



District of Columbia's Historic BMP database clean-up effort

Presentation to the CBPO Urban Stormwater Workgroup

February 16, 2016

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Starting Point?

CBPO Guidance

HISTORICAL BMP AND WASTEWATER DATA CLEANUP

February 4, 2015

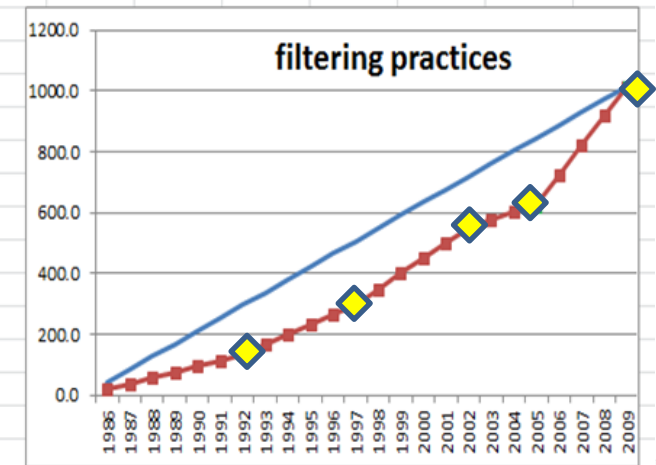
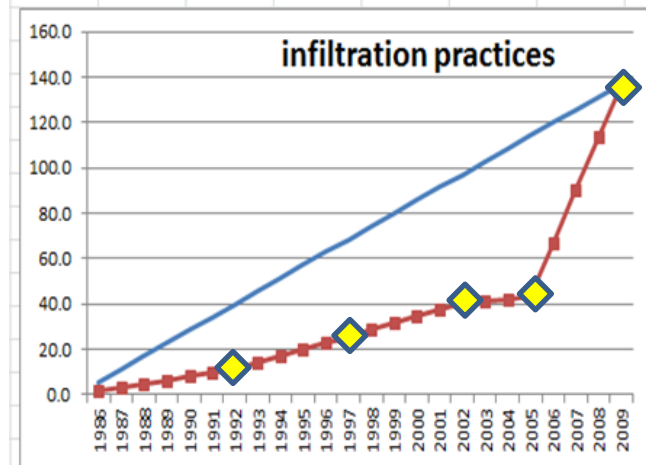
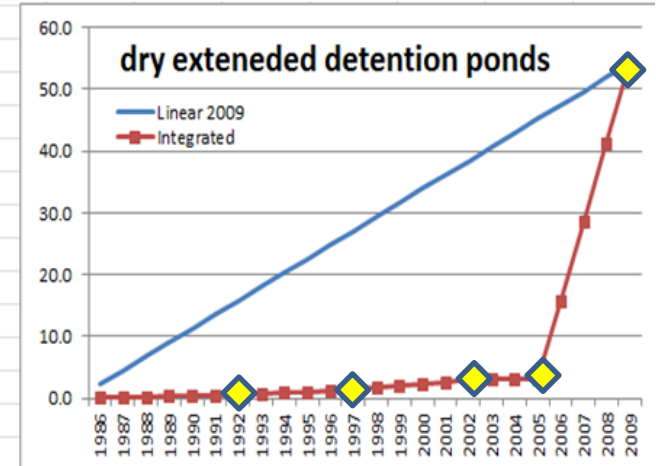
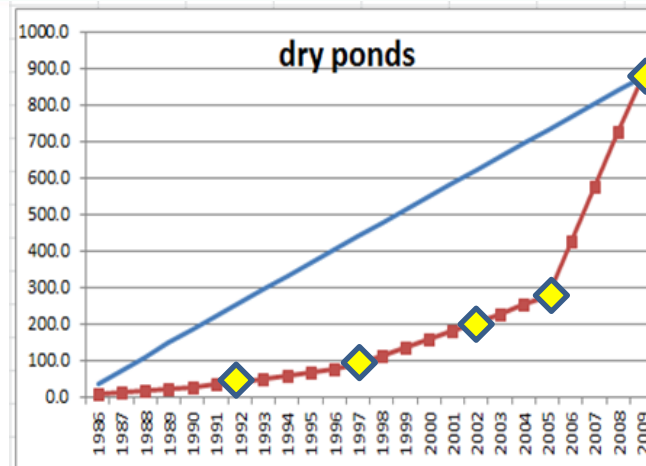
WHAT? As part of the Chesapeake Bay TMDL Midpoint Assessment, the seven Chesapeake Bay jurisdictions are expected to “clean up” the information on best management practice (BMP) information and wastewater treatment plant discharges that they have submitted to the Chesapeake Bay Program Office (CBPO).

