

CITY OF BOWIE  
STATE OF THE ENVIRONMENT REPORT  
FOR  
FISCAL YEAR 2012

(JULY 1, 2011 TO JUNE 30, 2012)

October 2012

Prepared by the Department of Planning  
and Economic Development



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## **I. Introduction**

The *2012 City of Bowie State of the Environment Report* is a summary of the City's environmental actions and initiatives undertaken during Fiscal Year 2012 (July 1, 2011 through June 30, 2012). The report tracks the performance measurements for environmental programs and activities identified in the City's Environmental Infrastructure Action Strategy Plan (EI Plan).

This report is organized into three sections. The first provides a list of accomplishments achieved during FY 2012. The second section presents specific progress made on objectives from the EI Plan. The final section of the report identifies some key findings, including some observations of the strengths, weaknesses and challenges for the City's environmental programs, as well as an overall conclusion about the City's environment.

It is important to note the existence of the City's Energy Efficiency and Conservation Strategy (EECS), developed under a grant from the US Department of Energy. The EECS is one of a series of plans, policies, and programs the City has undertaken since 2005 addressing the environment, climate change and sustainability. The EECS lists 34 strategies to manage energy use, promote energy efficiency, reduce greenhouse gas emissions, increase the use of renewable energy, and reduce material consumption. Because all of the elements identified in the City Council's Climate Change Resolution (R-47-09) are covered by the EECS, reporting associated with that document will be used to track progress of the Climate Change Resolution.

## **II. Accomplishments**

- The City Council launched a Green Team comprised of residents as part of the Sustainable Maryland Certified program. Council subsequently appointed a Green Team Executive Committee as an official City committee on June 4, 2012.
- An application for certification under the University of Maryland Environmental Finance Center's Sustainable Maryland Certified Program was drafted.
- A Maryland "Sustainable Communities" application was prepared and filed with the Maryland Department of Housing and Community Development
- A draft Request for Proposals was prepared for a stormwater Best Management Practices inventory project.
- A Request for Proposals was issued for an Invasive Species Management Study for 55 acres of City-owned afforested sites plus Whitemarsh and Tanglewood Parks.
- A Community Greenhouse Gas emissions analysis was prepared and circulated for comment. This analysis will be useful in establishing City-wide benchmarks pertaining to greenhouse gas emissions and will help the City in formulating a campaign to better communicate to City residents strategies by which to reduce energy consumption.

- The City Council adopted a revised Green Building Policy for City initiated construction projects.
- The City Council adopted an Energy Star Policy for City purchases.
- The City Council adopted a policy to replace gasoline engine vehicles with hybrid vehicles whenever practical and financially feasible.
- The City purchased additional hybrid vehicles for the City Hall fleet.
- A total of 307 volunteers cleaned 16 stream segments (8 each in October 2011 and April 2012), removing a total of 2,175 pounds of trash and 1,925 pounds of recyclables.
- As of June 30 2012, 185 rain barrels have been registered with the City, most of which were purchased through the Bowie Lions Club.
- City staff continued meeting with Prince George’s County and other agencies on the Phase II Watershed Implementation Plan (WIP II) to meet required nutrient and sediment reductions of the Chesapeake Bay TMDL.
- The City Council adopted WIP II milestones, as required by the Maryland Department of the Environment.
- City staff wrote an environmentally-themed article for each edition of the City’s newsletter, the *Bowie Spotlight*.
- Several drainage improvement projects were completed by the Department of Public Works, including: Belair Meadows, Holiday Lane, Race Track Road channel, Overbrook Lane and Grenfell Loop.
- The City’s Watershed Manager worked with an Eagle Scout candidate to install 125 additional storm drain markers that say “Do Not Dump, Drains to Waterway,” which completed all storm drains in the Pointer Ridge section. Staff will continue working with Scouts and other volunteers to finish marking all storm drains in the Middle Collington subwatershed and then move into other subwatersheds.
- The City’s Watershed Manager worked with a Girl Scout on her Gold Award project – building a rain garden at Kenilworth Elementary and holding two public workshops on the subject for residents.
- The City’s Watershed Manager gave presentations at Heather Hills and Rockledge elementary schools about recycling and stream cleanups.
- The City’s Planning Director addressed the Rockledge Elementary School Faculty Green Team regarding sustainability and the City’s Green Bowie program.
- The City’s internal workgroup, comprised of staff from departments across the City to implement the recommendations from the Energy Efficiency and Conservation Strategy, began functioning as the “Municipal Green Team.”
- The City held its annual Arbor Day celebration in April 2012 at Acorn Hill Park, which was marked by a tree planting in honor of the holiday.

