In June 2011, the County initiated development of its local strategies to fulfill Phase II Watershed Implementation Plan (WIP) requirements. The Department of Environmental Resources (DER) was the lead County agency in developing the WIP in partnership with other County agencies, Maryland Department of the Environment (MDE), Maryland Department of Natural Resources (MD DNR), and the County Executive and Council. On November 17, 2011, the County submitted to MDE a draft WIP strategy to meet the local pollutant reductions required under the State's WIP. A revised WIP was forwarded to MDE in May 2012.

Each sector applied different approaches for meeting the WIP goals.

- **Agriculture:** Focus on the highest efficiency implementation strategies.
- **Septic Systems:** Improve tracking and continue to upgrade failing systems.
- **Point Sources:** Adhere to current NPDES Surface Water Discharge Permit requirements.
- **Urban:** Achieve conditions specified in the anticipated new MS4 permits.

To illustrate the County's near-term commitments to implementing the WIP, 2-year milestone were developed to meet the local pollutant reductions for the urban sector. The following provides a summary of the progress made towards reaching the implementation and programmatic milestones for the first year of the 2-year milestone period. All programmatic milestones are based on calendar year and BMP milestones are based on fiscal years. Those milestones illustrate the County's near-term commitments to implementing the WIP. They are organized by sector and for urban stormwater, they are further organized by year.

Program Enhancement Milestones for 2012–2013:

Urban Stormwater

Year 1

- Prince George's County will initiate a research study with the University of Maryland to determine BMP efficiencies for new technologies to reduce nutrients in a more cost effective manner. The strategy requires full partnership of MDE and EPA to ensure that the County reaches its 2017 and 2025 goals.
  - **Progress:** The BMP efficiency research project with the University of Maryland is in progress, with 50 percent of the total project cost funded by the National Fish and Wildlife Foundation. The County has added a Phase II to the project to further investigate additional design alternatives, as the preliminary results are very encouraging. For instance, the removal efficiency for total phosphorus is reaching approximately 90 percent with the new design materials. The entire project should be completed within the next two years.
- Prince George's County is expecting a new MS4 permit to be issued in 2012. The County is aware of the new requirements and has started to and will continue to prepare for its implementation.
  - **Progress:** In May 2012, the County submitted its revised WIP to MDE, outlining a scheduled work plan that is consistent with the conditions of the County's

March 2011 NPDES MS4 draft permit. The County carefully crafted a plan, using this version of the MS4 permit, to ensure appropriate funding would be raised to address WIP mandates. On two separate occasions since then, MDE had requested that the County consider additional changes to the draft permit which will result in an associated increase in implementation costs over the 5-year permit term. The County received the most recent draft MS4 permit in October 2012. The County anticipated that MDE would proceed with issuing a tentative determination on the October 2012 draft permit in 2013. The County was informed that a tentative determination is pending further discussion with environmental stakeholders. The County and MDE conducted the required tentative determination (public meeting on the draft permit). MDE and EPA had discussion over public comments. County representatives have been in contact with MDE officials to finalize permit conditions. The final NPDES MS4 permit was issued by MDE on January 2, 2014.

- Prince George's County's CIP does not allocate the funding necessary in future years to complete BMP implementation. The County has the following milestones to identify additional funding.
  - The County plans to update its CIP for 2013–2018 to reflect the needs for stormwater BMP installations for WIP implementation.
    - **Progress:** The County will continue to implement and use the Stormwater Management Enterprise Fund, EF49 (*ad valorem* tax), funding for traditional stormwater related programs, projects, and support services. To facilitate design and construction of projects to meet WIP and NPDES MS4 mandates. Accordingly, DER has included the CIP Projects in FY 2015 for design and construction of projects to meet WIP and NPDES MS4 mandates are listed in the 2014–2015 Milestones. :
      - DV 542105 – MS4/WIP II Compliance and Restoration
      - DV 541835 – Municipal MS4/WIP II Compliance and Restoration: This CIP will facilitate design and construction of projects to meet WIP and NPDES MS4 mandates within the County's municipalities.

