

# Where Stormwater Discharge Permits May Be Headed

A Quick Look at the District of Columbia  
SW Discharge Permit

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## Permit Issued by Region III, EPA

- Issued 10/7/2011 thru 10/7/2016
- DC is tributary to Chesapeake Bay which is a “sensitive water”
- An insight to EPA’s thinking regarding stormwater discharge permitting
- Most permits will be issued by states

# Stormwater Management Plan (SWMP)

- Develop **New** SWMP elements and Submit to EPA for approval
  - Anacostia Watershed Trash Reduction Calculation Methodology
  - Catch basin O & M
  - Outfall repair schedule
  - Off-site mitigation/payment-in-lieu program
  - Retrofit Program
  - Consolidated TMDL Implementation plan
  - Revised monitoring program

# Standard for Long-Term SW Mgt

- **Focus on on-site retention**
- **Develop and implement** a SWMP that integrates **practices** at the site, neighborhood and watershed levels designed to **mimic predevelopment hydrology** through use of on-site SW retention measures (harvest and use, infiltration and evapotranspiration)
- **Performance standard:** On-site retention of 1.2” of SW from a 24-hr storm with a 72-hr dry period for all developments  $> 5,000$  sq ft.

# Retrofit Program for Existing Development

- Develop program that establishes performance metrics for retrofit projects within 2 yrs
- Fully implement program upon EPA approval
- Implement retrofits from a minimum of 18,000,000 sq ft (413 acres) of impervious surfaces during the permit term (2016)
- A minimum of 1,500,000 sq ft must be in transportation ROW
- Ensure major renovation/rehab projects for public buildings includes on-site SW retention measures.

- **Tree Canopy**

- Achieve tree canopy coverage of 40% by 2035
- Achieve a minimum net annual tree planting rate of 4,150 annually

- **Green Roof Projects**

- ID District owned properties where green roofs are technically feasible and commit to schedule for implementing projects
- Install minimum 350,000 sq ft of green roofs on District properties during permit term

- **O & M of SW Retention Practices**

- Develop and implement O&M protocols for District owned on-site retention practices (development and retrofit)
- Develop accountability mechanisms to ensure mtn of SW control practices on non-District property
  - Must include long-term verification process of O&M
  - Maintain electronic inventory of retention practices on private property including O&M verification process

- **Pesticide, Fertilizer and Herbicide Use**

- Utilize integrated ecosystem based pest mgt program focused on long-term prevention of pests thru techniques such as biological control, habitat manipulation, modification of cultural practices, use of resistant varieties, and use of low or no chemical and irrigation input landscapes

- **Solids and Floatables Reduction**

- Develop and implement plan for cleaning and repair of all catch basins at least once annually
- Develop and implement plan to repair about 10% annually of all outfalls needing repair

- **Street Sweeping**

- Conduct on at least 641 acres of roadway annually at frequencies varying from 9 times a yr for arterials to 1 time a yr for central business streets
- Implement Anacostia Clean Up Act to **ban use of disposable non-recyclable plastic carryout bags** and **restrict use of disposable carryout bags** in certain food establishments

- Develop Implementation Plans for all TMDL WLAs for MS4 Discharges and Fully Implement upon EPA Approval
  - Anacostia River trash: Remove 103,188 lbs (51.6 T) annually by 5<sup>th</sup> yr of permit
  - Hickey Run: Implement Hickey Run TMDL strategy
  - Consolidated TMDL implementation plan for:
    - BOD in Upper and Lower Anacostia River
    - TSS in Upper and Lower Anacostia River
    - Fecal Coliform Bacteria in Upper and Lower Anacostia
    - Etc. for 16 TMDLs

# Revised Monitoring Plan

- Develop and implement revised monitoring program (6 sites)
  - Make wet weather loading estimates of required parameters to receiving waters
  - Evaluate health of receiving waters to include biological and physical indicators such as macroinvertebrates and geomorphologic factors.
  - Include additional monitoring for source ID and WLA tracking.
- Use info to evaluate quality of SW program and health of receiving waters to:
  - Estimate annual cumulative pollutant loading for required parameters
  - ID and prioritize additional efforts needed to address WQ exceedances
  - ID WQ improvements or degradation

# Stormwater Modeling

- Continue to develop SW model & GIS
- Annually report pollutant load reductions using statistical model developed by District
- Assess on-site retention projects through monitoring, modeling and/or estimating storm retention capacity to determine volume of SW removed from the MS4

# Fiscal Resources

- District shall **provide adequate finances**, staff, equipment and support capabilities to implement provisions of permit
- District shall **provide a dedicated funding source**
- Each annual report shall include a **demonstration of adequate fiscal capacity** to meet requirements of permit

# Implications and Impacts of the District of Columbia Permit Model

## I. California Contrast

- DC permit – 92 pages  
Draft Salinas permit – 359 pages
- DC permit – 9 monitored priority pollutants  
Draft Salinas permit – 21 priority pollutants  
Caltrans permit – 46+ priority pollutants
- DC permit – urbanized area unlikely able to attain WQS during permit term.  
9<sup>th</sup> Circuit Court – Permittee obligated to satisfy permit conditions.