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- The City planted 104 trees along City-owned streets and 17 trees within parks and on other City property. A breakdown of park trees planted is in Section 3.
- The Environmental Advisory Committee recommended a new tree canopy goal to the City Council. (On July 9, 2012, Council passed Resolution R-56-12, adopting a Tree Canopy Goal of 45% for the City)
- The City was designated as a Tree City USA community for the 20<sup>th</sup> year in a row.
- A total of 42.5 acres on five City-owned sites were afforested as part of the MD State Highway Administration's Intercounty Connector mitigation planting in October 2011.
- The City and the Bowie Lions Club sponsored a Green Expo in April 2012 at the Kenhill Center.
- The City issued 150 rebates for mulching lawn mowers. In FY 2012, the program was expanded to include electric and push-reel mowers. Rebates were given for 3 push-reel mowers, 4 electric mowers and 143 gas mowers.
- The City's Environmental Advisory Committee again attended a multi-jurisdictional meeting of environmental advising groups, including College Park, Gaithersburg, Greenbelt, Hyattsville and Rockville.
- The Environmental Advisory Committee sponsored informational displays at the International Festival and Bowiefest to promote environmental awareness.
- The new 79,950 square foot City Hall and Police Department building received a LEED® Gold rating from the U.S. Green Building Council.
- The number of properties designated as certified Backyard Wildlife Habitats by the National Wildlife Federation in the City increased from 91 to 102.
- The Bowie Gardens4Wildlife group sponsored a habitat tour of National Wildlife Federation certified properties in the City.
- The Planning Department held another rain barrel workshop in conjunction with the Bowie Lions Club at City Hall with about 25 residents in attendance.
- The Lions Club International completed a professional public relations video production regarding environmental initiatives in Bowie, specifically the rain barrel program.
- A new 8.8 kWh photovoltaic array was installed at the Harmel House and construction of a new 6.9 kWh photovoltaic array is underway at the Parks and Grounds facility.
- The City issued an RFP for a facilities management consulting services.
- A CIP page was approved in the FY 2013 Budget to analyze City facilities for photovoltaic capabilities and then to fund identified installations at \$50,000 per year.
- As of September 30, 2012, 65-gallon rolling recycle carts were distributed to all City residences.



### ***Environmental Restoration, Preservation and Conservation***

- **Objective: Complete Land Preservation Plan by December 31, 2009 (Action Plan 8).**

Progress --The Plan was deferred due to a lack of funding in the Approved FY 2010 City Budget. City staff completed a study of vacant lands that identified 164 acres of privately-owned developable land and 63 acres of undevelopable land. Gaps in the City's Green Infrastructure network were included in the official Program Open Space Plan submitted to the MD Department of Natural Resources. The Prince George's County Council approved a Priority Preservation Area (PPA) for Bowie (see PPA Functional Master Plan for details).

- **Objective: Decrease areas mowed Citywide by at least 10% by 2012 (Action Plan 12).**

Progress-- Turf mowing actually increased from the 202 acres in FY 2011 to 232 acres in FY 2012. This is due to maintenance agreements under which the City started to mow turf located in the city but owned by both Prince George's County and the MD State Highway Administration. An analysis by the Community Services Department has concluded that there are no other areas that can be given a "no-mow" designation. However, due to the implementation of afforestation projects at Glen Allen and Pope's Creek Park in Fall, 2011, the mowed area (232 acres) decreased by almost three (3) acres, or 1.3%.