      The County is also developing and will implement a funding strategy, in addition to the EF49 revenue, in response to the programmatic and funding mandates of House Bill (HB) 987. The County's stormwater fee structure will be based on impervious area; with a hybrid application of fees based on a combined flat rate and graduated rate system. Revenues generated from these fees will be used for water quality related programs.

      With an emphasis on meeting untreated impervious area goals, as defined by the County's next generation MS4 Permit, and WIP TMDL pollutant load reductions; funding will resource engineering concept and design, construction, contract administration, maintenance operations, and municipal participation projects and operations.

      The County has passed new legislation to fund the necessary CIP levels for restoration. A new Watershed Protection Restoration Program was legislated under the County's CB-45-2013, and created a dedicated fund for restoration work.

Additionally, the County has passed a new resolution CR-59-2013 that establishes a fee structure imposed on county properties as new revenue source that gets deposited in the Watershed Protection Restoration fund. These two pieces of legislation meet the requirements under HB 987. This Milestone has been completed.

- The County will continue funding capital improvements projects and NPDES program through Stormwater Management Tax.
  - **Progress:** Prince George's County's will continue to use the revenue from the Stormwater *ad valorem* tax ($0.054/$100 of assessed property value) to help fund stormwater management programs and pay debt service on CIP bond sales. The County continues to fund CIP expenditure levels for NPDES programs.
- The County will complete a study that will evaluate funding via a stormwater fee that is based on impervious area. The County will work with state regarding requirements for and feasibility of stormwater fee-based funding. On the basis of the study, the County might add a stormwater fee to fund WIP implementation. The County plans on hiring a consultant to conduct a detailed financial analysis to refine their preliminary funding strategy.
  - **Progress:** A County feasibility study to evaluate a new stormwater funding mechanism to support WIP implementation is no longer necessary, as HB 987 mandates all MS4 jurisdictions develop a system of charges and a watershed restoration program to support compliance with WIP mandates. In the fall of 2012, the County developed an interagency workgroup to evaluate remediation funding options allowable under HB 987. The workgroup determined that in addition to the County's Stormwater District ad valorem tax, supplemental funding is needed to meet the projected load reductions required under the WIP. A consultant contract to develop options for a new water quality restoration fee was executed in September 2012.

    Interagency workgroup representatives traveled throughout the County to meet with all municipalities in the fall of 2012 to brief elected municipal officials and staff on the purpose and projected timeline of new system of stormwater charges. Stormwater fee legislation is currently under development and will be introduced the Executive Branch and County Council in 2013, with adoption anticipated prior to the County's FY 2014 budget year.

    The County has passed new legislation to fund the necessary CIP levels for restoration. A new Watershed Protection Restoration Program was legislated under the County's CB-45-2013, and created a dedicated fund for restoration work. Additionally, the County had passed a new resolution CR-59-2013 that establishes a fee structure imposed on county properties as new revenue source that gets deposited in the Watershed Protection Restoration fund. These two pieces of legislation meet the requirements under HB 987.

    This Milestone has been completed.
- The County will continue to look for and apply for state and federal grants to assist in WIP implementation.

- **Progress:** In 2012 alone, the County has been awarded over $4 million in grant funding from various federal and state agencies to support our stormwater management program. In late January 2013, MD DNR informed the County that an additional $5.2 million in grant funding will be awarded. At this time the County is developing two additional proposals for state grant funding and cost-share assistance from U.S. Army Corps of Engineers (USACE) for an additional project. The cost of the two State proposals is approximately $3.4 million and the projected cost-share of the USACE project is approximately $1.8 million.

- The Prince George's County Department of Environmental Resources (DER) will develop an organizational plan that includes the responsibilities of existing staff and new hires and a schedule and funding strategy for new hiring to appropriately implement WIP.

  - **Progress:** The County is currently in the process of re-structuring agency responsibilities which will include the creation of a new agency, the Department of Permits, Inspections and Enforcement (DPIE). The core responsibilities of this new department will include issuing permits, conducting commercial and residential property inspections, and enforcing property standards. The goal of this new department is to increase efficiency and improve consistency, predictability, as well as streamline communications to both commercial and residential stakeholders in regards to permitting, inspections, and code enforcement. Agency re-structuring will require the transfer of permitting, inspection, and enforcement positions into the new agency. Once the organizational structure of DPIE is complete, DER will focus on developing a new organizational structure to meet the County's environmental mandates under the WIP and MS4. DER has included in its FY 2014 budget 10 new positions and 8 new positions for FY 2015 to support these mandates. In addition, DPIE has included in its FY 2015 budget request, 20 new positions FY 2015 to support these mandates.