## Implications and Impacts (con't.)

### II. Original Permit Program Model (Phase I – II)

1. Clean Water Act Mandate – Reduce the discharge of pollutants **from MS4's** to waters of the U.S., to the MEP.

2. Phase I and II Permit Requirements –

\* Ph. I – “reduce the discharge of pollutants to the MEP using mgmt. practices, control techniques and system, design, and engineering methods, and such other provisions which are appropriate.”

\* Ph. II – “Reduce the discharge of pollutants **from your MS4** to the MEP to protect WQ, and to satisfy appropriate WQ requirements of the CWA.”

# Implications and Impacts (con't.)

## Original Permit Program Model (con't.)

### 3. Phase I. and II Permit Program Requirements

- \* Focus – the **quality** of the SW discharged **from** the MS4's.
- \* Permit Mandate – improve the **quality** of the SW discharged **into** and **from** the MS4's.
- \* Permit Program Components –
  - Public education and participation
  - Source controls (illicit discharges, non-SW, industrial pollution, const. sites, good housekeeping, fertilizers, herbicides, pesticides, sewer spills)
  - Design, operation and maintenance of MS4's (system master planning, in-system treatment, flood control project retrofit.)
  - Perpetual operation and maintenance of post-construction SW quality mgmt. features.

## Implications and Impacts (con't.)

### Ph. I- II Permit Program requirements (con 't.)

- \* Permittees SWQ Program Admin. Requirements
  - Legal Authority to regulate discharges to MS4 (ordinances, regulations, exe. order, agreements)
  - Fiscal Resources available to carry out permit program (budget, assets, indebtedness, sources of funds)
  - Inspections (sources, in-system flows, discharges)
  - Monitoring (characterization, sources, discharges)
  - Evaluation and Assessment of permit program effectiveness. (progress toward measurable goals)

# Implications and Impacts (con't.)

## III. The District of Columbia Permit Model

1. Focus – “manage, implement, and enforce a SW mgmt. program **in accordance with** the CWA.” [1.4]
2. Mandate –
  - “prohibit pollutants in SW **discharges . . . into** the MS4 as necessary to comply with the existing DCWQS” [1.4.1]
  - “attain applicable WLA’s” [1.4.2]
  - “comply with all other provisions of the permit [1.4.3]
    - “Require on-site retention of 1.2” of SW from 24 hour storm” [4.1.1]
    - “implement retrofits for SW discharges from a minimum of 18,000,000 sq. ft..” [4.1.5.4]
    - “minimum annual tree planting rate of 4,150 plantings” (net) [4.1.6.2]
    - “install a minimum of 350,000 sq. ft. of green roofs” [4.1.7.2]

# Implications and Impacts (con't.)

Old Permit - Regulation of SW **quality discharged from pollutant source parcels**

New Permit - Regulation of effective **imperviousness of all parcels**

The Change – New permit focused on control of **quantity** of SW **discharged into** the MS4 - **not** on the **quality** of SW **discharged from** the MS4

New Permit Requirements –

1. Modify all relevant municipal codes to facilitate on-site retention permit requirements [4.1.2]
2. Establish SW site plan review for all development [4.1.2]

## Implication and Impacts (con't.)

### New Requirements (con't.)

3. Establish post-const. verification for all development [4.1.2]
4. Track on-site retention performance of each site [4.1.2]
5. Establish off-site mitigation/in-lieu fee [4.1.3]
6. Establish green landscape incentive program [4.1.4]
7. Establish retrofit program [4.1.5.1]
8. Establish master planned tree canopy program [4.1.6]
9. Establish green roof program [4.1.7]
10. Operation and maintenance of SW capture practices [4.2]
  - \* DC owned/operated facilities
  - \* Facilities owned/operated by others

## Implication and Impacts (con't.)

### New Requirements (con't.)

11. TMDL/WLA Compliance – Develop Consolidated TMDL Implementation Plan. (16 TMDL's, 12 Constituents, Trash TMDL – 103,188 lbs. annual removal)
  
12. **Permit Compliance Administration**
  - \* Inventories, tracking and accounting, on-site/off-site, public/private
  - \* Site plan review, inspection, enforcement, maintenance
  - \* Revised monitoring/traditional monitoring
  - \* Mandatory modeling
  - \* Mandatory dedicated revenue source
  - \* Mandatory land use form regulations [legal]
  - \* Surveillance of non-regulated parcels
  - \* Mandatory EPA reviews and approvals

## Implication and Impacts (con't.)

Be it ever so well concluded:

“ . . . many commentors noted that the implementation costs of the District’s stormwater program will be significant.

**EPA agrees.**” (emphasis added)

Fact Sheet - NPDES Permit No. DC0000221

Government of the District of Columbia - Permittee