Methods to Estimate Cumulative BMP Implementation

- **Method 1) Constant Yearly Implementation**
- Jurisdiction submits best estimate of ALL cumulative BMPs in 2000 reflecting TOTAL amount of BMPs on the ground.
- Jurisdiction assumes 0 BMPs on the ground in 1985.
- Jurisdiction assumes constant yearly implementation from 1986 through 2000.
 - Example: Total Forest Buffers in 2000 = 10,000 acres
 - Annual implementation for 1986 through 2000 = 667 acres
- **Method 2) Linearly Increasing Implementation**

Initial Review

- *Data Gaps*
- *Assumptions*
- *Interpolation*



Appendix F
Technical Memorandum

BMPs and BMP Implementation

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Consolidated TMDL Implementation Plan – Comprehensive Baseline Analysis
May 08, 2015

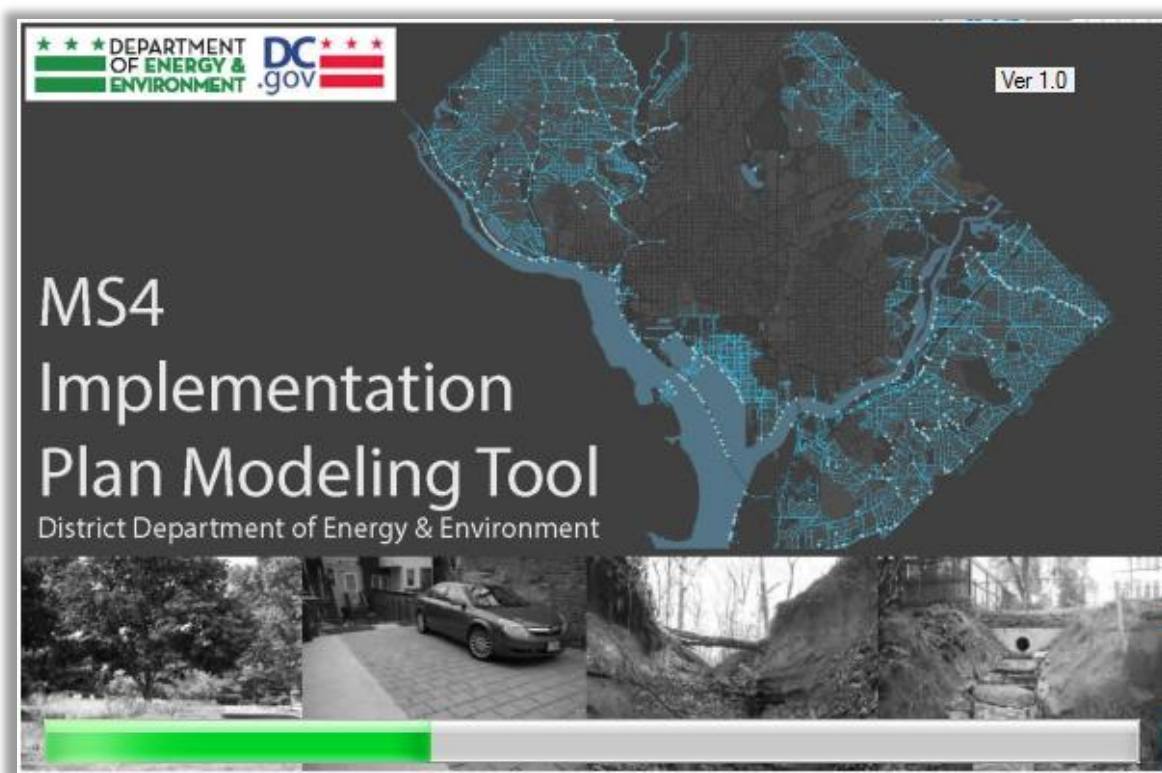
Consolidated TMDL Implementation Plan

(http://dcstormwaterplan.org/wp-content/uploads/Final_Comp_Baseline_Analysis_2015-with-Appendices.pdf)

BMP Inventory

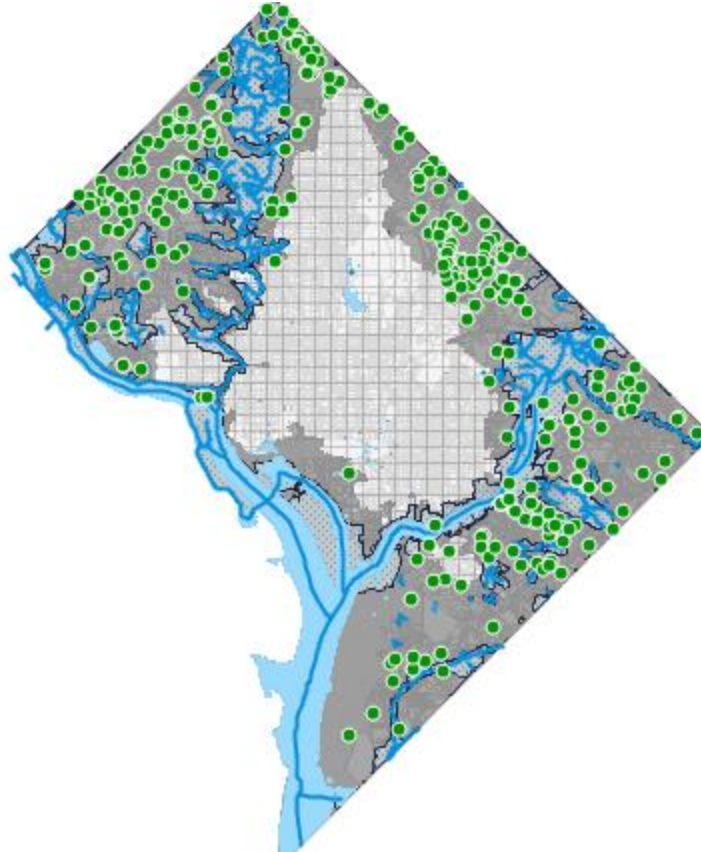
- **RiverSmart Homes spreadsheets (RSH):** The dataset includes 3,183 records from 2009-2013.
- **RiverSmart Communities spreadsheet (RSC):** The dataset includes 21 records from 2012-2013.
- **DDOE BMP Tracking Database – General table (TDGN):** This dataset includes 1,589 records from 2000-2007.
- **DDOE BMP Tracking Database – Construction Details table (TDCD):** This dataset represents BMPs from plans that were reviewed and approved by DDOE and includes 2,809 records from 2000-2013.
- **DDOE BMP Tracking Database – Stormwater Facility table (TDSW):** This dataset represents BMPs that were field verified to be constructed and includes 666 records from an unknown period of time.
- **Green Roofs spreadsheet (GR):** This DDOE dataset exists as a single spreadsheet and includes 235 green roof records through 2014.
- **GSA BMP spreadsheet (GSA):** This dataset includes all BMPs on Federal property operated by the GSA. It includes 62 BMP records that were last updated in 2013.
- **Federal partners spreadsheet (FED):** It includes 78 BMP records from an unknown period of time.
- **DC Water Clean Rivers Project (DCCR):** This includes 23 records from an unknown period of time.

