

# Best Practices for Stormwater at Commercial Properties

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June 25, 2019



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# AGENDA

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Introduction  
to  
Stormwater

District-wide  
Regulations

Location-  
specific  
Regulations

Incentives



Photo by WTOP





# Stormwater Runoff







© KRISTA SCHLYER

# Outfall

@DOEE\_DC 



# STORMWATER POLLUTION

## Anything other than stormwater

- Dirt
- Trash
- Wash water and soaps
- Vehicle and equipment fluids

- Pesticides and fertilizers
- Paints and solvents
- Salt and Brine
- Rust
- Pet waste



# IMPACTS

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# DISTRICT-WIDE REGULATIONS

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## 1. Slow it Down

## 2. Reduce Major Pollutants

- Pesticides
- Fertilizer
- Coal Tar
- Litter





# 2013 STORMWATER REGULATIONS

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New buildings and major renovations are required to install Best Management Practices (BMPs)

**Stormwater Management Plan**  
is like a Maintenance Agreement





# Common Best Management Practices

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Trees & Rain Gardens



Permeable  
Pavement



Cisterns & Channels



Bioretention



Green Roofs

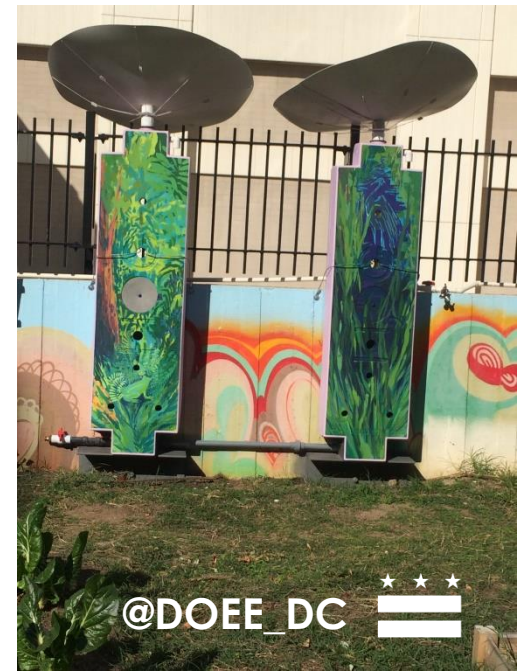
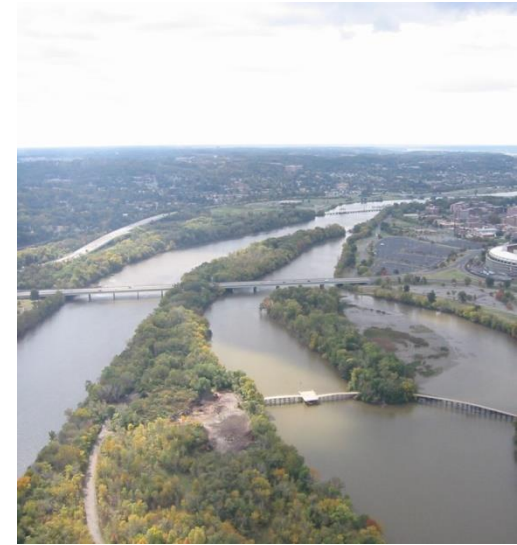


# OFF-SITE COMPLIANCE

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- **Why Comply Off-Site**
  - Increases site design flexibility
  - Use space on site for other amenities
- **Who's Eligible?**
  - Any property that triggers the 2013 Stormwater Rule can comply 50% off-site
  - DOEE has proposed to increase off-site flexibility to 100% for projects that drain to CSS storage tunnels
- **What's Required?**
  - Use Stormwater Retention Credits or Pay an In-lieu Fee annually

[doee.dc.gov/service/offv](https://doee.dc.gov/service/offv)