    DER has completed its organizational structure under two new divisions: Storm water Division (SMD) and Sustainability Initiatives Division (SID). With these two new divisions, the department will be able to focus attention to these important WIP II and NPDES initiatives that are important in meeting bay load allocations.

    The role for the SMD is to administer programs and CIP projects to meet the WIP II mandates for 2017 and 2025, and the NPDES restoration and programmatic goals for the term of the permit.

    The SID mission is to launch various new outreach & education initiatives (water, air, energy, and community partners) to better serve the needs of our communities. The primary goal for these initiatives is to ensure WIP II and NPDES county commitments are translated into our communities for coordination and awareness.

    The SMD recently completed the implementation of the County's Clean Water Act fees (CWAF) aimed at funding impervious restoration projects and community based outreach & education. The County's CWAF fulfills the State mandate under HB 987 for the development of a new watershed protection and restoration fund.

The SMD is currently in the process of selecting a consulting service to carry out the County's NPDES inspection programs (BMPs, SWPPP, IDDE & Outfall Sampling). We anticipate contract award in early March 2014.

The County is also in the process of developing a Private Public Partnership intended at accelerating the restoration of impervious surfaces.

- There is no standardized Prince George's County database for data collection across county agencies. Therefore, the Department of Environmental Resources (DER), the Department of Public Works and Transportation (DPW&T), [the Department of Permit, Inspection, and Enforcement (DPIE),] Soil Conservation District (SCD), and the Maryland National Capital Park and Planning Commission (M-NCPPC) will work together to form a workgroup to build a standardized data collection methodology regarding BMPs, land use, permit issuance, and other data related to analyzing existing and future growth and WIP implementation. For instance, [DPIE,] DPW&T, and DER will enhance the *ePermit* system to enable the collection of pertinent data in the proper format for reporting WIP progress with respect to new development and redevelopment, in addition to stream/watershed restoration work.

- **Progress:** During the past 6 months, DPIE evaluated permit tracking systems to identify methodologies for reporting and sharing stormwater management data for new development, redevelopment, stream and watershed restoration projects. The evaluation included analyzing our permitting tracking system, *ePermits*, as well as the Site/Road Plan Review Section's *Master Log* of all related stormwater management plans and computations.

  All land development activity in the County requires stormwater management concept approval. This requirement allows the County to identify attributes associated with the proposed development and ensure stormwater management is addressed. Using the *ePermits* permitting software system, the County is able to capture all proposed land development activity prior to application stage.

  During 2012, *ePermits* was enhanced to better support land development tracking and reporting. *ePlan* is used to review digital plan submissions, electronically transfer comments, and catalog project files. Coupled with enhancements to *ePermits*, the execution of *ePlan* plan review software will allow the review of digital plan submissions by multiple agencies simultaneously. With respect to WIP reporting, *ePlan* ensures project file storage and retrieval for evaluation of BMP designs, inspections, efficiencies, and watershed studies.

  In addition to *ePermits*, DPIE maintains a SharePoint spreadsheet to track reviews and approvals of stormwater management concept plans, technical plans, and as-built plan submittals. Known as the *Master Log*, the log is linked to *ePermits* by Case Number and digital document attachments. This allows agencies with access to *ePermits* to check the status of the case and view attachments. Digital attachments include approved concept and approved stormwater/storm drain technical plans.

  In addition to the *Master Log*, DPW&T has developed linkage between the concept plan BMP geodatabase and the DPWT NPDES Enterprise GIS site on the County's network. While this location was primarily set up for NPDES MS4 reporting purposes, the data

may also serve as a valuable tool for tracking and evaluating WIP progress by watershed after permitting and construction has been completed. The information collected includes point data for each proposed development site. The data is geo-referenced in GIS to allow analysis of BMP attributes. The Concept feature class is complete and we are working on creating a Final Plan feature class to include drainage area polygon data. DPIE is capturing BMP summary information in a table that is attached to the plans in order to facilitate inspections, plan review, and identify associated permits.

