

KC URBAN STORMWATER CONFERENCE

# Integrating Stormwater Education Into the Big Picture



# Kansas City Water Services



Water



Wastewater



Stormwater

# Our Mission

“KC Water is committed to providing excellent water, wastewater, and stormwater services that ensure the health and safety of our customers while safeguarding our regional water resources for future generations.”



# Snapshot

- Have served Kansas City, MO since 1873
- \$361M Enterprise
- 860+ Employees
- 470,000 Residents Served Inside City
- 200,000 Residents Outside the City
- 170,000 Residential & Commercial Customers
- 32 Wholesale Water Agreements & 27 Interjurisdictional Wastewater Agreements
- Other programs include:
  - Curbside Leaf & Brush Collection
  - Household Hazardous Waste
  - Street Sweeping



# Kansas City's Sewer System

## Combined Sewer System

- 58 Square Miles
- 1,060 Miles of Pipe
- Dates back to 1857
- 90 Outfalls
- 6.4 B Gal. Overflow (avg./year)



## Separate Sewer System

- 260 Square Miles
- 1,750 miles of pipe
- Dates Back to 1960's

**670,000 People Served**

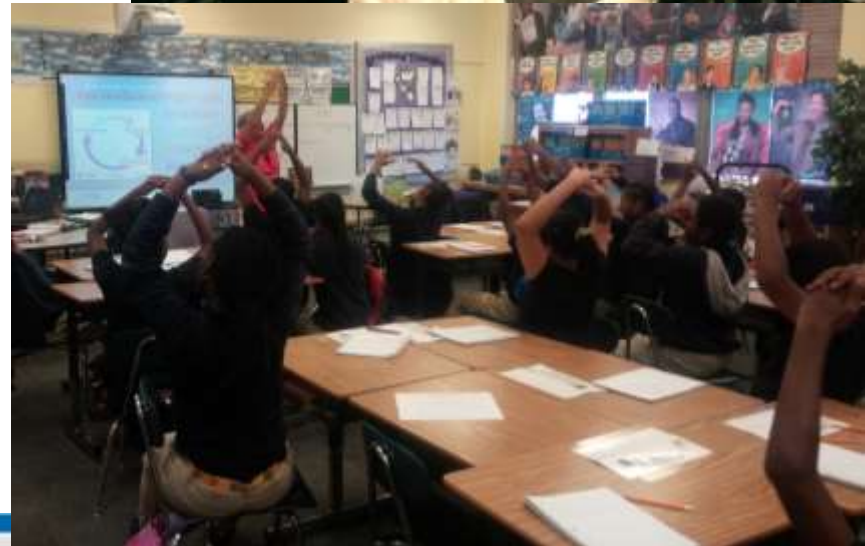
**Combined Sewer System**  
**Separate Sewer System**



# Why the curriculum was developed

*Good water quality is everybody's business*

- To educate future customers on the water quality issues facing Kansas City
- To promote the culture change needed to protect the water quality in our rivers, lakes, and streams
- To help achieve education and outreach goals in our MS4 Permit and Overflow Control Plan
- To empower youth to share the message of good water quality with others



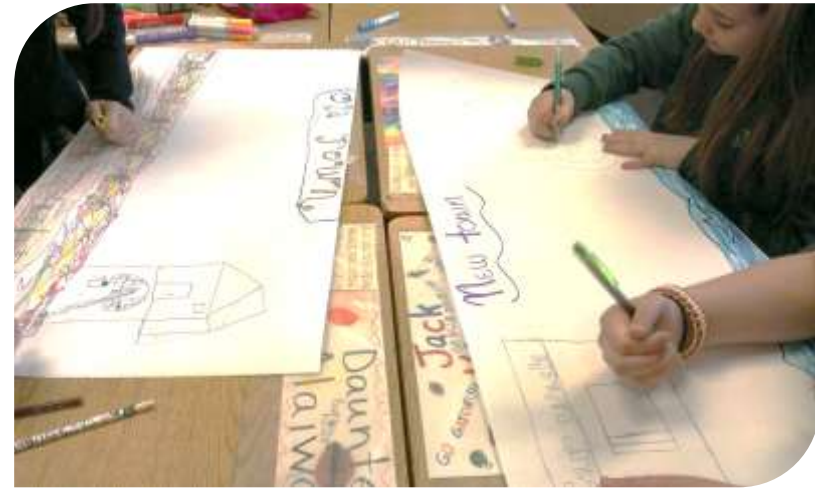
# The Journey of Stormwater: KC to the Sea