# BMP MAINTENANCE

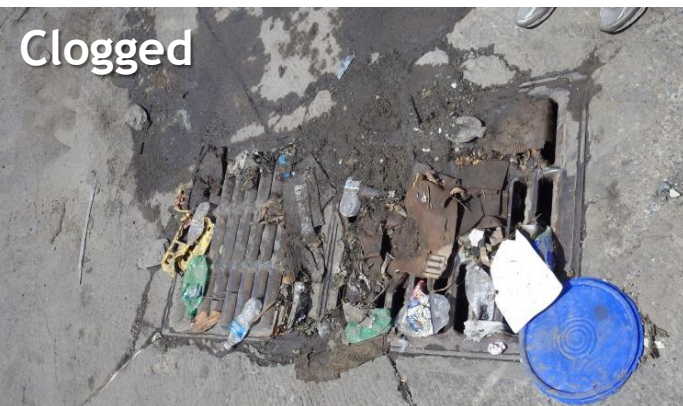
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**BMPs must be regularly maintained and inspected**

- Owner responsibility
- Self-inspections and regulatory inspections

## How?

1. Follow Stormwater Management Plan
2. Check with manufacturer
3. Use DOEE Stormwater Guidebook  
[doee.dc.gov/swguidebook](https://doee.dc.gov/swguidebook)





# SELF-INSPECTION SELF-REPORTING

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- Online, self-reporting tool for top performers
- **Report, track, share, and store inspection and maintenance records**
- Being piloted

[doee.dc.gov/service/sisr](https://doee.dc.gov/service/sisr)

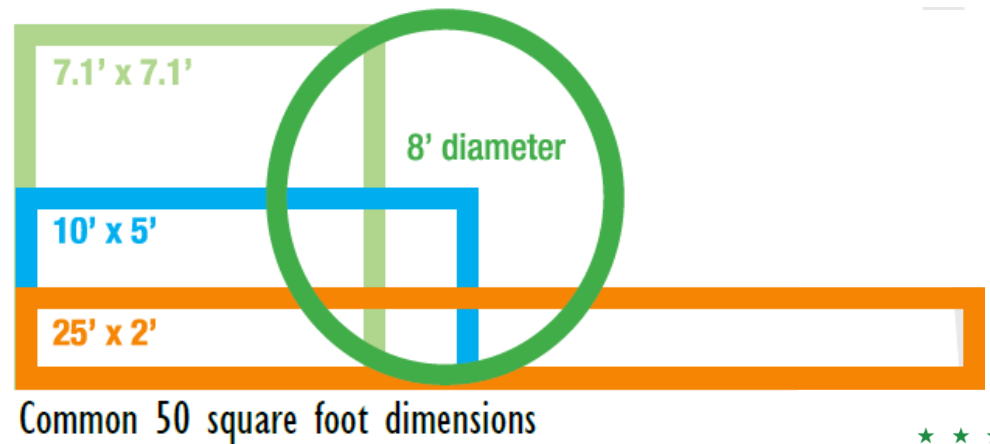


# EROSION AND SEDIMENT CONTROL (ESC)

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**Any project that disturbs more than 50 square feet of land must submit an ESC plan to DOEE before starting the project**

[doee.dc.gov/esc](https://doee.dc.gov/esc)





# PESTICIDES

- Herbicides, rodenticides, insecticides, fungicides, and others
- Applicator must be licensed in the District of Columbia and follow District guidelines
- Encourage Integrated Pest Management

[doee.dc.gov/service/pesticides](https://doee.dc.gov/service/pesticides)



We want to hear from you!

# FERTILIZER LAW

Applies to professionals treating turf  
If using fertilizer:

- **No Phosphorous (P)**
  - unless soil test shows need
- **Nitrogen (N) must be at least 20% slow release** applied using these rates:
  - <0.7 lbs per 1,000 ft<sup>2</sup> if water-soluble
  - <0.9 lbs per 1,000 ft<sup>2</sup> of total nitrogen
- **Follow best management practices**  
[doee.dc.gov/fertilizer](https://doee.dc.gov/fertilizer)





# FERTILIZERS (cont.)

## Do not apply fertilizer:

1. Between November 15 and March 1
2. Within 15 feet of a waterbody
3. When it is raining, 24 hours before it is expected to rain, if soil is saturated, or if ground is frozen
4. In excess of the legal rate found online:

[doee.dc.gov/fertilizer](https://doee.dc.gov/fertilizer)



# COAL & HIGH-PAH SEALANT BAN

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**Illegal to sell, use, or permit the use of coal tar and other high-PAH pavement products**

- Coal tar contains high levels of PAHs
  - toxic and known carcinogens
- Commonly used to seal and beautify parking lots and driveways
- Fine up to \$2,500 per day