## **2. EI Plan Performance Indicators for Green Infrastructure Network**

### ***Environmental Restoration, Preservation and Conservation***

- **Objective: Increase the number of registered lots with certified backyard habitats to a minimum of 150 lots by 2012 (Action Plan 3).**

Progress—There are currently 102 certified habitats in the City including one place of worship, five schools, and 96 homes.

- **Objective: Convert at least seven (7) acres of publicly-owned turf to native landscaping by 2010 (Action Plan 12).**

Progress—Approximately 2,500 square feet of turf was converted in Heather Hills in FY 2012. The total area of turf converted since 2007 is 16,000 square feet (or 0.37 acres). The City continues to look for opportunities to convert public turf areas to landscaping.

- **Objective: Increase the number of acres of protected land (Action Plan 8).**

Progress—In FY 2011, the City acquired one acre of land adjacent to the Devonshire subdivision and 10 acres of a 21-acre tract known as the Mills Property at the northwest corner of US 301 and Mitchellville Road. It had been approved for development of 14 single-family homes, which will not be built. No land was acquired by the City in FY 2012.

### *Alternative Means of Stormwater Management*

- **Objective: Encourage three (3) stormwater management retrofits by 2012 (Action Plan 7).**

Progress--There were no developer-sponsored stormwater retrofits installed in FY 2012, however, as development and redevelopment projects come in for review under the new Environmental Site Design regulations, City staff works with developers to install low-impact development practices to the maximum extent practicable. Additionally, several stormwater management studies are funded in FY 2013 that will identify potential stormwater management retrofits where treatment is not provided or is insufficient in order to meet the requirements under the Chesapeake Bay TMDL.

### **3. EI Plan Performance Indicators for Waste Management**

- **Objective: Decrease tonnage of material landfilled from 1.3 tons-per-household to 1 ton-per-household by 2012 (Action Plan 2).**

Progress--Landfill tonnage decreased from 1.42 tons-per-household (FY 2007)<sup>1</sup> to 0.88 tons-per-household in FY 2012. This objective has been achieved.

- **Objective: Increase tonnage of recyclables from FY 2007's percentage (24%) to 50% by 2012 (Action Plan 2).** (NOTE: The passage of the City Council's Climate Change Resolution established a more limited benchmark of 2% per year over the next five years, which results in a new goal of 35% by 2014.)

Progress--The recycling rate for FY 2012 is 38%, up from 31% in FY 2011. The revised benchmark set in the Climate Change Resolution has been met. This increase is likely at least partially due to the recent completion of delivery of 65-gallon rolling recycle bins to all city residents. This number is expected to continue increasing over the coming years as residents continue to use the larger recycle bin.

- **Objective: Increase tonnage of yard waste recycling (Action Plan 2).**

Progress – In FY 2012, 3,062 tons of yard waste were recycled. This is a decrease of 412 tons from 2007 level.

- **Objective: Increase number of mulching mower rebates from 30 to 60 by 2012 (Action Plan 2).**

Progress-- The City issued 150 rebates for mulching lawn mowers. In FY 2012, the program was expanded to include electric and push-reel mowers. In FY 2012, rebates were given for 3 push-reel mowers, 4 electric mowers and 143 gas mowers. This objective has been achieved, and rebates will continue to be offered.

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<sup>1</sup> This number was revised from the initial number of 1.3 tons shown in the EI Plan based on internal data adjustments.



#### 4. EI Plan Performance Indicators for Surface Water Protection

- **Objective: Establish a minimum of five (5) active stream teams by 2012 (Action Plan 1).**

Progress—Eight stream teams worked during FY 2012. The details of each cleanup are presented in the table below. This objective has been met.

|                       | <b>Fall<br/>(October 15, 2011)</b> | <b>Spring<br/>(April 21, 2012)</b> |
|-----------------------|------------------------------------|------------------------------------|
| Number of volunteers  | 182                                | 125                                |
| Number of sites       | 8                                  | 8                                  |
| Trash collected       | 1,150 lbs                          | 900 lbs                            |
| Recyclables collected | 750 lbs                            | 1,225 lbs                          |

