



**What**  
**We**  
**Do...**

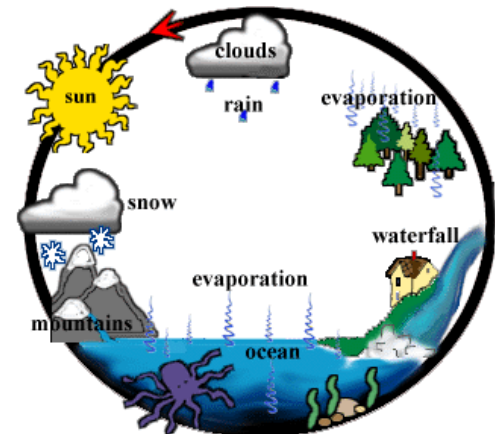
# Storm vs. Sanitary Sewers

- \* Sanitary sewer (wastewater) runs to a wastewater treatment facility before discharge to a creek or river
- \* Storm sewer (rain water runoff) runs directly to a creek, river, lake, or other water body – usually without treatment



# Storm Water Runoff

- \* **Human activities**, particularly urbanization, can alter natural drainage patterns and add pollutants to the rainwater and snowmelt that run off the earth's surface and enter our waterways.
- \* **Studies** have shown that storm water runoff is a major source of the pollutants !!!



# 1969 Cuyahoga River (Cleveland)



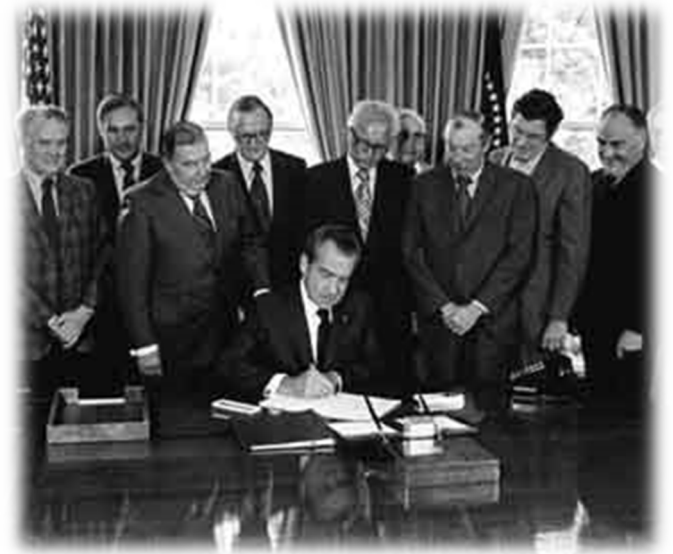


# HISTORY of the Clean Water Act

1970 Congress and President Nixon formed the Environmental Protection Agency (EPA).

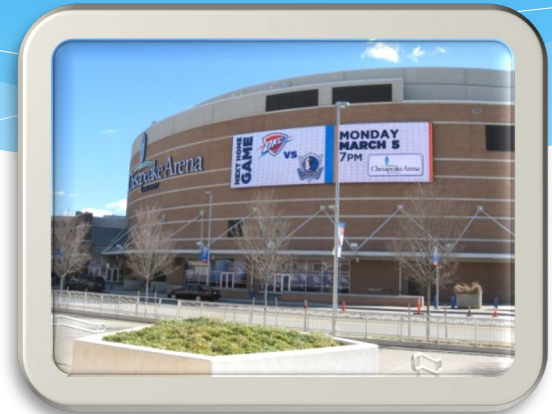
1990 President George H. Bush signed the Pollution Prevention Act.