Implementation Plan Modeling Tool (IPMT)



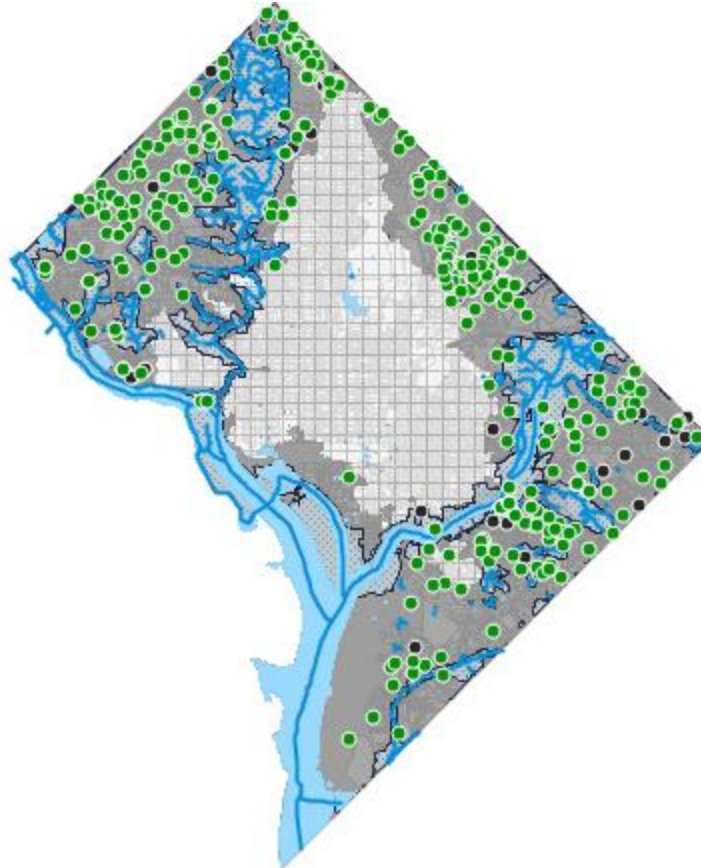
BMP Inventory

- Bioretention



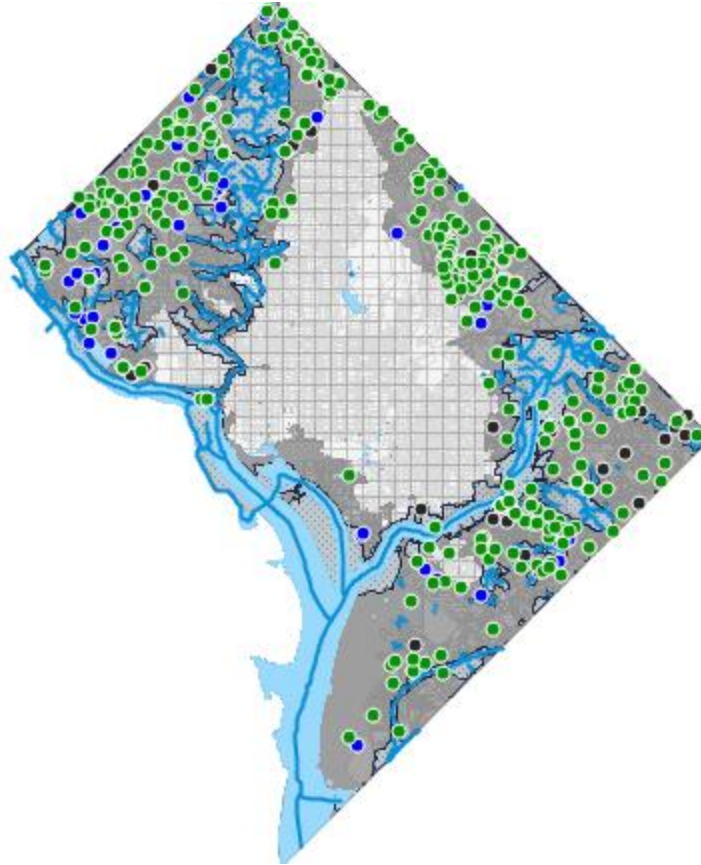
BMP Inventory

- **Bioretention**
- **Permeable Pavement**