- **Objective: Clean a minimum of 10 miles of stream annually (Action Plan 1).**  
Progress -- Through FY 2010, this objective had been met. Since then, stream team leaders have been hard to find, and the lack of consistent staffing at sites has made tracking the miles cleaned difficult. Staff will be conducting a comprehensive review of the stream team program during FY 2013 to determine if twice-annual cleanups continue to be necessary, given the downward trend in both volunteers and debris over the last few cleanups.
- **Install 150 rain barrels by 2012 (Action Plan 4).**  
Progress--As of May 2011, 185 rain barrels have been registered with the City, although many more have been sold by the Bowie Lions Club. These barrels collectively store 10,475 gallons of rooftop runoff. There continues to be a trend of finding more rain barrels on Levitt homes than other areas of the city.

#### IV. Findings

- A 28% increase in recycling was recorded in neighborhoods participating in the 65-gallon rolling recycling cart pilot project.
- In FY 2011, the City met its objective of decreasing tonnage of material landfilled to one ton per household by 2012. In FY 2012, this per-household amount decreased to 0.88 tons.
- Only 164 acres of privately-owned, developable land remain in the City.
- The City continued to exceed its mower rebate program objective.

- The City has met and continues to exceed its objective of cleaning 10 miles of stream annually.
- The City has not been able to convert any substantial turf areas to native landscaping and did not meet the objective of converting seven acres by 2010.
- The City has two-thirds of the necessary certified habitats to meet its backyard habitat objective of 150 lots by 2012.
- The City has met and exceeded its goal of afforesting 20 acres of City property by 2012.
- The City's Stream Team cleanups have been very successful. In the 9 events held between the program's beginning in April 2008 and April 2012, 68 streams have been cleaned by 1,900 volunteers who have removed 14,470 pounds of trash, 12,775 pounds of recycling and about 10 tons of bulk trash and scrap metal.
- The rain barrel program has been very popular, and the objective of 150 barrels installed by 2012 has been met and exceeded.
- There has been no progress toward achieving at least three developer-initiated stormwater management retrofits by 2012. As redevelopment projects come through for approval, they must comply with new state stormwater regulations requiring stormwater retrofits.
- While State funding has been eliminated in past fiscal years, the City's Program Open Space allocation for land acquisition from previous years is substantial and remains a viable funding source for open space preservation opportunities.
- In FY 2012, the percentage of solid waste stream recycled was 38%, compared to only 25% in FY 2005. The number of tons of white metal collected averaged 137 tons per year over the past five (5) fiscal years.
- The amount of gasoline and diesel fuel used in City vehicles has grown over 18% since FY 2008, from 212,000 gallons in FY 2008 to 249,900 gallons in FY 2012. The amount of gasoline used in FY 2008 was 48% of total combined vehicle fuel usage, while diesel fuel accounted for 52%. By FY 2012, the vehicle fleet used about 57% gasoline and 43% diesel fuel. In FY 2009, gasoline surpassed diesel as the most used vehicle fuel, beginning a trend that has become more accentuated over time. This corresponds with an increase in police vehicles from 36 in FY 2008 to 59 in FY 2009.
- The number of City vehicles has grown by more than 11% since FY 2008, while the amount of vehicle miles driven has only grown by about 4%. This, too, corresponds with an increase in police vehicles from 36 in FY 2008 to 59 in FY 2009.
- The City maintains 396 miles of storm sewers, 104 acres of basins, outfalls and drainage areas, including 73 ponds and basins and 40 outfalls/drainage areas. The City added two (2) stormwater basins and three (3) acres to its inventory during FY 2012. The City cleaned over 5,000 linear feet of open channels, down from 5,800 linear feet recorded for FY 2011.
- The Community Services Department saw the number of acres of grass maintained rise almost 15% from an annual average of 202 acres to 232 acres in FY 2012 due to the City taking over mowing along some County and State roads. The amount of City-owned turf

mowed actually decreased by almost three (3) acres, or 1.3%, due to afforestation at Glen Allen and Pope's Creek Park.