[doee.dc.gov/coaltar](https://doee.dc.gov/coaltar)





# LITTER & ILLEGAL DUMPING

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## 1. Use a licensed hauler

- [eservices.dcr.dc.gov/BBLV/Default.aspx](https://eservices.dcr.dc.gov/BBLV/Default.aspx)

## 2. Pick up litter from property and public space



# LOCATION-SPECIFIC REGULATIONS

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1. Stormwater Permits
2. Protect Sources of Pollution
3. Spill Prevention and Response

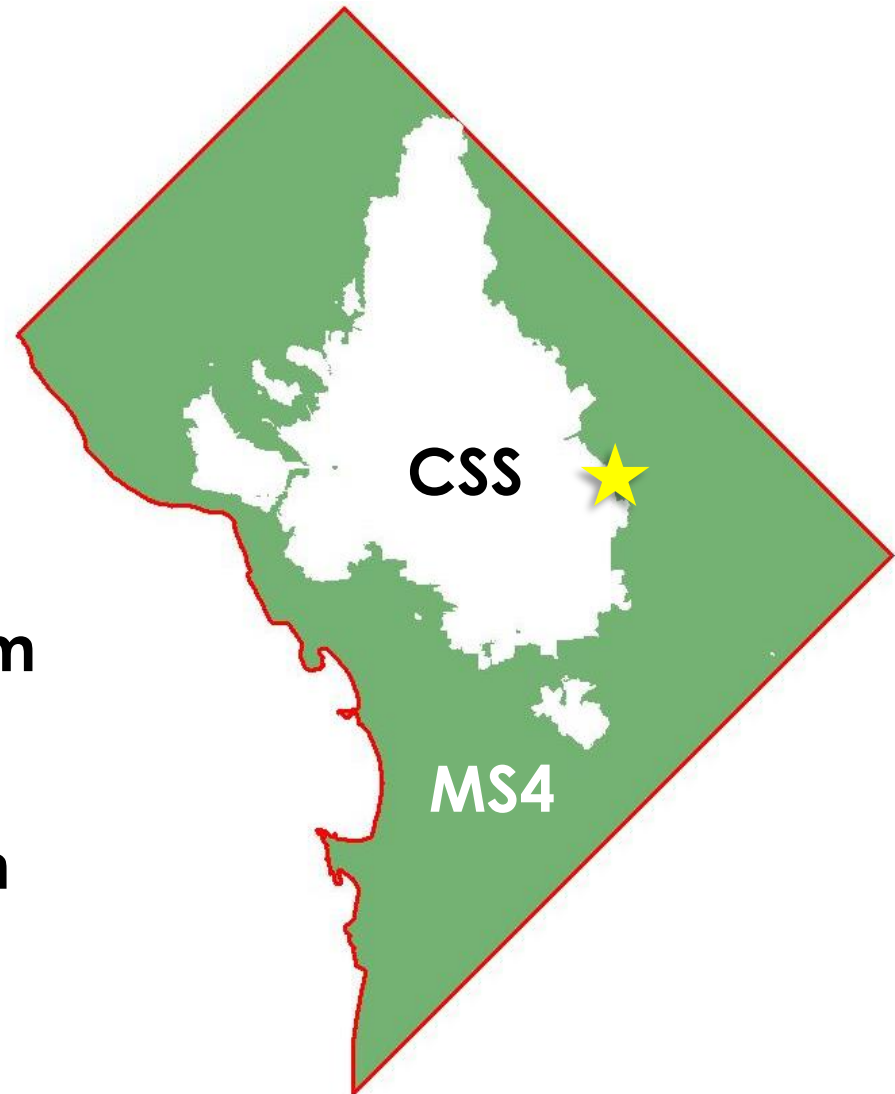




# TWO TYPES OF SEWERS

**2/3** of the District flows directly into local waterways with little to no treatment

- 1. Municipal Separate Storm Sewer System (MS4)**
- 2. Combined Sewer System (CSS)**



Look up your address at:

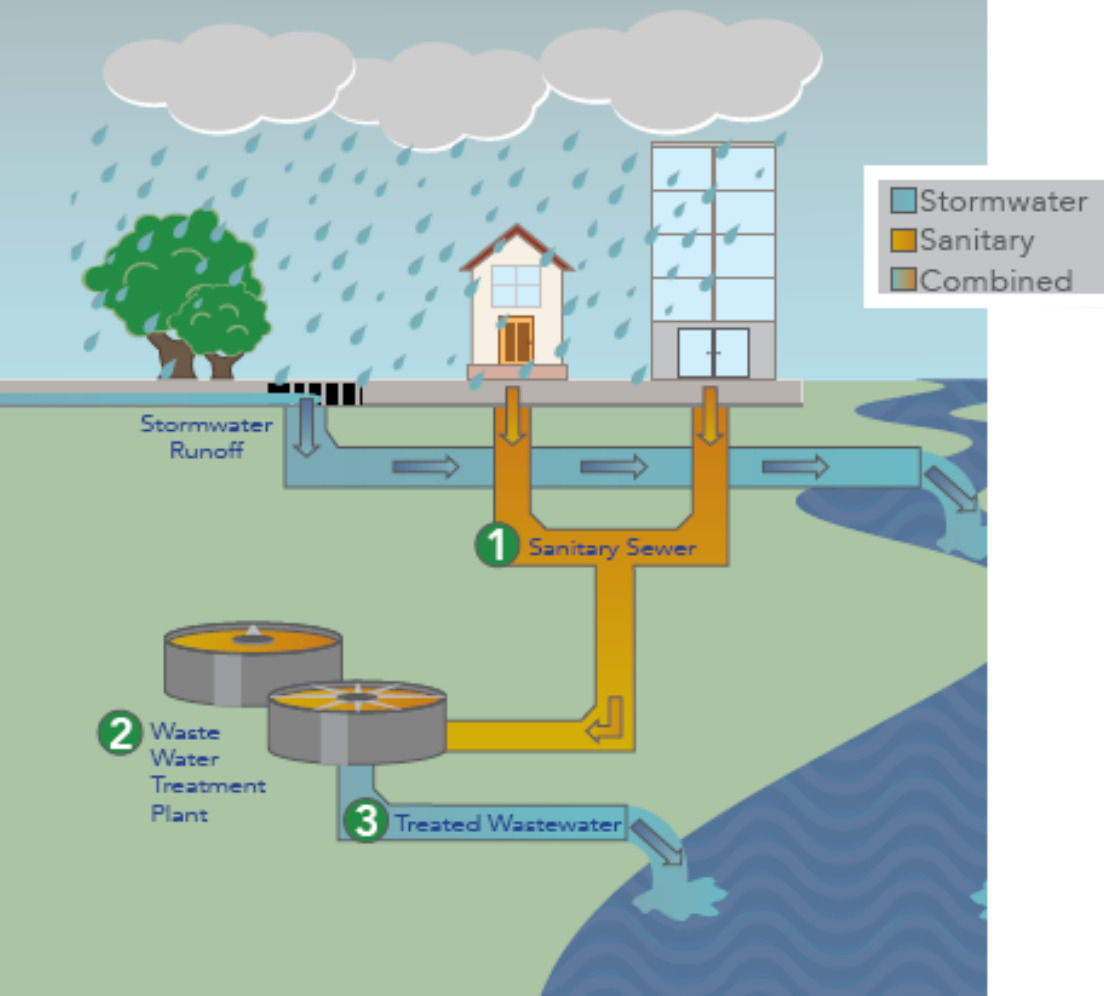
<https://dcmis.maps.arcgis.com/apps/InformationLookup/index.html?appid=a60a0086b47c4e35a638b7a8abe5954f>



# MS4

## MUNICIPAL SEPARATE STORM SEWER SYSTEM

This system uses separate pipes for sanitary sewage and stormwater flow.