Finally, another major change that will improve data collection across county agencies is the creation of the new department known as DPIE. DPIE will manage all permitted project submissions at one intake point and from there plans will be pre-screened and electronically distributed for review via *ePlan* with the project status tracked in the case workflow in *ePermits*. *ePermits* will continue to be used until a new permit tracking system is implemented. Data collection under DPIE will enable the County to track new impervious areas, restoration projects, BMP locations for inspection, and watershed development activities relevant to WIP reporting needs.

- The DPW&T Office of Engineering [now DPIE] will initially collect and track data relating to stormwater management BMPs for new development and redevelopment areas. That data will be incorporated into [geo]databases and stormwater management design plans in a format that can be migrated to a geographical information system (GIS) environment and comply with the standardized format requested by MDE. Data collection and tracking systems will translate to field application with respect to the enforcement and inspection of sediment and erosion control during construction activities. [DPIE and] DPW&T will work with DER to ensure that BMPs are not double counted between County databases.
  - **Progress:** DPIE has been collecting and tracking data relating to stormwater management BMPs for new development and redevelopment areas through all project phases—from conceptual plan approval through final construction completion. A newly created geodatabase is designed to meet the County's Urban BMP database MS4 reporting requirement for permitting, review activities, and construction enforcement. Stormwater BMP attributes will be captured as projects progress through the site development review and construction processes. Once a project is closed out, associated records are migrated to DER and/or Office of Highway Maintenance for inspection and maintenance enforcement. In addition to the geodatabase Access file, an Enterprise GIS site is used to graphically represent BMP information. The Enterprise GIS location is accessible by other agencies for viewing and sharing. The database and GIS site BMP attributes can be analyzed for type, MDE code, watershed, ownership, impervious area treated, drainage areas, location, retrieval of concept plans, and permit association.

    Beginning in FY 2014, a BMP Summary Table will be attached to the drainage area map (DAM) of all new and redevelopment plans to help identify BMP information to simplify inspection and reporting processes to track all new BMPs.

- DPW&T will implement a program to identify rural roadways that could be considered treated because of being [hydrologicaly] disconnected. That will be accomplished using GIS to identify the rural roadways that will be credited and removed from the County's total untreated impervious surface area. The process will entail field verification to ensure that the

roadways qualify per the MDE June 2011 draft document, *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated*.

- **Progress:** According to MDE's Accounting for *Stormwater Wasteload Allocations and Impervious Acres Treated* (June 2011 draft); existing open section rural roadways might be eligible for structural watershed restoration credit. The County is using two methodologies to evaluate water quality retrofit credit for existing rural roadways.

  The first method evaluates existing roadway data in our Pavement Assessment Management System (PAMS) system to differentiate closed-section roadways (curb and gutter) from open-section roadways (without curb and gutter). Since the polygon road section shape data in PAMS does not readily differentiate closed roadways systems from open roadway systems the County's consultant has identified the feasibility of obtaining this information. Once the roadway segments are categorized as open or closed section roadways, a further evaluation of the drainage flow paths will be necessary to determine hydrologic disconnectedness and the potential for receiving impervious acreage treatment credit for rural roadways.

  The consultant completed updates to the PAMs goedatabase in October 2013. Within the PAMs environment, difficulty tagging closed section and open section roadway segments in relation to segment stationing was encountered. In order to analyze the effectiveness of the methodology, the consultant conducted a pilot study for a portion of the County. In the pilot, the consultant applied the *Full Open* attribute to any section that did not have curb on both sides. Further refinement between *Full Open* and *Partial Curb* could occur using the right-of-way images from the data collection. Aerial imagery (SHA's 2011 6-inch imagery) was used to populate the *OPEN/CLOSED* attribute on the pavements feature class for a pilot area in the County. In November 2013, the pilot dataset was evaluated and ground truthed and found to be accurate. To apply the pilot methodology to all of the County-maintained segments (19,520), the consultant estimates an additional 500 technician hours.

