



The Drive to Clean Water: Bringing the Clean Water Act Home

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Environment
November 18, 2010



Key Components of the Clean Water Act

- Water Quality Standards – Defining Water Quality in terms of Uses and Criteria
- Watershed Planning – 319 NPS & TMDLs
- Permitting – Wastewater, Stormwater for Municipalities, Industries, CAFOs



Water Quality Standards

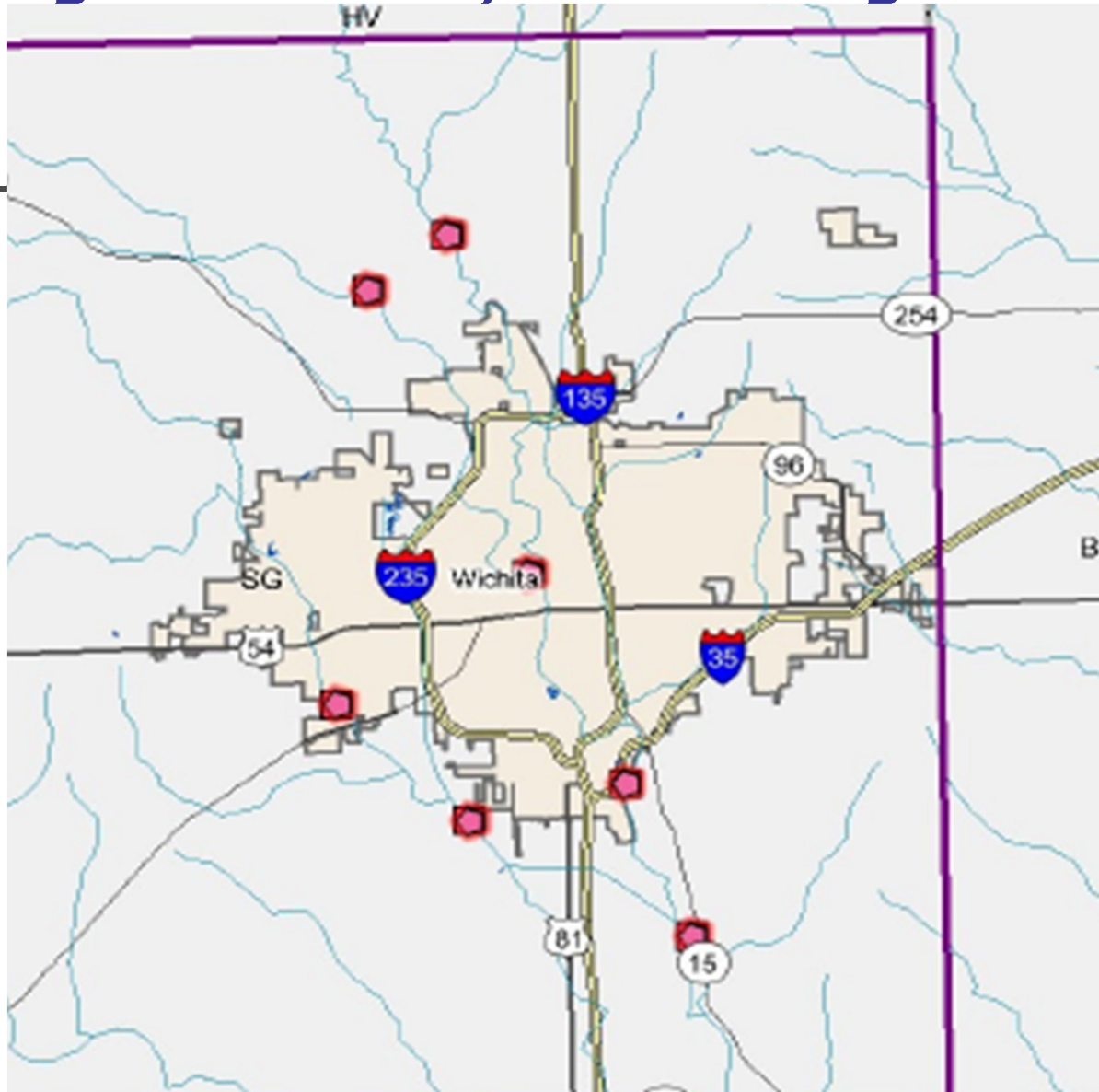
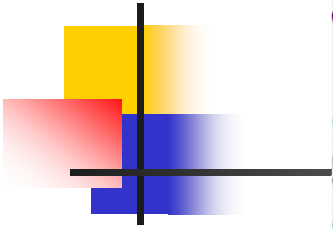
- 1. Uses – *Aquatic Life, Recreation, Food Procurement, Drinking Water, Water Supply for other uses*
- 2. Criteria – *5mg/l Dissolved Oxygen; 250 mg/l Chloride; Control introduction of plant nutrients to prevent undesirable aquatic life*
- 3. Antidegradation – *New or expanding discharges will maintain existing uses and not degrade water quality (without social/economic justification)*