June 1995 Storm Water Quality became a Division of the Public Works Department





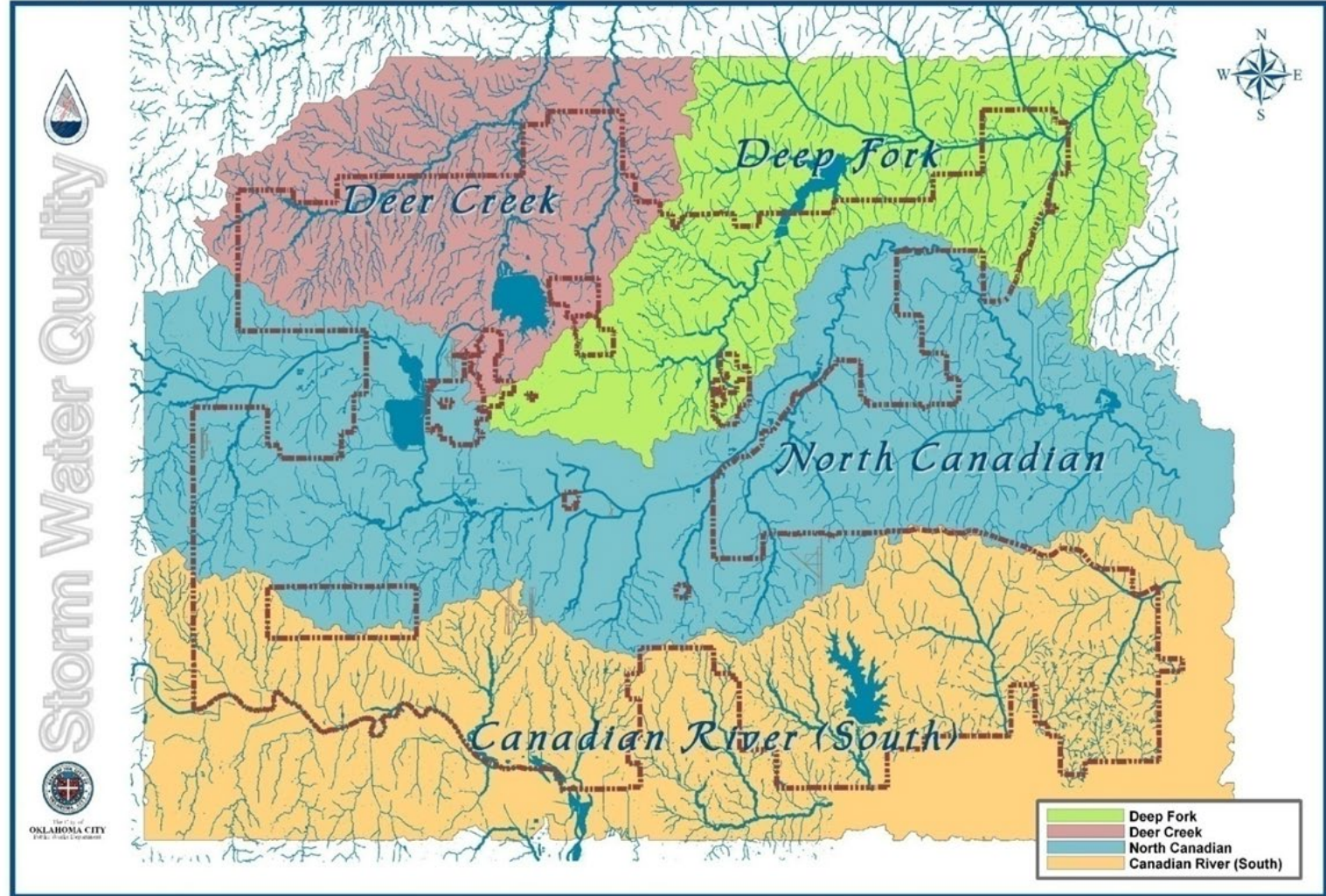
# The City of Oklahoma City



**Area: 620 square miles**

**Population: 610,000 (Metropolitan – 1,300,000)**

# City of Oklahoma City - Drainage Basins





# PHASE 1 PROGRAM COMPONENTS

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- \* **1. Storm Water Management Plan**
- \* **2. New Construction and Re-development**
- \* **3. Flood Control Projects and Structural Controls**
- \* **4. Construction Site Runoff**
- \* **5. Industrial and High Risk Runoff**
- \* **6. Household Hazardous Waste/Used Motor Vehicle Fluids**
- \* **7. Public Outreach**
- \* **8. Roadway Operation and Maintenance**
- \* **9. Pesticide, Herbicide and Fertilizer Application**
- \* **10. Pollution Complaint and Spills Response Program**
- \* **11. Floatables**
- \* **12. Wet Weather Analytical**
- \* **13. Priority Based Monitoring**
- \* **14. Illicit Discharge Detection and Elimination**
- \* **15. Supporting Permit Conditions, Monitoring Programs**

# Construction Auditing Program

- \* **Permitting** ~ All construction sites are permitted and inspected for potential pollutant runoff
- \* **Permitting requirements**
  - Notice of Intent
  - Storm Water Pollution Prevention Plan
  - Site Plan showing erosion controls
  - Annual permit fee
- \* **Sites are audited** by five Environmental Technicians. The intent of these audits is to reduce or eliminate the potential to pollute surface runoff at each site.
- \* **2017 - 510 new permits issued**
- \* **Total # of permits 1,282**
- \* **8,204 audits conducted**