# MS4

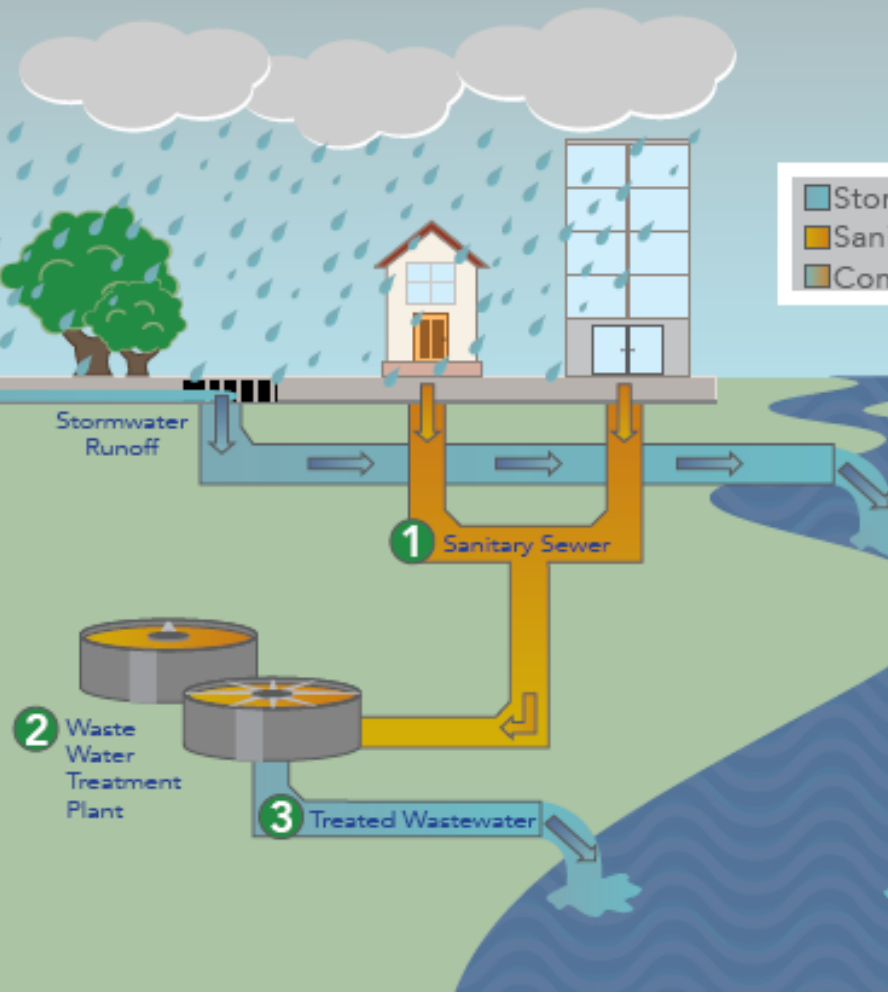
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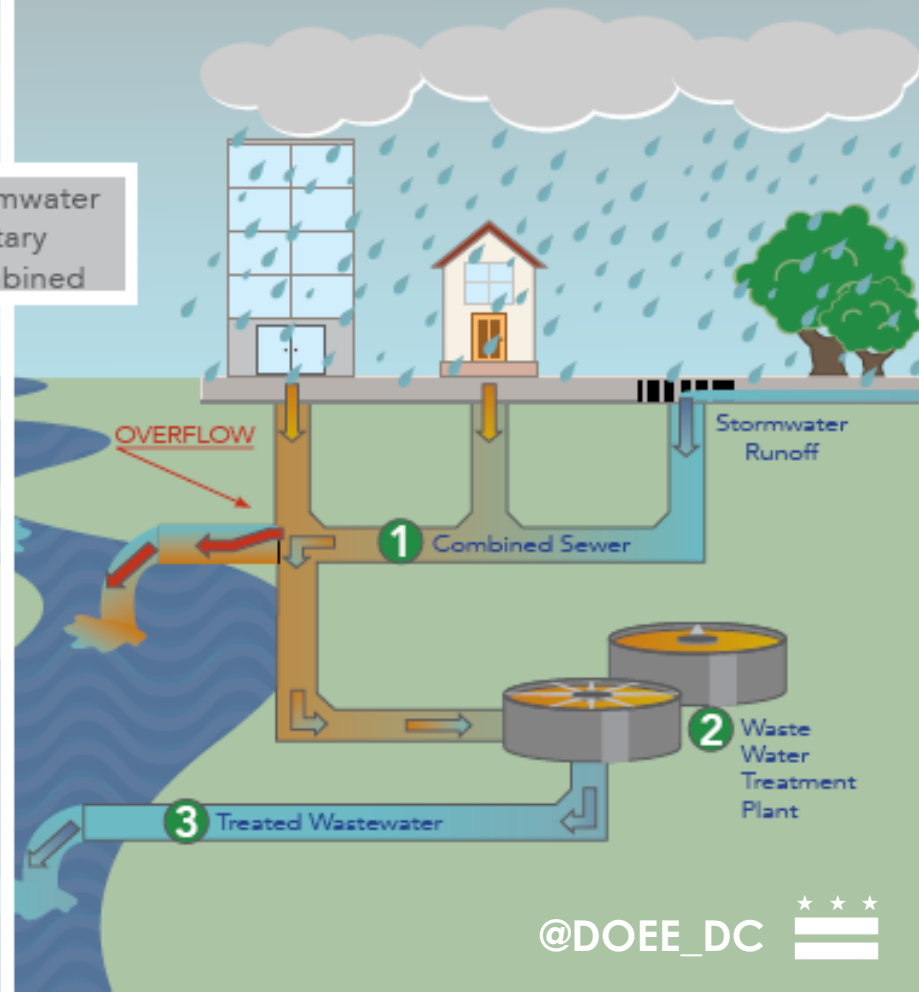
# CSS