- The number of animals-running-at-large calls has leveled off at around 440 while the number of wildlife complaints has decreased by about 27% since FY 2008 to 310 complaints in FY 2012.
- The number of City water system accounts averages about 7,700 residential customers and 222 commercial customers.
- The number of street trees actually planted in FY 2012 (104) was 48% less than in FY 2011 (200).
- The City's Annual Drinking Water Report for calendar year 2011 indicated no water quality concerns, but the report acknowledged that the City's water system is susceptible to build-up of naturally-occurring iron. The City has installed treatment to remove iron from the raw water, and the City increased the frequency of flushing of the water mains in order to reduce iron deposits in pipes. Consequently, there was a corresponding increase in the number of water quality complaints recorded in 2012 (80) versus prior years.
- The percentage of wastewater collection system cleaned peaked at 54.1% in FY 2009 but amounted to not even one-third of the system in FY 2012. The percentage dropped to an all time low of 29% in FY 2010 and has risen slightly in the last two fiscal years.
- The Public Works Department sweeps well over 1,800 curb miles of street annually. A total of 1,872 curb miles were swept in FY 2012.
- The amount of wastewater treatment sludge produced in FY 2012 (2,198 tons) is significantly less than the average of 3,002 tons produced since FY 2008, while the volume of wastewater treated, 715 gallons, was slightly less than the average of 723 gallons over the same time period. This can be attributed to the recent Enhanced Nutrient Removal upgrade.

## **V. Conclusion**

Assessment of the City's EI Plan objectives through the annual State of the Environment Report is one way to monitor the condition of the City's environment. As of FY 2012, most of the EI Plan's objectives have been met. The City's environmental programs and facilities remain in full compliance with all applicable laws and regulations. The information contained in this report demonstrates that the state of the City's environment is very good and, with continued implementation of the EI Plan, will continue to improve. Specific areas to be targeted in the future include: continuing the City's involvement in the TMDL process with the County and the State, pursuing stormwater retrofits across the city to meet upcoming stormwater permit requirements, work on an urban forest management plan, and further implementation of the Sustainable Maryland Certified and Energy Efficiency and Conservation Strategy plans.

## Appendix A: City Documented Measures

### Animal Control

The Animal Control division of the Department of Community Services is responsible for wildlife complaints and general animal control in the City. This includes capturing any reported wild animals and pets that are either 'running-at-large' or are not leashed in public.

|                                  | <i>CY08</i> | <i>CY09</i> | <i>CY10</i> | <i>CY11</i> | <i>CY12</i> |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|
| Number of running-at-large calls | 358         | 389         | 480         | 444         | 440         |
| Number of wildlife complaints    | 423         | 355         | 348         | 306         | 310         |

### Equipment Maintenance/Garage

Maintaining and repairing all City vehicles and equipment is the responsibility of the Equipment Maintenance and Garage division of the Department of Public Works.

|  | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|--|-------------|-------------|-------------|-------------|-------------|
| Number of vehicles in service            | 181         | 191         | 193         | 199         | 201         |
| Total number of vehicle miles driven     | 1,597,810   | 1,588,905   | 1,615,000   | 1,613,500   | 1,662,000   |
| Number of Police vehicles                | 36          | 48          | 50          | 56          | 59          |
| Gallons of gasoline used in all vehicles | 101,900     | 109,000     | 122,800     | 130,700     | 142,100     |
| Gallons of diesel used in all vehicles   | 109,300     | 105,600     | 112,900     | 108,100     | 107,800     |

### Solid Waste

The Solid Waste division of the Department of Public Works is responsible for the collection and disposal of the City's solid waste. This includes bulk trash pickup, glass, cans, newspaper, magazines, junk mail and yard waste pickup for recycling, twice weekly household refuse pickup, weekly pickup of special metals and tires, and processing of plastics.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Number of households served             | 19,231      | 19,320      | 20,734      | 20,745      | 20,776      |
| Total number of tons collected          | 33,896      | 31,696      | 29,865      | 29,627      | 29,300      |
| Number of tons land filled              | 25,583      | 23,080      | 21,016      | 20,559      | 18,300      |
| Number of tons recycled                 | 8,313       | 8,616       | 8,849       | 9,068       | 11,000      |
| Percent of solid waste stream recycled  | 24.53%      | 27.18%      | 29.63%      | 31%         | 38%         |
| Sales Revenues from Recyclables         | \$53,665    | \$48,343    | \$27,330    | \$41,211    | \$60,000    |
| Number of tons of white metal collected | 177         | 121         | 173         | 114         | 100         |