- Targets 4<sup>th</sup> through 6<sup>th</sup> grades
- Now taught in 40+ schools in 7 districts
- Reached 3,321 students during 2015-2016 school year
- Reached 11,000+ students cumulatively since 2012
- Goal: reach every school serving 4<sup>th</sup> to 6<sup>th</sup> grades in the ratepayer area



# KC to the Sea Curriculum

- Project based learning aligned with Missouri curriculum standards
- Daily Topics
  - 1) It's an Event
  - 2) Dangerous Travels
  - 3) Cleaning Up our Water Act
  - 4) Building Clean Water Projects
  - 5) Walking the Talk
- Will culminate in a field trip to the Swope Campus after learning labs are complete for hands-on, outdoor learning experience





# Implementing the Curriculum

- Curriculum is provided free to all schools in our ratepayer area
- All teachers attend a free training workshop
- KC Water staff teaches the first day in the classroom
- KC Water staff available for questions and assistance with student projects



# How Does it Fit Into the Big Picture?







# Where kids think things come from...



← **Water Factory**

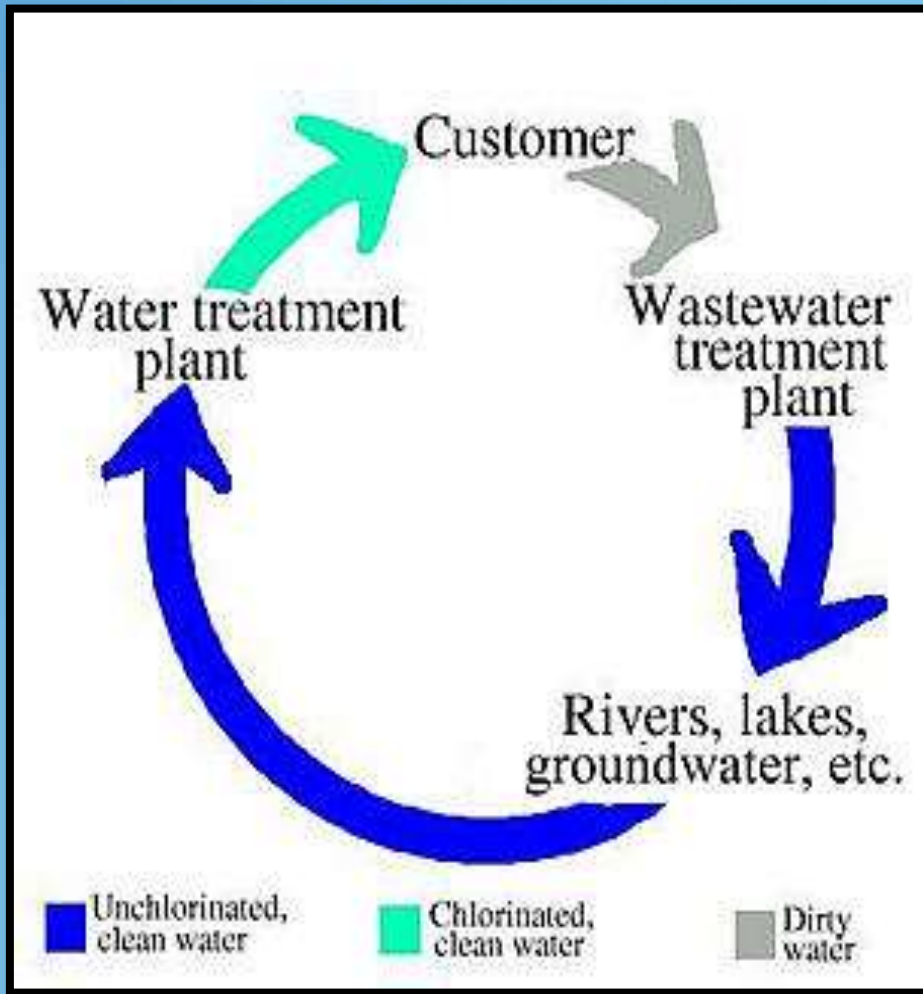