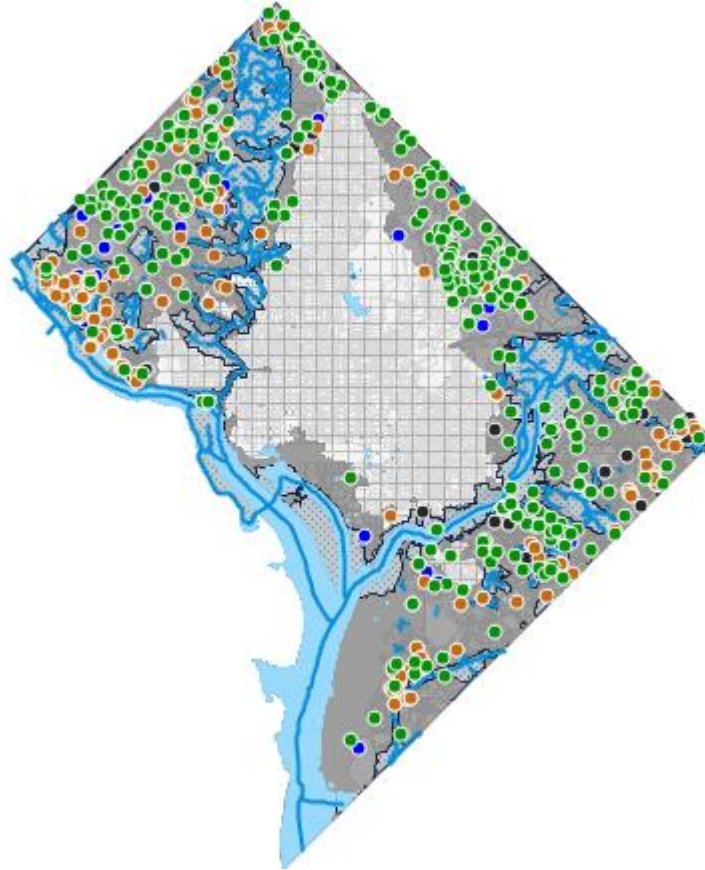
BMP Inventory

- **Bioretention**
- **Permeable Pavement**
- **Bioswale**



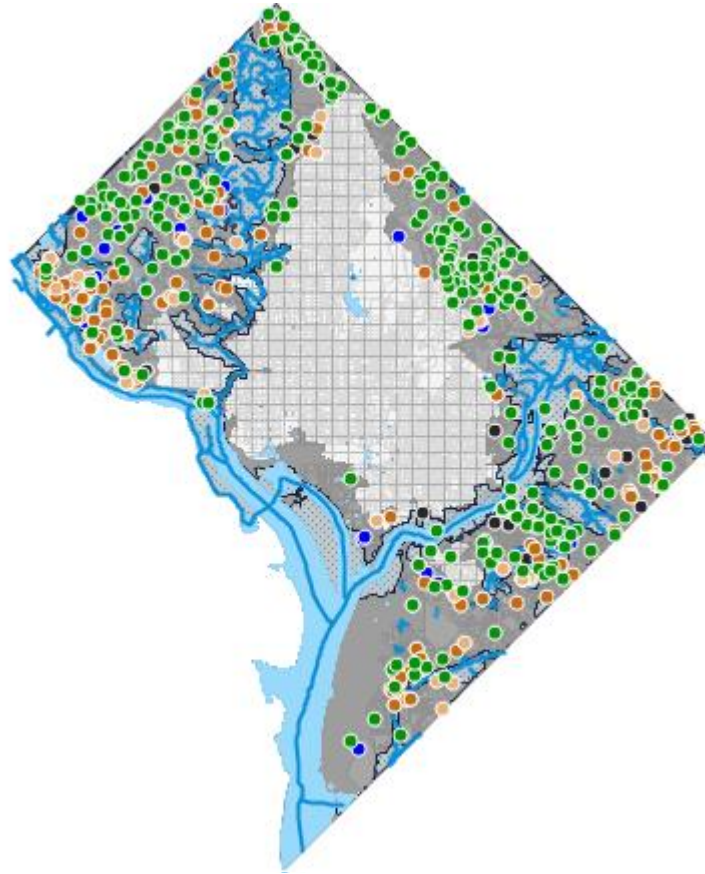
BMP Inventory

- **Bioretention**