**Streets**

The responsibilities of the Streets division of the Department of Public Works include all street and sidewalk maintenance as well as street and traffic signs, posts, snow removal and ice control on approximately 187 miles of City streets.

|                                    | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Miles of street maintained         | 183         | 183.5       | 184.2       | 186.7       | 187.2       |
| Square Yards of Streets Resurfaced | 163,932     | 155,883     | 142,407     | 157,262     | 185,000     |
| Miles of street resurfaced         | 9.31        | 8.56        | 9.90        | 9.10        | 12.50       |
| Curb-miles of street swept         | 1,830       | 1,834       | 1,840       | 1,867       | 1,872       |
| Miles of sidewalks maintained      | 124         | 127         | 127.9       | 128.2       | 129.7       |
| Number of street lights maintained | 5,348       | 5,723       | 5,595       | 5,636       | 5,636       |

**Public Buildings and Grounds**

The Public Buildings and Grounds division of the Department of Community Services is responsible for the maintenance at all City owned buildings and facilities.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Square feet of buildings cleaned/maintained | 110,732     | 110,732     | 110,732     | 190,732     | 190,732     |

**Parks and Grounds**

The Parks and Grounds division of the Department of Community Services maintains all City ballfields, parks, bike trails, fences, play areas, play equipment and flower beds as well as all trees, shrubs, and lawns on City property and the fencing along Route 197.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Number of acres of grass maintained         | 202         | 202         | 202         | 232         | 232         |
| Average number of times mowed per year      | 24          | 32          | 32          | 32          | 38          |
| Acres of R.O.W. and Parkland maintained     | 72          | 72          | 72          | 72          | 102         |
| Acres of athletic field turf maintained     | 130         | 130         | 130         | 130         | 130         |
| Number of fields maintained                 | 78          | 78          | 65          | 65          | 65          |
| Number of fields irrigated                  | 26          | 26          | 26          | 26          | 26          |
| Number of fields lighted                    | 21          | 21          | 21          | 21          | 21          |
| Miles of trail maintained                   | 24          | 24          | 24          | 24          | 24          |
| Number of trees in right of way inventoried | 17,500      | 17,500      | 17,500      | 17,500      | 17,500      |
| Number of trees maintained (pruned)         | 3,500       | 3,500       | 2,500       | 2,500       | 3,500       |
| Number of trees planted in right of way     | 200         | 150         | 145         | 200         | 150         |
| Number of annuals/color planted             | 3,500       | 5,000       | 5,000       | 5,000       | 8,000       |

**Stormwater Management**

The Stormwater Management division of the Department of Community Services currently provides stormwater facility management to the City's stormwater system.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Miles of Storm Sewers   | 396         | 396         | 396         | 396         | 396         |
| Total acres of basins, outfalls and drainage areas maintained | 99          | 99          | 101         | 101         | 104         |
| Number of SWM ponds and basins maintained                     | 69          | 69          | 71          | 71          | 73          |
| Number of SWM outfalls and drainage areas maintained          | 40          | 40          | 40          | 40          | 40          |
| Open channels cleaned (in linear feet)                        | -           | -           | -           | 5,805       | 5,000       |

**Water**

The Water division of the Public Works Department is responsible for the production and purification of the water supply for the City which meets or exceeds all State and Federal health standards. The water is fluoridated for health purposes and the iron is removed by a filtration-flocculation aeration-sedimentation process. The cost of maintaining the water distribution system is included in this division.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Miles of pipeline                           | 90          | 90          | 90          | 90          | 90          |
| Millions of gallons treated/delivered       | 798         | 743         | 769         | 746         | 650         |
| Number of water/sewer customers-residential | 7,700       | 7,700       | 7,700       | 7,700       | 7,700       |
| Number of water/sewer customers-commercial  | 220         | 220         | 222         | 222         | 225         |
| Customer complaints about water quality     | 10          | 10          | 12          | 8           | 80          |