**Food Generator** →





# How Is Rain Connected to the Water We Use?

## The Horizontal Water Cycle



Precipitation

becomes

**Stormwater**

becomes

**River Water**

becomes

**Drinking Water**

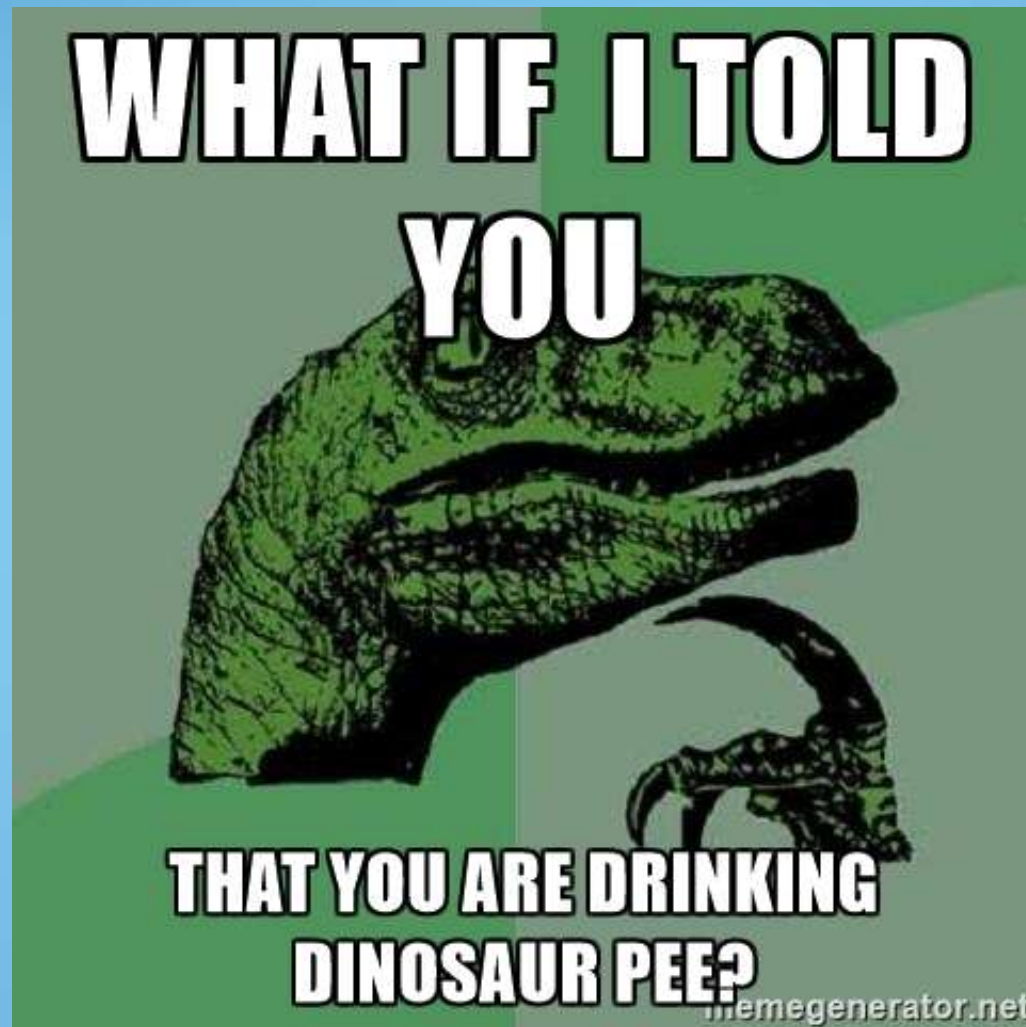
becomes

**Waste Water**

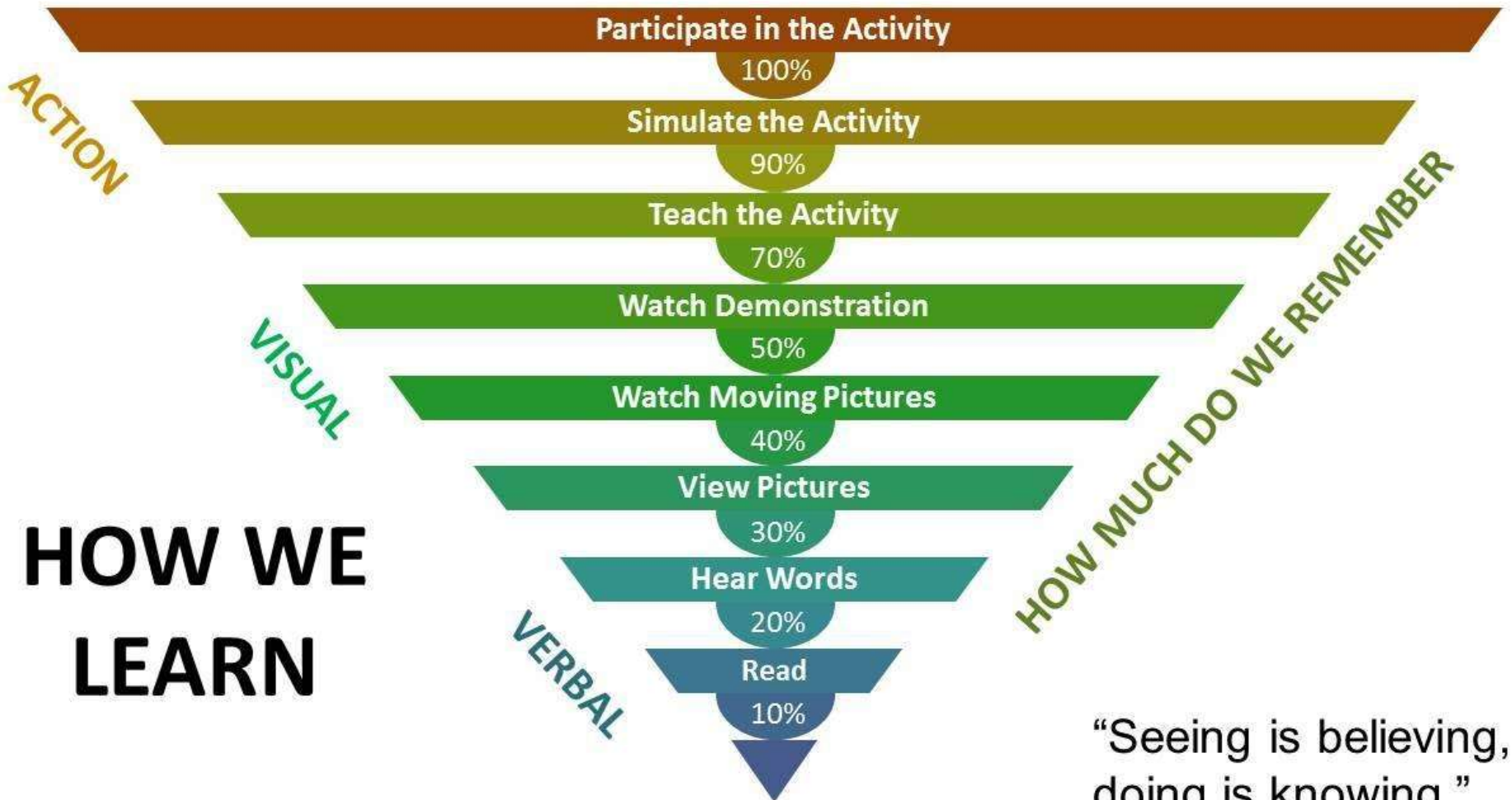
becomes

**River Water**

# How Does it Fit Into the Big Picture?



# How We Learn



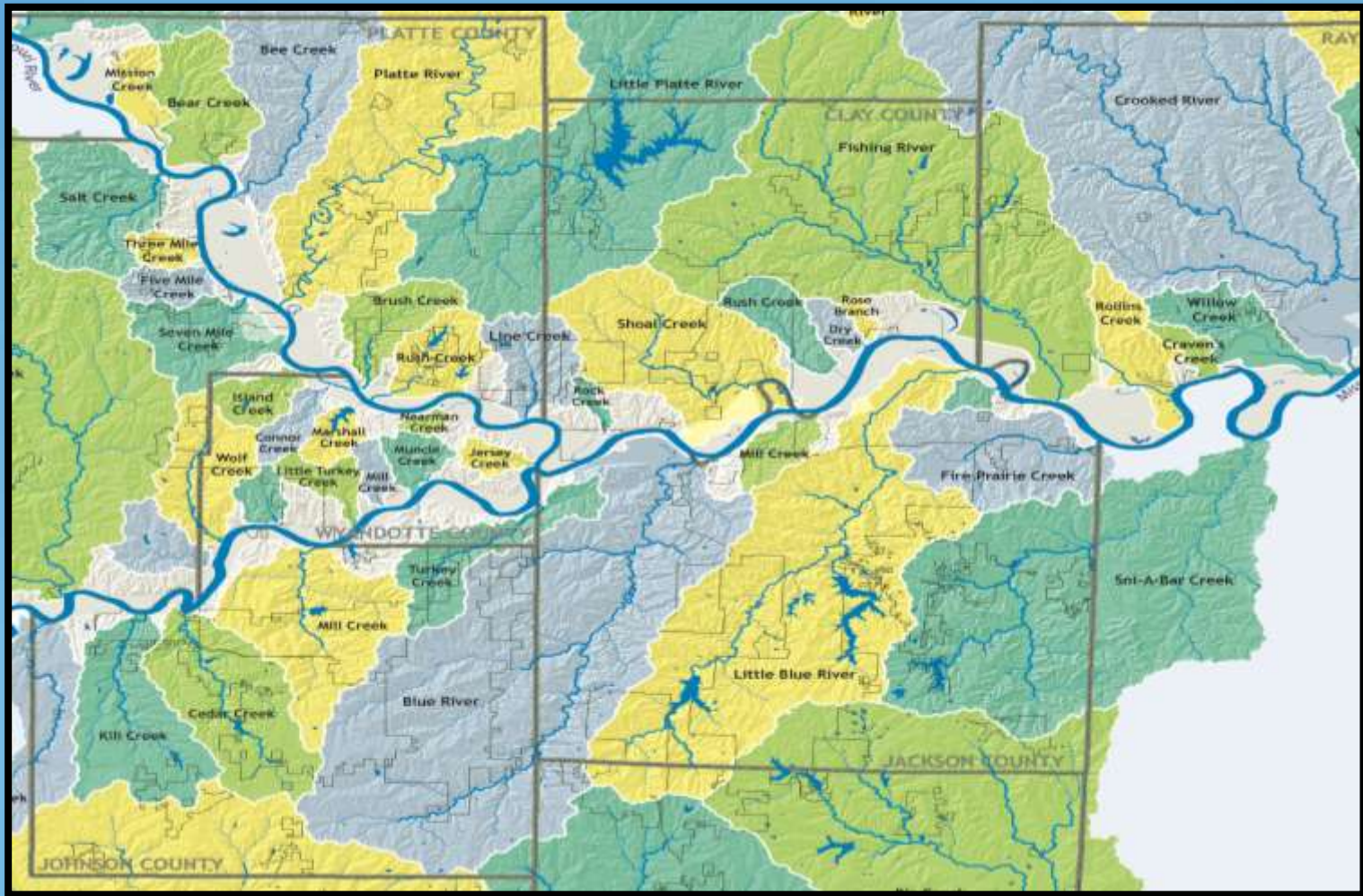
**HOW WE  
LEARN**

HOW MUCH DO WE REMEMBER

“Seeing is believing,  
doing is knowing.”  
– Neil Beyersdorf

Infographic published by Neil Beyersdorf  
[neil-beyersdorf.branded.me/](http://neil-beyersdorf.branded.me/)





# Watersheds of the Kansas City Area



# KC to the Sea



# Active Participation



How Does Water Become Polluted?



# More Active Participation



How much water runs off impervious surfaces during a rainstorm?

# Connecting the Dots



Rain



River



Ocean





# Connecting the Dots



Pollution



Drinking  
Water



Food



# Connecting the Dots



Wildlife



Recreation



Our  
Future



# Walking the Talk









# Questions?

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