# Construction Auditing





# Best Management Practices





# Best Management Practices



# Industrial Auditing Program

- Permitting** ~ Specific businesses whose processes or operations are potentially harmful to the environment are required to permit.
- Permitting requirements**
  - Notice of Intent
  - Storm Water Pollution Prevention Plan
  - Annual permit fee
- Facilities are audited** by four Environmental Technicians.
- 2017 – 413 active permits**
- 28 new permits issued**
- 703 audits conducted**





# Pollution Issues



# Best Management Practices





# Best Management Practices



# Quarterly Visual Monitoring





# Environmental Water Quality

- **Floatable Debris Program ~**  
Study-Categorize floatable debris from waterways.  
(21 monitoring locations)

447 tons collected in  
Oklahoma River in 2017





# Illicit Discharge Detection & Elimination Program

- \* **Spill Response ~ Provide technical support to the Fire Department**
- \* **Administration of the contract for street sweeping**
- \* **Storm Drain Camera Operations**



110 hazardous material incidents 2017



21,466 curb miles swept in 2017

# Storm Drain Camera Operation's



22 camera Operations in 2017

4,078 feet inspected in 2017





# TMDL Sampling



3 sampling events  
In 2017

Passive Sampling  
Program

# Mosquito Surveillance Program

OCCHD 15 years

2017 collected 22,480 adult mosquitoes

46 stations tested positive for West Nile Virus

4D's—Drain, Dress, Deet, Dusk/Dawn (Prevent)



## **FIGHT THE BITE**

Your Best Protection is Prevention!



### **Drain**

Drain anything in your yard that collects water or allows water to stand. Mosquitoes only need a small amount of water to breed.



### **Dress**

Dress in long sleeves and pants when you're outside to discourage mosquitoes from biting.



### **Deet**

Spray a safe repellent on exposed skin and clothes. The CDC recommends DEET, picaridin, IR3535 or oil of lemon eucalyptus.



### **Prevent**

Mosquitoes bite any time of day or night. Check and repair screens on doors and windows. Keep them closed and use air conditioning when you can.

# LOW IMPACT DEVELOPMENT (LID)

- \* EPA defines LID as “an approach to land development that works with nature to manage stormwater as close to its source as possible.”





# GREEN INFRASTRUCTURE

- \* EPA intends the term "green infrastructure generally refers to practices that use or mimic natural processes to infiltrate, or reuse stormwater or runoff on the site where it is generated."



# Oklahoma City MS4 Permit

- \* *“Permittee shall promote Low Impact Development and other green design strategies to minimize the impact of urban runoff discharges to receiving streams reducing peak flows and pollutant loads.”*





# Rain Gardens

- \* Rain Gardens are gardens typically comprised of native plants.



- \* Rain Gardens are specifically designed to collect, filter, and absorb storm water runoff from impervious surfaces such as roofs, driveways, and parking lots.

# Oklahoma City MS4 Permit

- \* “Identify local regulatory barriers which prohibit alternative storm water management design practices.”
- \* Municipal Code Chapter 16, 48 and 57
- \* Rain Water Harvesting





# Rain Barrels



Since 2014:  
4,133  
distributed  
Metro-wide

# Household Hazardous Waste Collection Facility

- Operating the state's first permanent HHW collection facility since August 23, 2003
- Paint, oil, gas, car batteries, fluorescent light bulbs, cleaning products, pesticides, herbicides, etc.





# Trash Truck and Dumpster fires



Replacement Cost  
\$263,000



# Household Hazardous Waste SWAP Shop





# Memorandums of Understanding

The Storm Water Quality Management Division contracts with Phase II cities, to fulfill aspects of their permit obligations with the Oklahoma Department of Environmental Quality.

Bethany, Edmond, El Reno, Moore, Shawnee, Tinker AFB, Village, Warr Acres, and Yukon





# HHW Spring 2018 Special Collections

**229 Oklahoma City residents**

**82,670 pounds of tires, computers,  
ammunition and medications.**

**71,205 pounds of car and truck tires**

**10,981 pounds of computers**

**184 pounds of ammunition**

**300 pounds of prescription medication.**

**Sleet, Snow and 24 degrees**



# City of Oklahoma City Public Outreach Program





# Public Outreach





# HHW Public Outreach Billboards



# News Print Ads English and Spanish

## BRING IT ON.

Oklahoma City's **Household Hazardous Waste Collection Facility** at 1621 S. Portland can take all the paint, bug and weed killers, used motor oil and other chemicals and solvents in your garage, under your sink and around your home. And it doesn't cost you anything.