**Wastewater**

The Wastewater division of the Public Works Department is responsible for the collection and treatment of raw sewage. This sewage is treated and returned to the Patuxent River in full compliance with State and EPA permit standards. The cost of maintaining the sewer collection system is included in this division.

|   | <i>FY08</i> | <i>FY09</i> | <i>FY10</i> | <i>FY11</i> | <i>FY12</i> |
|---|-------------|-------------|-------------|-------------|-------------|
| Miles of collection mains in the system | 85          | 85          | 85          | 85          | 85          |
| Miles of collection system cleaned      | 31          | 46          | 25          | 30          | 27          |
| Million gallons of wastewater treated   | 708         | 721         | 761         | 700         | 715         |
| Tons of sludge produced                 | 3,028       | 3,155       | 3,025       | 2,800       | 2,298       |

**Appendix B: EI Plan Performance Measures Tracking**

| Goals                           | Objectives   | FY 2010  | FY 2011  | FY 2012  |
|---------------------------------|--|--|--|--|
| <b>Waste Management</b>         | <b>Recycling</b>   |  |  |  |
|                                 | Decrease the tonnage of material landfilled per household from the current 1.42 tons (FY07) to 1 ton by 2012 | 21,726<br>(or 1.12 tons/hh)  | 20,559<br>(0.99 tons/hh)   | 18,300<br>(0.88 tons/hh)   |
|                                 | Increase the tonnage of recyclables from FY 2007's 24% to 50% by 2012  | 9,173<br>(or 30%)  | 9,068  | 9,109  |
|                                 | Increase the tonnage of yard waste recycling by 10% of 2007 levels by 2012. (3474)                           | 3,301  | 3,617  | 4,277  |
|                                 | Increase the tonnage collected during special recycling events   | 10.65 tons   | no event held  | no event held  |
|                                 | Increase the # of rebates given for mulching mowers from 30 - 60 per year by 2012                            | 188  | 216  | 150  |
| <b>Surface Water Protection</b> | <b>Stream Team</b>   |  |  |  |
|                                 | Establish a minimum of 5 active stream teams in Bowie by 2012.   | 9 in Oct 2009; 6 in Apr 2010   | 4 in Oct 2010; 8 in April 2011   | 8 in Oct 2010; 8 in April 2011   |
|                                 | (additional indicator) Amount of debris removed from streams   | <b>Oct 2009:</b> 114 vols, 1925 lbs trash, 1125 lbs recycling. <b>Apr 2010:</b> 242 vols, 3250 lbs trash, 3000 lbs recycling, 4700 lbs scrap metal | <b>Oct 2010:</b> 177 vols, 1025 lbs trash, 975 lbs recycling. <b>Apr 2011:</b> 235 vols, 1650 lbs trash, 1325lbs recycling | <b>Oct 2011:</b> 182 vols, 1,025 lbs trash, 1,175 lbs recycling. <b>Apr 2012:</b> 125 vols, 1,150 lbs trash, 750 lbs recycling |
|                                 | Clean a minimum of 10 miles of stream annually   | 12.8   | unsure   | unsure   |