  The second method that the county is pursuing uses Pictometry imagery tools to identify open-section roadway as potential candidates for impervious acreage treatment credit. Using Pictometry measurement tools, candidate roadways can be identified by calculating the length, area, and slope of open-section roadway. After disconnectedness is field verified, qualifying roadway sections can be removed from the existing untreated impervious areas. The recent addition of Pictometry Online allows impervious area reduction credits to be documented and stored online.

  In November 2013, ARCGIS Online with a Collector App allows for field collection of point data to ground truth and verify the pilot study area. Attaching pictures via the Collector App provides a documentation process needed to claim impervious area reduction credits. The field data points are added to the BMP Restoration GIS map for tracking and inventory. DPWT has allocated $200,000 to initiate a consultant based contract for program oversight. This task will commence during FY 2014 and continue through FY 2016.

- Prince George's County recently adopted a new stormwater management ordinance (CB 15), which references the County Code to update stormwater regulations and encourage environmental site design (ESD) to the maximum extent practicable (MEP), green building

for retrofit, redevelopment and new development in line with MDE stormwater management water quality requirements.

- **Progress:** The County is tracking new and redevelopment activities to ensure ESD practices are evaluated as the first option for stormwater control. Since the ordinance was enacted, OPIE has been using the development review and permitting processes a means of enforcement. Beginning at the end of 2013, DPIE will be providing the County Council with an assessment of compliance with the Stormwater Management Ordinance as required by Section 32-201 of the Prince George's County Code. In July of 2013, DPIE developed a half yearly report in accordance to the County Code requirement. The report focuses on stormwater management concept approvals and dispositions in preparation for the year-end report to the County Council. The following excerpt identifies the annual reporting requirement:

  > **Sec. 32-201. Annual Report.**
  > Starting in 2013, the Department [DPIE] shall issue an annual report and analysis by December 31st to the County Executive and the County Council on the implementation of and compliance with the stormwater management provisions contained in this Division, including projects that received administrative waivers under Section 32-170 (d), incentives under Section 32-175 (e) and variances under Section 32-176.

Year 2

- The Maryland-National Capital Park and Planning Commission (M-NCPPC) Planning Department, in partnership with DNR, will undertake a Climate Change Vulnerability Assessment for the County using grant funding from the National Oceanic and Atmospheric Administration. The analysis will include the in-stream loading impacts of the potential loss of marshes along the Patuxent River due to sea level rise.
  - **Progress:** M-NCPPC and DNR jointly submitted a grant for sea level rise assessment, similar to the assessment done by Anne Arundel County, however the grant was not selected to be funded.
- Prince George's County will complete field-verifying existing BMPs that are missing BMP information in the County database. The County will finalize the BMP database with updated drainage areas and update its BMP information with MDE. That will allow the County to receive credit for existing BMPs that are not reportable because of a lack of information.
  - **Progress:** DER has an inventory of approximately 1,600 BMPs consisting of both private and public facilities. DER has captured drainage areas for all private BMPs in the inventory. DPW&T, Office of Highway Maintenance, is in the process of developing the scope of services for a consultant to capture drainage areas for public BMPs, and field identify any other missing BMPs from the inventory.
- [DPIE,] DER, DPW&T, SCD, and M-NCPPC will work together to ensure the development and completion of the revised *Stormwater Management Design Manual*.
  - **Progress:** The County secured the services of an engineering consultant to lead the stormwater management design manual revision process. Numerous meeting were held with key stakeholders from DPIE, DPW&T, DER, Soil Conservation District (SCD), and

M-NCPPC in order to solicit and incorporate comments into the revised manual. Numerous changes have been made to incorporate the latest design criteria and the County Code changes with respect to the SWM Ordinance. The final draft design manual was distributed to the general public on December 13, 2013 for review and comments. Concurrent with the public review comment period, the DPIE will convene a stakeholder workgroup composed of interested parties and reviewed and approved by the County Council prior to adoption. The draft document was sent to the MDE Stormwater Management Office for their review and concurrence. It is anticipated that the manual will be brought forward to the County Council by the end of January 2014.

