and SEMCOG. Below is an overview of the various certifications EESD staff members have gained over the last year:

- Soil Erosion and Sedimentation Control Comprehensive Certification (1 staff member)
- PACP/MACP Certification (1 staff member)
- Incident Command System Certification (4 staff members)
- Certified Storm water Operator (1 staff member)
- Construction Storm Water Management Certification (2 staff members)
- Industrial Storm Water Operator (1 staff member)

Additionally, the EESD has invited vendors to present on products, utility maintenance, and utility installation. These trainings allow vendors and other organizations to speak about new technologies and regulations. In an effort to provide this informational opportunity to other departments, the EESD invited several other departments that would also benefit from the information. The following is a summary of the events that the EESD organized and coordinated:

**09/30/09 – Underground Solutions**

Chet Allen, Regional Manager of Underground Solutions, presented on the topic of C-900 fusible polyvinyl chloride (PVC) pipe for water main. The focus of the presentation was the application, use and technical information on C-900 fusible PVC pipe. The use of PVC pipe can result in lower costs and ease for material handling, installation and transportation.
Three members of the EESD, thirteen members from the Department of Public Works (DPW) Management and Water Division, and two staff members from Hubbell, Roth & Clark, Inc., the Township’s Engineer Consultant, attended.

**09/14/2009 – WRC Facilities Tours**
In September, the Oakland County Water Resource Commissioner’s office (WRC) offered tours of the combined sewer overflow retention treatment basins (CSO RTB) to communities and their consultants. While the CSO RTBs are jointly owned by the contributing communities, the WRC’s office maintains and operates them on a regular basis. Two members from EESD, along with DPW staff and Supervisor Dave Payne participated in the tour. The tour consisted of an explanation of the computer monitoring system, flow meters, pumps and a walk through of the station and tanks.

Staff Members also attended lunch and learn sessions hosted by HRC on the following topics:

**10/14/2009 – Urban Storm Water Retrofitting Webcast**
This webcast focused on the restoration of urban and suburban watersheds through storm water retrofitting. It featured retrofitting existing urban lands, such as parking lots, residential streets, conveyance systems, and landscaped areas. The webcast also provided information about the cost and pollutant removal performance of these retrofits.

**12/15/2009 – Soil Erosion/Sediment Control Webcast**
This webcast provided information on addressing NPDES MS4 construction site runoff control requirements, developing meaningful erosion and sediment control plans, and reviewing the effectiveness of site-level erosion and sediment control practices. Several EESD & DPW staff attended this event.

**VIII. 2010 … A Look Ahead**

As we look ahead to 2010, the EESD will continue to oversee the Township’s programs and manage new projects to meet upcoming mandates of the regulatory agencies and the desires of the community. In addition, the EESD will continue to provide support to all Township departments regarding the environment, natural features, building projects, and Township utilities.

Up and coming projects for 2010 include:
- MDOT Telegraph Road Reconstruction Projects and Protection of Township Utilities
- WRC Office Flow Based Sewer Billing
- Rouge Program Office Grant for Sewer Rehabilitation in Hickory Heights
- Chapter 20 Bonds for Bloomfield Township Drainage District Sewer Rehabilitation
- Implementation of the new Fertilizer Ordinance
- Tri-Party funding for Exeter & Andover Road Reconstruction