| Goals                           | Objectives   | FY 2010   | FY 2011   | FY 2012   |
|---------------------------------|--|---|---|---|
| <b>Surface Water Protection</b> | <b>Rain Barrels</b>  |   |   |   |
|                                 | Install 150 rain barrels by 2012. (each number presented is the total number in use at the end of the fiscal year)               | 97  | 143   | 184   |
|                                 | <b>Alternative Means of Stormwater Management</b>  |   |   |   |
|                                 | Implement three (3) stormwater management retrofits by 2012.   | ✓   | ✓   | ✓   |
|                                 | Encourage installation of five (5) green roofs by 2012.  | ✓   | ✓   | ✓   |
|                                 | <b>NPDES</b>   |   |   |   |
|                                 | Investigate WRAS pipe outfall sites, unusual conditions, & exposed pipes in two subwatersheds and mitigate deficiencies by 2012. | Initial investigations are underway in Middle Collington Branch   | This work has begun but is on hiatus for the summer due to vegetation growth  | All WRAS sites have been visited. Post-field data review has not been completed                 |
|                                 | Begin regular water quality sampling at specific locations in one subwatershed by 2010.  | Identification of sites is underway for taking a single round of grab samples to establish baseline conditions          | Some grab samples were collected at three sites in Middle Collington Branch. No water quality concerns were discovered. | Regular water quality monitoring does not appear necessary at this time                         |
|                                 | By the year 2012, install at least 1 continuous stream monitor in a subwatershed by 2012.  | WQ monitoring strategy changed per advice from MD DNR. Continuous stream gage installation is not advised at this time. |   |   |
|                                 | Have one team of volunteers per subwatershed trained in outfall screening by 2012  | 0   | Interns have been conducting these screenings for now   | The stream team program will be reviewed, and this objective will be assessed at the same time. |



State of the Environment Report (2012)

| Goals                          | Objectives  | FY 2010   | FY 2011   | FY 2012  |
|--------------------------------|---|---|---|--|
|                                | <b>WRAS</b>   |   |   |  |
|                                | By 2012, make one (1) stream habitable by a fish population.    | Under investigation. MBSS data indicates that multiple streams are already inhabited by fish. | Awaiting updated MBSS data to determine if fish are present   |  |
|                                | Begin testing family-level benthic index of biotic integrity    | Some initial investigations are underway in Middle Collington Branch                          | B-IBI scores are calculated by MD DNR. Awaiting updated data  |  |
|                                | Complete investigations of 35 inadequate buffer sites           |   | An initial desktop investigation has been conducted. Field verification to follow.  | All WRAS follow-up investigations were completed in FY 2012.                     |
|                                | Complete investigations of 21 channel alteration sites          |   | This work has begun but is on hiatus for the summer due to vegetation growth  |  |
|                                | Complete investigations of 78 fish barriers                     |   | Fish barriers that have been identified are not easily fixed (e.g., railroad track, culvert). Field review will continue this fall. |  |
|                                | Establish new baseline of stream bank length with eroding banks | -   | This work has begun but is on hold for the summer due to vegetation growth  |  |
| <b>Urban Forest Management</b> | <b>Urban Forest</b>   |   |   |  |
|                                | Strive for 40% canopy coverage in 20 years.                     | 46%   | objective met   | EAC recommended a 45% canopy goal to Council, which was approved on July 9, 2012 |
|                                | <b>Street Trees</b>   |   |   |  |
|                                | Plant a minimum of 150 street trees annually through 2012.      | 170   | 149   | 104  |

| Goals  | Objectives   | FY 2010  | FY 2011      | FY 2012 |
|--|--|--|--------------|---------|
|  | <b>Forest Mitigation Sites</b>   |  |              |         |
|  | Afforest 20 acres by 2012* (each number presented is the total number as of the end of that fiscal year)   | 8  | 8            | 50.5    |
| <b>Environmental Restoration, Preservation and Conservation</b>  | <b>Land Preservation</b>   |  |              |         |
|  | Complete a Land Preservation Plan by 12/31/09.   | This objective is indefinitely on hold due to budget constraints |              |         |
|  | <b>Backyard Habitat</b>  |  |              |         |
|  | Increase the amount and stewardship of wildlife habitat on private property - minimum of 100 lots registered by 2012. (each number presented is the total number in place at the end of the fiscal year) | 83   | 91           | 102     |
|  | <b>Turf Reduction</b>  |  |              |         |
|  | Decrease the number of acres mowed Citywide by at least 10% by 2012. (total mowed area in 2007 = 202 ac)   | 202  | 202          | 232     |
| Convert 7 acres of publicly-owned turf to native landscaping (each number presented is the total number as of the end of that fiscal year) | 10,500 sq ft   | 13,500 sq ft   | 16,000 sq ft |         |
| *The year planted was mis-reported in the FY 2011 report. These numbers are correct.   |  |  |              |         |