- **Permeable Pavement**
- **Bioswale**
- **Infiltration**



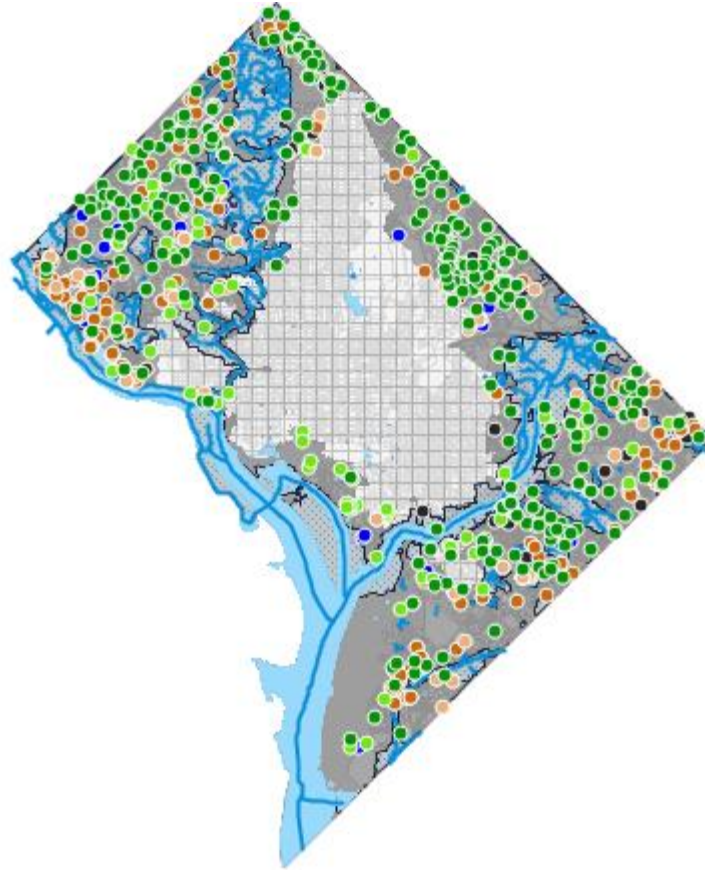
BMP Inventory

- **Bioretention**
- **Permeable Pavement**
- **Bioswale**
- **Infiltration**
- **Filtration Systems**