- Prince George's County will look into developing a residential stormwater benefits program similar to Montgomery County's RainScapes program. The program would promote technologies, such as rain gardens, rain barrels, dry wells, and permeable pavement on residential areas.
  - **Progress:** This milestone has been completed through CB 40-2012: Stormwater Management Retrofit Program. This bill—passed June 24, 2012— established the Rain Check Rebate Program. Prince George's County has developed a stormwater benefits program (Rain Check Program) funded through the Stormwater Management District Fund. The program was developed for the purpose of providing incentives to individuals, non-profit organizations, commercial businesses and other properties located with Prince George's County, to invest in green stormwater retrofits to improve water quality DER will continue to identify opportunities to work with private nonprofit organizations to evaluate, design and construct smaller BMPs on private properties, to provide treatment of impervious areas to meet the MS4 Permit, and the WIP requirements. Eligible practices include rain gardens, rain barrels, cisterns, green roofs, tree canopy, pavement removal and permeable pavement. The program became operational as of July 1, 2013, and will be continued into 2014 and 2105.
- The M-NCPPC Planning Department will create a future land use map for Prince George's County using community plans. The process will include establishing consistent land use categories for the County.
  - **Progress:** The M-NCPPC Planning Department has started work on this milestone and is currently in progress. They have identified the land use categories that will be used for future master planning.
- Prince George's County will identify, target, and protect sensitive watersheds, including water supply reservoirs, by using the biological, chemical and Basin Condition Scoring and the Sensitive Areas identified by DNR.
  - **Progress:** The County has not identified sensitive watersheds using the Basin Condition Scoring method; however the County is addressing this milestone indirectly by continuing to encourage LID and other restoration practices in sensitive watersheds, including those covered by TMDLs. The County's watershed restoration focuses on design, demonstration and implementation of BMPs in accordance with the goals and objectives established by WRASs and stream restoration projects, which are designed to protect water quality, natural resources, human safety, and property. The County's watershed restoration program is implemented in three major focus areas, water quality retrofit projects in partnership with Federal and State program initiatives and supported

by grant funding, construction of SWM retrofit projects, and County source control and public participation programs whose achievements significantly reduce the risk of stormwater contamination. The County's watershed restoration approach is designed to meet local priorities and regulatory requirements, and this will be achieved through a concerted effort of funding, restoration opportunity, and BMP applicability and efficiency. Project types include flood abatement and storm drainage relief, stream restoration, grants, community revitalization, as well as watershed restoration to treat impervious surfaces. In addition, the County provides services—such as trash netting, trash screens, street sweeping—that control potential pollutants at the source.

- DPW&T will reduce the existing untreated impervious surfaces through the Green Streets Program Initiative. The program will include BMPs such as treatment facilities or reducing impervious surfaces among other sustainable efforts to comply with MDE environmental site design to the maximum extent practicable.
  - **Progress:** There are ten projects currently in different phases.

Ager Road	100% Design Phase
Harry S Truman	60% Planning Phase
Swan Road	30% Design Phase
Edmonston Road	20% Planning Phase
Paint Branch Parkway	10% Planning Feasibility Phase
Addison Road	80% Planning
Contee Road	75% Design Phase
Virginia Manor (w side)	40% Construction Phase
Hill Road	90% Planning Phase
Auth Road	95% Planning Phase

For the Green Streets Program, A draft design manual was completed in FY 2013. The Office of Engineering and Project Management (OEPM) will commence work on the Green Streets/Complete Streets Design Manual in FY 2013–FY 2014.

- In accordance with Prince George's County's anticipated new MS4 permit, Prince George's County will develop a long-term schedule for completing detailed assessments for each County watershed and wasteload allocation implementation plans for each TMDL.
  - **Progress:** The County is deferring this milestone until it receives its new MS4 permit. The SMD is currently reviewing consultant services qualifications to develop the County's Local TMDL Implementation Plans, which will come due one year after the issuance of the County's MS4 permit. We anticipate and award by the 1st quarter of 2014.

Septics

- The Health Department will introduce revised County Regulations (Subtitle 22) in 2012–2013 for on-site sewage disposal systems that will include pertinent state legislation passed during the upcoming legislative session. The regulations will provide maintenance guidelines for on-site sewage disposal systems and guidance for the appropriate use of nutrient reduction systems.