Check [www.okc.gov](http://www.okc.gov) for a complete list of what we can and can't take or call 682-7038 for more information.

Bring your current water bill stub to prove residency. Residency restrictions apply.

We're open Tuesday-Friday 9:30 a.m. to 6 p.m and Saturday 8:30 to 11:30 a.m.

**HOUSEHOLD HAZARDOUS WASTE  
COLLECTION FACILITY** 1621 S.  
Portland

*The City of Oklahoma City*



## TRAIGAMELO.

El establecimiento de **Residuos Domesticos Peligrosos de la ciudad de Oklahoma City** ubicado en la 1621 S. Portland puede recibir, pinturas, mata insectos, mata plantas, aceite de motor usado, solventes y otros quimicos peligrosos que acumulamos en nuestros garages, abajo de la pileta de la cocina y en otros lugares de nuestro hogar.

Vaya a [www.okc.gov](http://www.okc.gov) para obtener una lista completa de lo que aceptamos o llame al 682-7038 para mas informacion.

Estamos abiertos de Martes a Viernes de 9:30 A.M. a 6:00 P.M. y los sabados de 8:30 a 11:30 A.M.

Usted debe que vivir en Oklahoma City, para obtener esos beneficios.

**ESTABLECIMIENTO de RESIDUOS  
DOMESTICOS PELIGROSOS** 1621 S.  
PORTLAND

*Ciudad de Oklahoma City*



# Wayne Drop



Elementary School



Trunk or Treat



# School Presentations

- \* Protecting Our Water Resources

- \* Hands-on science activities
- \* Pre-Kindergarten – 6<sup>th</sup> grade
- \* Classroom activities, assemblies, and school fairs
- \* More than 2,300 elementary school students in 2017



# Events, Training, Tours



- Local Festivals
- Environmental Training Classes
- Tours





# Workshops/Education



Pesticide Workshop



Industrial Workshop



Construction Workshop





Adopt A City Street

# *Volunteer Programs*



Curbs To Creeks

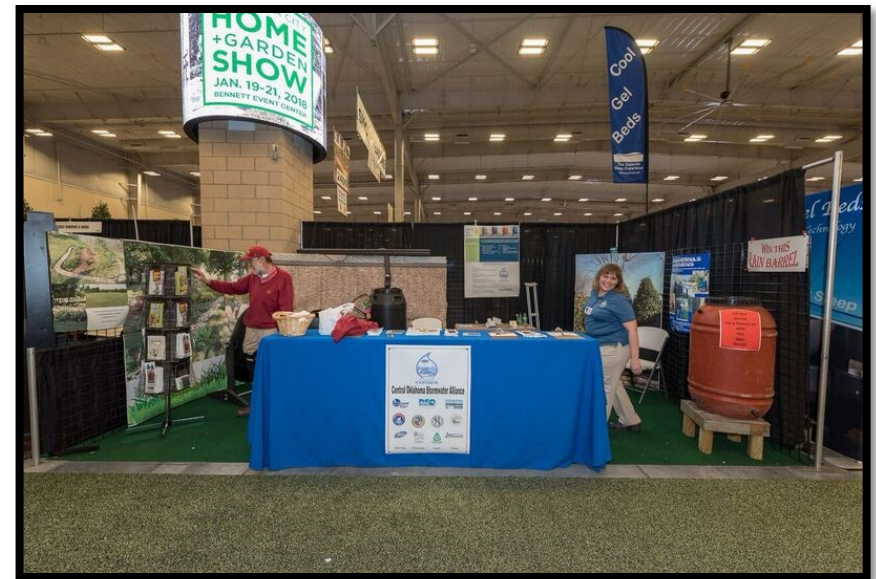


Waterway Clean Sweep

# Central Oklahoma Storm Water Alliance



- \* Public Outreach radio announcements
- \* Workshops
- \* Home and Garden Show
- \* Brochures
- \* Rain Barrel Promotion
- \* Coordination and Planning





# Enforcement



- City of Oklahoma City Ordinances
  - Chapter 16 ~ Drainage & Detention
  - Chapter 48 ~ Grading Erosion & Sediment Control
  - Chapter 57 ~ Permits & Enforcement
- Environmental Technicians are commissioned Environmental Enforcement Officers, capable of shutting down or stopping any activity that is breaking city ordinances or a facilities requirement per their SWPPP.





# Thank You

**Raymond Melton**

**City of Oklahoma City**

**(405) 297-1774**

**[www.okc.gov/swq](http://www.okc.gov/swq)**