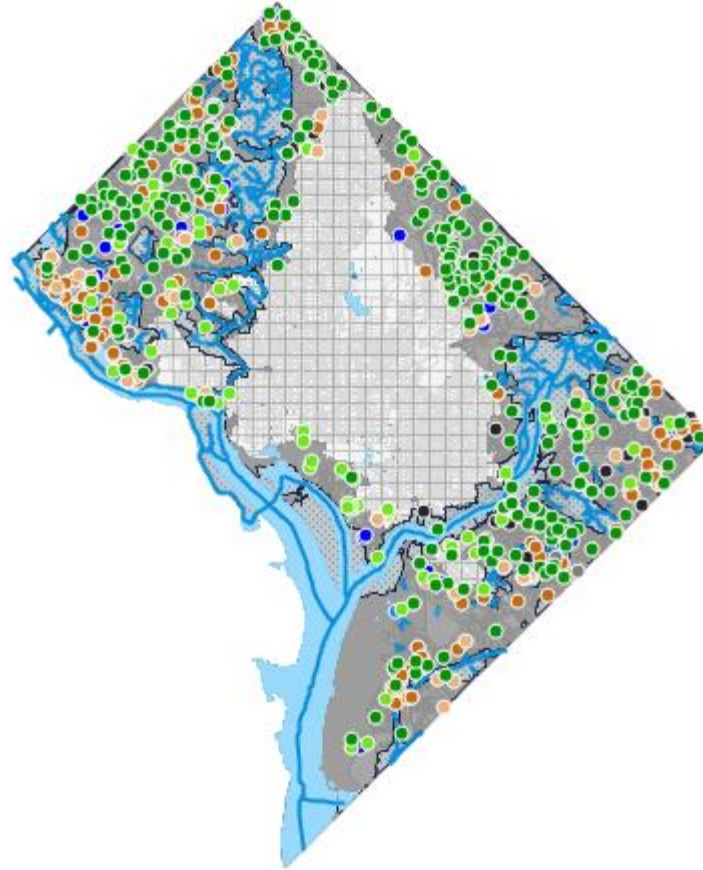
BMP Inventory

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- **Permeable Pavement**
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- **Infiltration**
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- **Green Roofs**



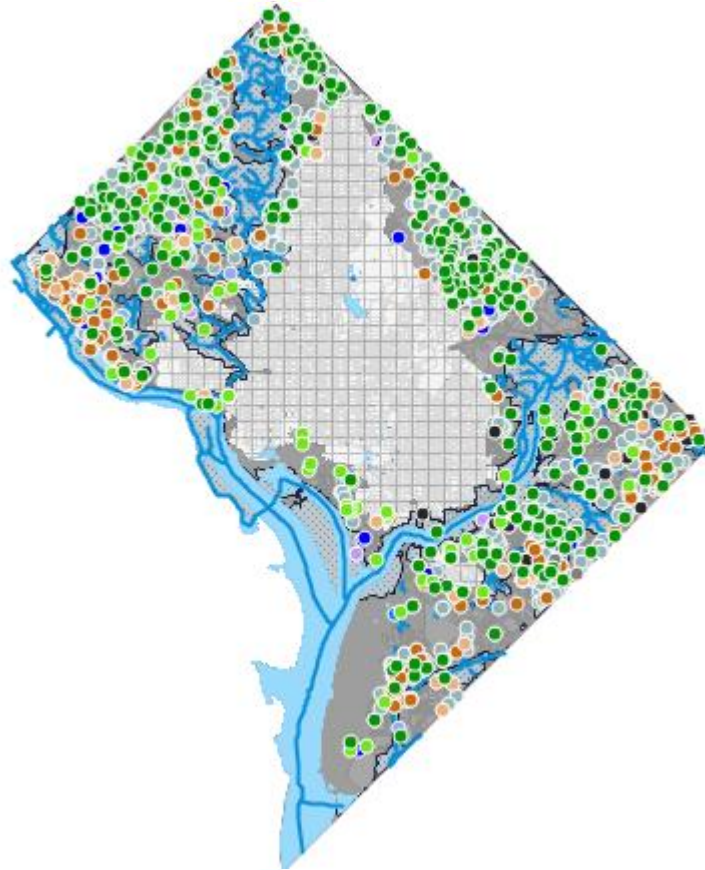
BMP Inventory

- **Bioretention**
- **Permeable Pavement**
- **Bioswale**
- **Infiltration**
- **Filtration Systems**
- **Green Roofs**
- **Impervious Surface Removal**
- **Impervious Surface Disconnection**
- **Dry Ponds**



BMP Inventory

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- **Rainwater Harvesting Systems**
- **Storage practices**
- **Rain Barrels**