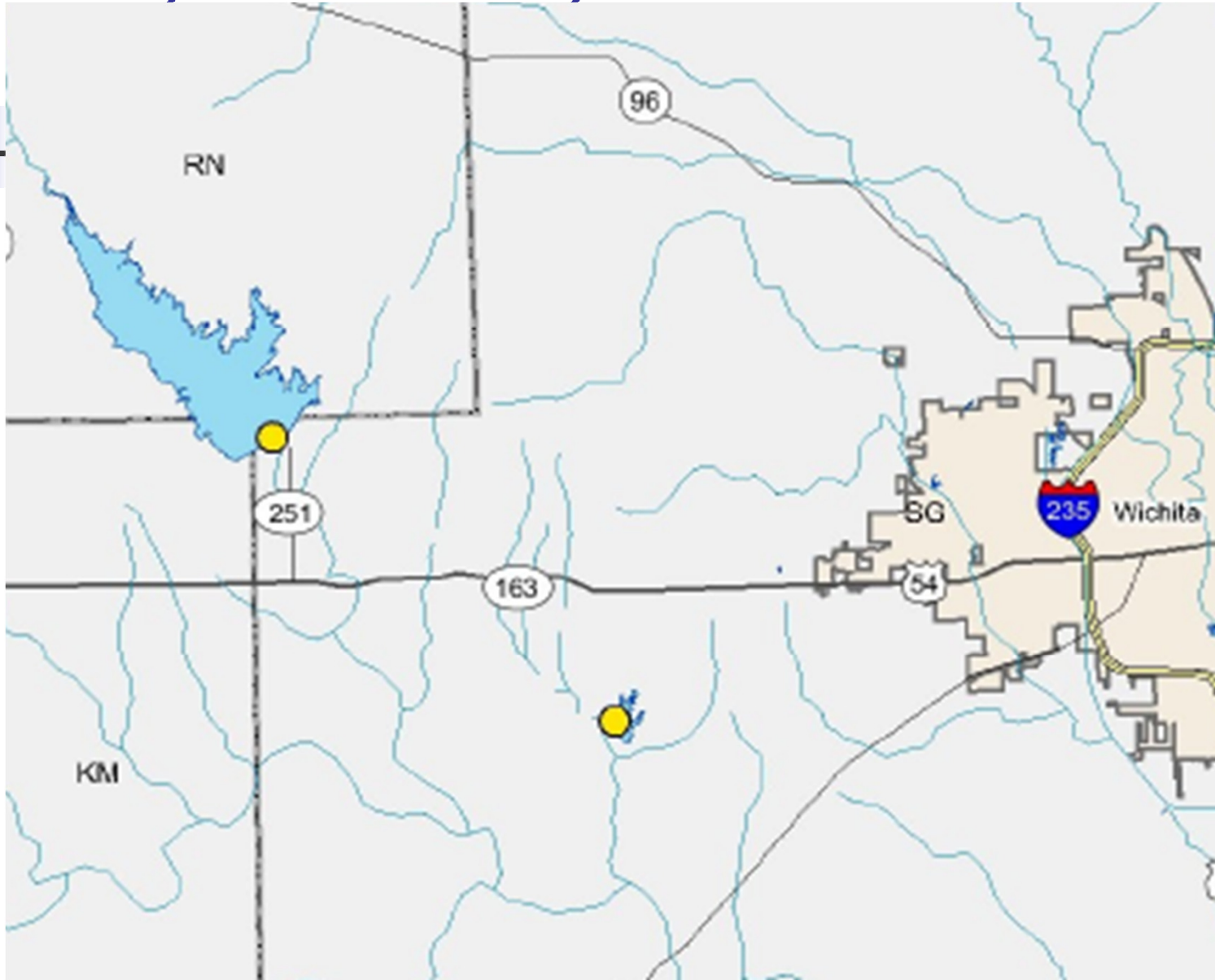
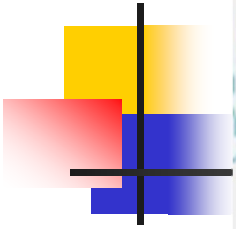
Wichita Area Waters