  - **Progress:** The regulations were introduced, but were put on hold because of (1) the development of the new State of Maryland Regulations regarding BAT systems and (2) the County introducing the new Department of Permitting, Inspection and Enforcement.

- The Health Department will work with the Washington Suburban Sanitary Commission (WSSC) to develop a method to track septic systems that are connected to an advanced WWTP. The County does not record how many conversions occur per year. That practice will help the Health Department maintain an accurate accounting of the number of septic systems in the County. Similarly, the Health Department will work with septic system pump-out companies to develop a method of tracking septic system pump-outs.
  - **Progress:** The Health Department contacted WSSC regarding the development of a tracking method for conversions to WWTP. WSSC indicated that they do not have the ability to track this information at this time. The Health Department will continue to pursue collaboration with WSSC. Because the proposed septic regulations that were put on hold, the Health Department has not contacted septage haulers regarding a pump out database.
- Using BRF funds, the Health Department plans to continue replacing septic tanks during the remodeling of failing septic systems in the critical area with nitrogen reducing aerobic systems. . It is expected that two failing systems will be upgraded each year with possibly more if the governor's septic systems initiatives are implemented through legislation next year.
  - **Progress:** Eight septic tanks were replaced, through December 2013) with advanced BAT units throughout Prince George's County. Bay Restoration Funds were not used and none of the tanks were located in the critical area. Two of the systems replaced were to correct failing septic systems.

Point Sources

- No programmatic milestones are anticipated to enable ENR upgrades. ENR upgrades at major wastewater treatment plants are already planned, started, or completed.

Implementation Action Milestones

Urban Stormwater

- Prince George's County will assess and identify near-term retrofit project sites and start implementation. In addition, through 2017, DER will complete 1,422 acres of County impervious area and 186 acres of municipal (not including Bowie) impervious area retrofit per year, in accordance with the County's MS4 permit. Bowie will complete impervious area retrofit, in accordance with its anticipated MS4 permit. The retrofits include planning, design, and construction of BMPs.
  - **Progress:** The County is currently making progress towards its goals. Several BMPs are listed below, while others are included in the annual NPDES MS4 report. In addition, the County has initiated a Public/Private Partnership (P3) Program. Under this Program, the

County will enter into agreement with a private entity for the design, construction, and long term maintenance of BMPs which will retrofit 2000 acres by 2017.

- DER has several BMPs slated for implementation as part of the initial 2-year milestones. In its 2010 NPDES annual report, it identified 18 projects that are in planning, design, or construction and would treat more than 300 acres, including almost 100 impervious acres. Below is a summarized list. More complete descriptions are in the County's 2010 annual NPDES report to MDE.
    - Stream restoration or stabilization projects totaling 14,700 linear feet, treating more than 200 acres, distributed between several sites including Paint Branch Stream Restoration working with the U.S. Army Corps of Engineers (in construction); Northwest Branch Stream Restoration (in planning stage); and other County projects.
        - **Progress: (Paint Branch)** Construction is complete on Phase I consisting of 3,350 linear feet of stream restoration. Phase II consists of an additional 1,400 linear feet of stream restoration and this is in construction.
    - Working with the U.S. Army Corps of Engineers, 14 acres of wetland creation and 6 acres of riparian forest enhancement throughout five sites along Western Branch.
        - **Progress:** Phase I that of this project consists of fisherman site and areas upstream and downstream of Water Street is complete. The construction of Phase II (1,400 linear feet) project is currently on hold pending on the results of the USACE's flood study that is currently under way.
    - Two separate bioretention areas treating 3.7 acres (in planning) and 11.6 acres (in design).
        - **Progress:** The bioretention area treating 3.7 acre is in the design phase, which is 90 percent complete. The other bioretention area's design phase is complete and is in the bid phase.
    - One Stormceptor in design to treat 1.5 acres.
        - **Progress:** The project is complete.
- All DPW&T capital improvement projects that involve roadways and bridges by their nature include water quality amenities. Recent projects with water quality attributes are
    - Cherry Hill Road Phase II: This included improvements along Sellman Road. The project included installing new and expanded storm drain systems and a stormwater management facility. ***Complete***
    - Mount Oak/Woodmore/Church Intersection Reconstruction: This project added a storm drain system and stormwater management features including a pond and grassy swales to an area that previously had no defined management (rural section road). ***Complete***
    - MD 193 at Lottsford Road Intersection Improvement: Upgraded existing storm drains and added both a new stormwater facility and infiltration BMPs. ***Complete***
    - Fox Meadow/Archer/Lottsford Road Intersection Improvement: Added storm drains and water quality BMPs along Lottsford Road. ***Complete***