## COMBINED SEWER SYSTEM

This system uses separate pipes for sanitary sewage and stormwater flow.



This system uses the same pipes for sanitary sewage and stormwater flow.



# CLEAN WATER ACT

1972

- Protects waterways from pollution
- Regulates illicit discharges
- Sets water quality standards

**National Pollutant Discharge Elimination System (NPDES)** – Permitting system





# ILLICIT DISCHARGES

## Illegal Emissions

*The act of allowing material other than stormwater to get into the storm sewer system*

### Types:

- Misconnected or leaking sewer lines
- Materials poured or swept into stormdrains
- Dumpster juice
- Wash water

IN THE MS4



City of Raleigh, NC



# EPA PERMITTING SYSTEM



## NPDES Permits in the District:

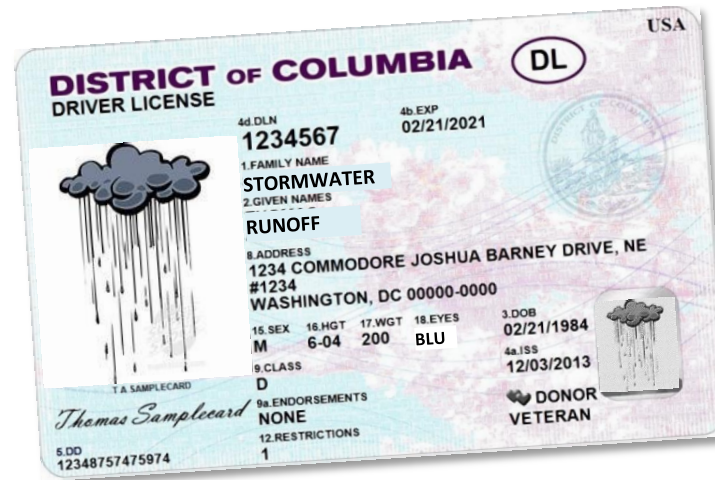
### 1. Individual Permits:

- Sewer Systems: DC Water, District of Columbia
- Large Facilities: JBAB, NPS, DCA, et al.

### 2. Multi-Sector General Permit (MSGP) for industrial activity

### 3. Construction General Permit for projects >1 acre

Drivers License  
for  
Stormwater



IN THE MS4



# INDUSTRIAL ACTIVITIES

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Activities that need MSGP coverage include:

1. Passenger transportation
2. Food and beverage production (resale)
3. Printing and publishing
4. Electronic, electrical, photographic, and optical goods (manufacturing)



... and others



**APPLY DIRECTLY TO EPA FOR COVERAGE**

[www.epa.gov/npdes/stormwater-discharges-industrial-activities](http://www.epa.gov/npdes/stormwater-discharges-industrial-activities)

**IN THE MS4**

# PENALTIES

Fines range from \$2,500 to \$250,000 and imprisonment *per day per violation*

Types of Penalties	Fines	Imprisonment
Negligent Violation	\$2,500 - \$25,000	< 1 years
Knowing Violation	\$5,000 - \$50,000	< 3 years
Knowing Endangerment	< \$250,000	< 15 years
False Statement	< \$10,000	< 6 months or < 2 years

