Bureau of Water Overview

Summer Institute for European Student Leaders on Environmental Stewardship

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Jargon

- 106 – EPA wastewater program grant
- 319 – EPA nonpoint source program grant
- CAFO – Concentrated Animal Feeding Operation
- DBP – Disinfection By-Products
- ECOS – Environment Council of States
- NPDES – National Pollutant Discharge Elimination System Wastewater permitting
- NPS – Nonpoint Source
- PWS – Public Water Supply
- SRF – State Revolving Loan Fund
- SWP – State Water Plan
- TMDL – Total Maximum Daily Load
- UIC – Underground Injection Control
- WQ S – Water Quality Standards
- WW – Wastewater

Overview

- The Kansas Landscape
- Who we are and what we do
- Fiscal/staffing picture
- Challenges

Precipitation

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<th>Centimeters</th>
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Population Density

- 87% of the UK’s area
- <5% of the UK’s Population

2.9 million people
82,277 sq miles (213,096 km²)
### Bureau Programs

- **Administer two major federal laws in lieu of EPA**
  - Clean Water Act (CWA) – Since 1974
    - Wastewater permitting/compliance
    - Livestock waste permitting
    - Surface water quality standards/monitoring
    - Nonpoint source management
    - Total Maximum Daily Load (TMDL)
    - State Revolving Fund loan program (CWSRF)
  - Safe Drinking Water Act (SDWA) – Since 1978
    - Public Drinking Water Supply (PWS) permitting/compliance
    - State Revolving Fund loan program (DWSRF)
    - Underground Injection Control (UIC) permitting/compliance
- **Receive state-matched grants from EPA to administer**

### Eight Major Water Programs

- Wastewater permitting, enforcement and compliance
- Water quality standards development and total maximum daily load (TMDL) development
- Water quality monitoring
- Public water supply permitting, compliance, and enforcement
- Certification of drinking water and wastewater operators
- State revolving fund (SRF) low-interest loan programs for water and wastewater infrastructure
- Nonpoint source pollution control
- Underground storage and disposal wells along with a well driller certification program

### Administration

- Permit review/Public Notification
- WW compliance/enforcement
- WW data management
- Water/WW operator certification
- EPA coordination

### Municipal Programs Section

- Municipal wastewater permits
- Clean Water State Revolving Fund (CWSRF)
- Municipal stormwater permits
  - MS4
Watershed Planning, Monitoring, and Assessment Section

- Monitor surface water quality
- Develop WQS
- Assess surface water for impairment
- Develop TMDLs

Livestock Waste Management Section

- Permit Federal CAFOs
- Permit State CAFOs
- Permit sale barns/truck washes

Geology Section

- UIC permitting and compliance
- Natural gas/petroleum storage in old salt caverns
- Water well driller licensing
- Odds and ends

Industrial Programs Section

- Permit industrial wastewater discharges
- Permit construction stormwater
- Manage pretreatment program

Public Water Supply Section

- Public drinking water permits, compliance, and enforcement
- Drinking Water State Revolving Fund (DWSRF)

Watershed Management Section

- Nonpoint Source Management
- Watershed Restoration and Protection Strategies (WRAPS)
- Local Environmental Protection Program (LEPP)
BOW Funding Sources

- SGF: $1,100,210 (10%)
- State Water Plan: $1,021,269 (9%)
- Fees: $474,236 (4%)
- Federal: $8,507,463 (77%)

Total ~ $11 million

- Includes ~$2.4 M in aid to local governments from SWP and Federal funds

Challenges

- Nutrients in surface waters
  - Impacts recreation, drinking water, public health/safety
- Small population compliance with Federal regulations
  - Median water/wastewater system serves < 400 population
  - Drinking water – As, NO₃, U, DBP
  - Wastewater – lagoon treatment technology
    - Very green, low energy
    - Affordable
    - Don’t meet EPA standards year round
- Intermittent/Ephemeral streams
  - How to assess water quality on streams that only flow a portion of the time
- Keeping up with Federal rules while funding shrinks

Nutrient Impaired Reservoirs – Examples

Milford Reservoir

Point Source Urban Runoff
1% 10%
Manure 23%
Fertilizer 44%

Channel Length
22%

Source of Total Phosphorus Load Entering Milford Reservoir

58% of Total Load Generated In-state
**Source of Total Phosphorus Load Entering Kaw Reservoir - Oklahoma**

- **Point Source**: 27%
- **Manure**: 10%
- **Urban Runoff**: 12%
- **Fertilizer**: 47%
- **In-Channel**: 4%

**Bottom Line**

- Nutrients are a persistent pollutant
- There is no one “recipe” to apply in all watersheds
- The water agencies are working together to maximize reduction
- We have made good progress, but
  - Need to continue to make progress
    - Wastewater treatment and
    - Nonpoint source