- Ritchie Marlboro Road Bridge: Improved water quality management by adding a storm drain system and BMPs. ***Complete***
- Rhode Island Avenue Intersection Improvement: Upgraded existing storm drains and added water quality management through infiltration. ***Complete***
- Allentown at Temple Hill Intersection Improvement: Upgraded existing storm drains and added water quality management through infiltration. ***Complete***
- Bock Road Bridge Replacement: Added storm drains and water quality through swales ***Complete***
- Brinkley Road Bridge Replacement: Added storm drains and water quality through swales. ***Complete***
- Baden Naylor Road: Small wet pool sand filter and swale. ***Construction Phase***
- Brandywine and Surratt's Road: 500 foot bio-swale, road-side shallow ditch. ***Design Complete/Under Construction***
- Oxon Hill Road: water quality wet pond, bioretention swale system in the median. ***Under Construction***
- Sunnyside Bridge Replacement: Bridge replacement project to entail water quality stream/road-side improvements. ***65% Design***
- DPW&T Road and Bridge CIP Project Impact and Mitigation Activities
  - Projects that involve impacts to existing wetlands or stream systems require mitigation. Typically, wetland impacts require mitigation through wetland creation. Where stream impacts are involved, stream restoration projects suffice for mitigation of impacts.
  - OEPM has implemented a feasibility study to identify mitigation opportunities. During FY 2014, the feasibility study was completed. In FY 2014 and 2015, additional funding to continue a search for opportunities and use a land use model to identify wetland creation opportunities through GIS modeling and analytics.
  - OEPM embarked on finding and establishing a wetland banking project that could be used for WIP credits over and above project impact mitigation.

Septics

- Using BRF funds Prince George's County plans to continue to replace septic tanks with aerobic nutrient reduction units when remodeling failing septic systems in the critical area depending on adequate funding through the BRF.
  - **Progress:** Four septic tanks were replaced with advanced BAT units throughout Prince George's County. Bay Restoration Funds were not used and none of the tanks were located in the critical area. Two of the systems replaced were to correct failing septic systems.

- The number of septic system upgrades in the 2012–2013 milestone period will be dependent on the Governor's initiative but it is anticipated that four septic systems will be retrofitted with these advanced aerobic units within the critical area during this time period.
  - **Progress:** See progress above.

Point Sources

The major wastewater treatment plants will continue to upgrade to enhanced nutrient removal (ENR) technology as required in their permits. The table below summarizes the wastewater treatment plants and the 2012–2013 milestones. No anticipated actions or milestones exist for the remaining point sources.

NPDES	Facility name	Major/minor	Action/status/updates	2012–2013 Milestones
MD0022781	Marlboro Meadows WWTP	Major	Flow will be transferred to Western Branch. Construction completed in mid-2012	Start construction June 2011. Substantially complete by June 2014; Permit limits end January 2015
MD0021725	Parkway WWTP	Major	Construction of the ENR completed August 2013	Substantially complete by July 2013; New permit limits effective January 2014
MD0021539	Piscataway WWTP	Major	Complete construction associated with upgrade to ENR	September 2012; New permit limits effective January 2013
MD0021741	Western Branch WWTP	Major	Construction associated with upgrade to ENR underway. Construction through 2016.	Construction ongoing through 2012 and 2013
DC0021199	Blue Plains Advanced WWTP	Major	Construction associated with upgrade to ENR	Construction ongoing through 2012 and 2013. Comply with total nitrogen effluent limits in January 2015
MD0021628	Bowie WWTP	Major	ENR completed	None
MD0021865	Mattawoman WWTP	Major	ENR completed	None
MD0052680	Edgemeade WWTP	Minor		None