**Other types:** Civil and Administration Penalties



# WATER POLLUTION CONTROL ACT

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**Facilities in the MS4 must have a  
Spill Prevention and Cleanup Plan**

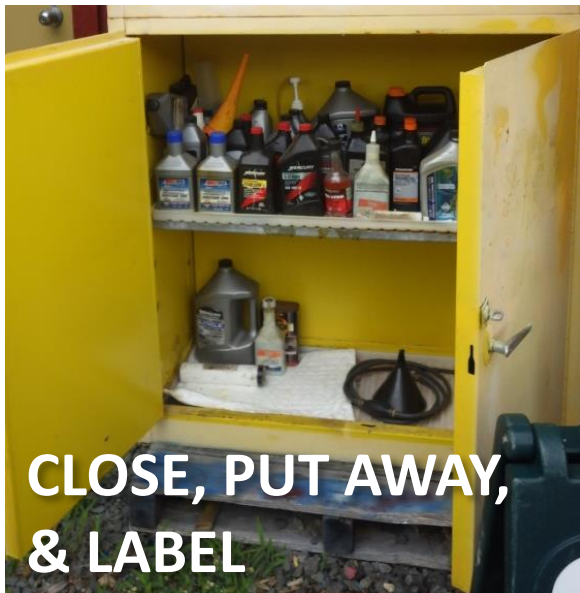


[doee.dc.gov/publication/water-pollution-control-act-1984](https://doee.dc.gov/publication/water-pollution-control-act-1984)

**IN THE MS4**

# GOOD HOUSEKEEPING

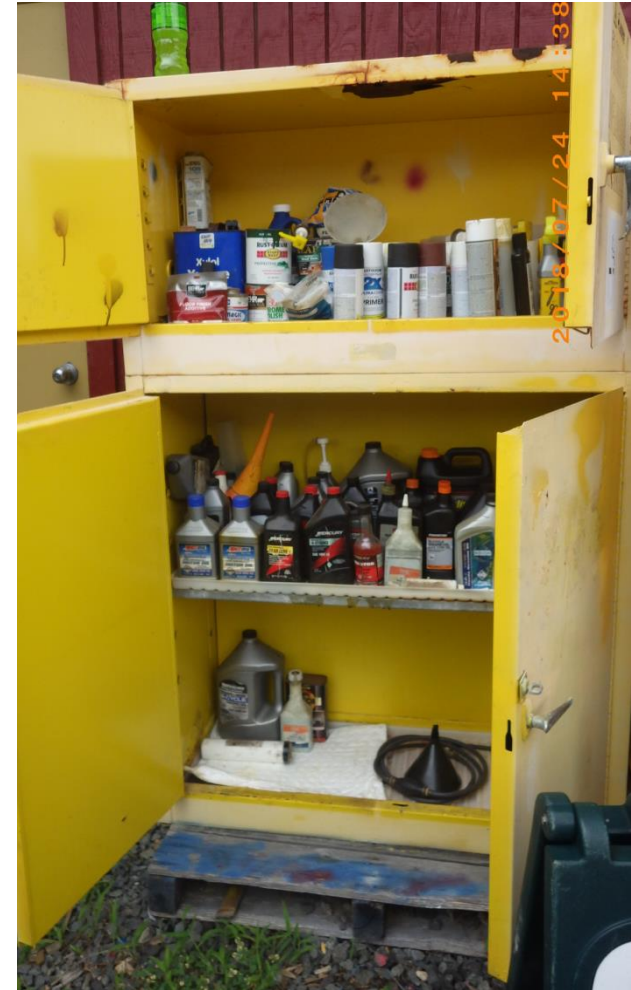
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# LIQUIDS

1. **Transfer liquids inside** - in a parking garage or under cover
2. **Keep fluids in secondary containment**, such as in a tub while using them
3. **Keep containers closed** when not in use
4. **Immediately clean up** any spills or drips
5. **Use less toxic alternatives**