BMP Inventory

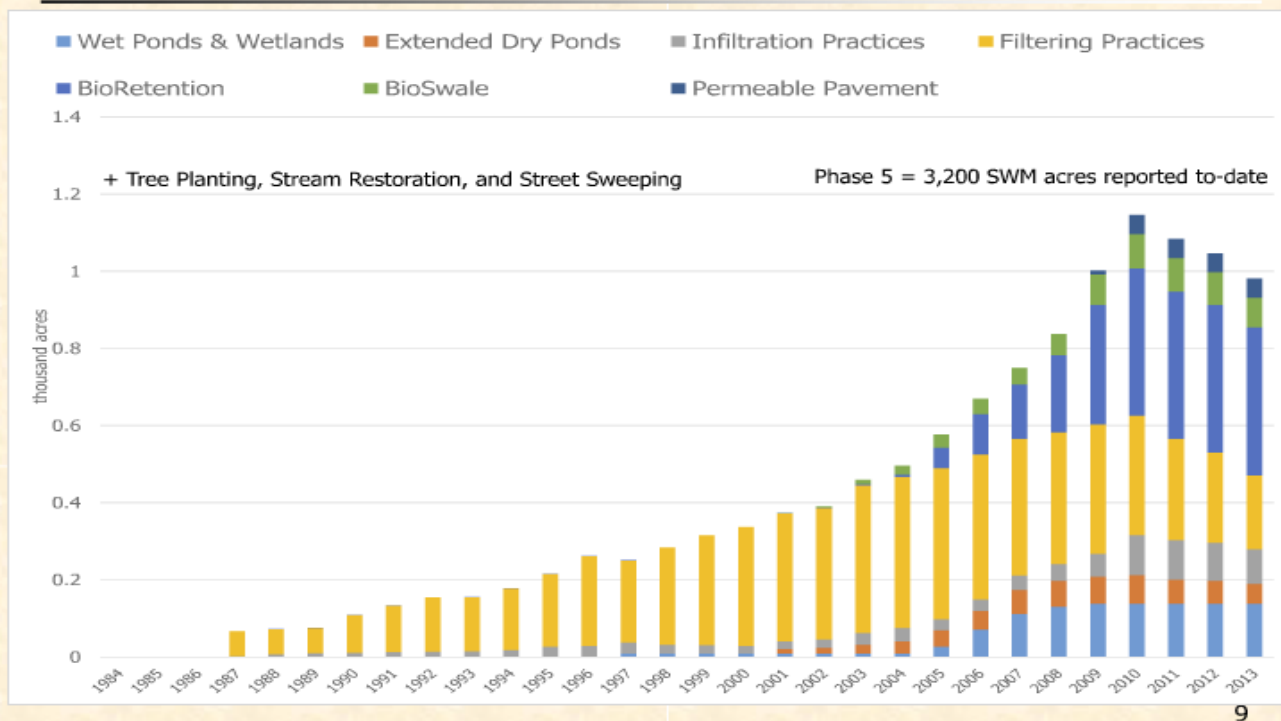
(outside of New Stormwater Database)

- **Tree Planting** – DDOT Urban Forester Planting database.
- **Street Sweeping** – CBPO Historic Record (best available).
- **Sediment & Erosion Control** – Construction Estimates, subsample of E&S plans < 5000 Square Feet.

BMP Inventory Submission Results



Reported Historic Stormwater Management District of Columbia



- CSS/MS4 Assumptions in legacy dataset
- Lack of digital maintenance records
- Methodology differences

Next Steps

Short Term

- **Data Review for errors**
 - invalid codes, conversions, data entry, or units
- **Review and re-visit methodology differences**
 - Initial requirements for coordinates

Long Term

- **Data validation & verification effort**
 - Digitize paper records (inspections, as-builts, other) and update SW database
 - Confirm or Remove BMPs that are no longer in place / functioning
 - Obtain data elements required for new urban stormwater performance standards