- Arkansas River – Special Aquatic Life, Primary B Recreation, Food Procurement, Water Supply
- Cowskin Creek – Expected Aquatic Life, Recreation ranges from Primary B to Secondary b, Food Procurement, Water Supply
- Big Slough – Same as Ark R, but no Food Procurement
- Chisholm Creek – Restricted Aquatic Life and Secondary a recreation
- Most lakes – Expected Aquatic Life and Primary B Recreation

Sedgwick County Monitoring Stations



Sedgwick County Lakes

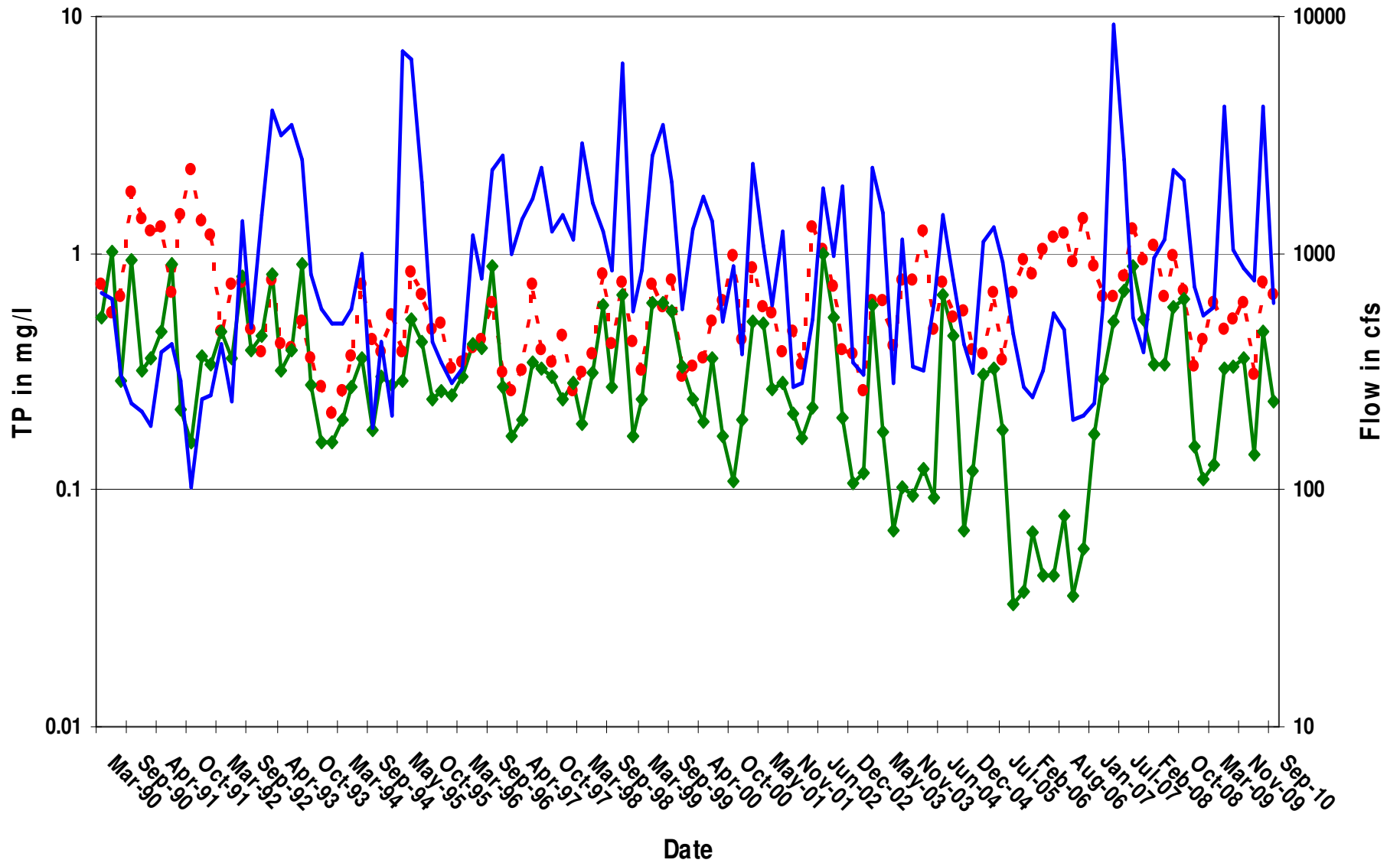




The Big Issues in Water Quality

- Nutrients – Excessive Phosphorus and Nitrogen trigger stream and lake eutrophication, impacting aquatic life, recreation, and water supply
- Bacteria – Impacts Recreation, presents human health threat – Ark River Festival
- Sediment – Scour and deposition of stream habitat, water clarity and aesthetics

20 Years of Arkansas River Flow and TP above and below Wichita



- - - Derby -◆- Maize - Flow



Impairment Planning

- 2010 Listing of Impaired waterswaters
 - Arkansas River and Little Arkansas
 - Phosphorus, TSS, Lead, Atrazine
- Total Maximum Daily Loads (TMDLs)
 - Pollutant Budget to attain standards
 - Assigns responsibility to sources
 - Arkansas, Cowskin, Little Ark Bacteria, Chloride, Sulfate, Biology impairments
 - Cheney Lake and Lake Afton Eutrophication
- Implementation
 - Wastewater and Stormwater Permits
 - Financial, Educational, Technical Assistance to NPS



Permits

- NPDES wastewater discharge permits
 - Pollutant limits
 - Conditions for study, data collection
 - Monitoring of pollutants leaving WWTP
- MS4 stormwater permits
 - Construction
 - Development
 - Housecleaning
 - Illicit Hookups
 - Monitoring of Storm Events



319 Watershed Planning

- Non-Point Sources – Agriculture, urban activities outside of permits
- Watershed Restoration and Protection Strategies (WRAPS)
- River City WRAPS
- Primary forum for citizen interaction with Clean Water Act programs
- Set priorities for action
- Create alliances to forge resources

Driving the CWA toward Clean Water



- **Takes time** – learning curves, public and political buy-in, individual bottom lines
- **Takes money** – sewer rates, stormwater utilities, individual cost-shares
- **Takes participation** – citizens supporting city efforts, individual action in urban and rural settings to reduce sources and mitigate activity through BMPs



Preferred Futures

- Water Quality: To establish reliable and plentiful water resources that maximize water conservation and assure optimum water quality
- *Water Quality: Maximize water conservation and clean water efforts to maintain and enhance the use of reliable and plentiful water resources*



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