# OUTDOOR STORAGE

1. Put it away
2. Keep it clear of stormwater - covered and elevated
3. Keep an eye on containers



*Metal drums are rusting & dented, & boxes of material have degraded*

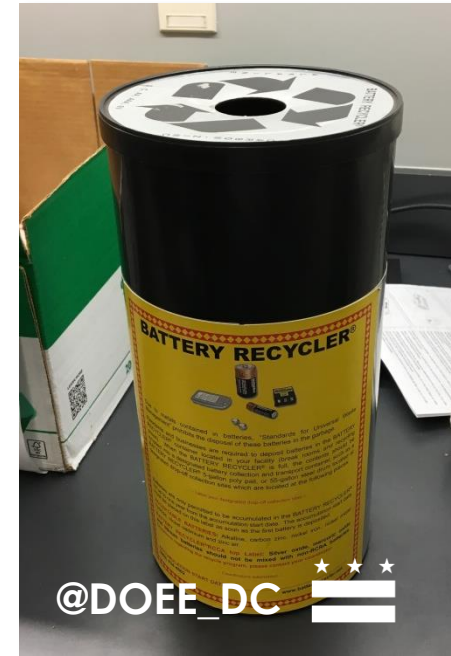


*These supplies are elevated off the ground on pallets & covered with a tarp*



# WASTE

1. **Do not dispose of liquids** in the trash, recycling, or directly into the storm drain
2. **Keep the lids on dumpsters and trash bins**
3. **Dispose of hazardous wastes**, such as batteries, at assigned collection locations



# SPILL RESPONSE

## Clean up spills and leaks immediately

### 1. Never use water

- Prevent the material from getting to the drain
- Cover with absorbents and scrub
- Pick/sweep up absorbents and dispose of properly

### 2. Spill kits should be:

- Stocked
- Labeled
- Easily accessible
- Where they belong

**NEVER USE WATER**



### 3. Document all spills and leaks

- Report them to DOEE

# SPILL REPORTING

- **Call 911**  
if it gets into a public storm drain or cannot be controlled
- **Call 202-535-2600**, Monday-Friday, 9am to 5pm  
to report non-emergency spills and leaks



IN THE MS4



# INCENTIVES

1. Stormwater Retention Credits
2. Green Roofs
3. Pollination



# STORMWATER RETENTION CREDITS

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- **Who's Eligible?**
  - Properties and SRC-aggregating businesses that voluntarily install green infrastructure
- **What's Required?**
  - DOEE approved Stormwater Management Plan
  - Pass DOEE inspections
  - Maintenance contract/plan
- **Incentive Amount:**
  - Average \$1.81/SRC over the last 12 months
  - Sell to DOEE at fixed rates through SRC Price Lock Program

[doee.dc.gov/src](https://doee.dc.gov/src)



*Green Infrastructure at East Washington Heights Baptist Church, top, and Progressive National Baptist Convention, bottom.*





# RIVERSMART ROOFTOPS

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- **Who's Eligible?**
  - All District property owners
- **What's Required?**
  - Apply before installing green roof
- **Incentive Amount: Rebate**
  - \$10 per square foot (in CSS)
  - \$15 per square foot (in MS4)
- **Structural Capacity**
  - Building must have structural capacity to host green roof
  - Structural engineering rebate available for buildings <2,500 sqft

[doee.dc.gov/greenroofs](https://doee.dc.gov/greenroofs)





# POLLINATION

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## Voluntary Program

1. Plant native and non-invasive plants
2. Plant a mix of flowers that bloom all year and provide habitat
3. Minimize pesticide use

[doee.dc.gov/pollinators](https://doee.dc.gov/pollinators)



# REVIEW



# REVIEW

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1. **Stormwater:** slow it down and stop pollution
2. **District-wide Regulations**
  - 2013 Stormwater Regulation for new builds and renovations
  - Prevent major sources - Pesticides, Fertilizer Law, Coal Tar ban, Litter and illegal dumping
3. **Location-specific Regulations for MS4**
  - Permit for industrial facilities
  - Spill Prevention and Response Plan
4. **Incentives**
  - Stormwater Retention Credits
  - RiverSmart Rooftops
  - Pollination





# CONGRATULATIONS!

**You have completed stormwater  
pollution prevention training!**

- You are now expected to implement the BMPs you learned today
- Failure to could lead to penalties up to \$250,000 for the facility *or for the individual*



# Questions?



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[doee.dc.gov](http://doee.dc.gov)



GOVERNMENT OF THE  
DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**