Kansas Water Planning Process
Who We Are & What We Do

Kansas Water Office

Coordination
Planning
Water Supply
State Water Planning

- Kansas Water Plan
  - Kansas Water Authority
    - 25 member body
    - Appointed and ex-officio (state agencies) members
    - Makes recommendations to the Governor and legislature
  - Basin Advisory Committees
    - 11 member volunteer committees
    - Advise the KWA on basin issues
- Wetlands Planning & Coordination
Kansas Water Plan

- Policy Sections
  - Addresses issues of statewide concern
  - New or amendatory legislation
  - Major program development or modification
- Basin Sections
  - Focus on basin specific issues
  - Application of existing programs
- State Water Planning Process
- Electronic
- Updated at least every 5 years
- State Water Plan Fund
State Water Plan Fund

- $17-20 million annually
- **Revenue**
  - State General Fund
  - EDIF (Lottery) Fund
  - Fees & Fines
  - Clean Drinking Water Fees in ’08
    - $3.2 M annually
    - Dedicated to Lake Restoration & Protection
    - PWS Technical Assistance
State Water Planning: A Grassroots Approach

Local Input through Basin Advisory Committees
Coordination

- Kansas Water Authority
- Natural Resources Sub-Cabinet
  - Created by Governor Sebelius in 2003 to improve interagency coordination
  - Includes seven state natural resources agencies (KDHE, KDWP, KDA, KWO, SCC, KCC, AHD)
- Agency management planning process
  - Development of interagency strategic plans to enhance implementation of State Water Plan priorities
Water Supply Programs

Kansas Water Marketing, Water Assurance District and Multipurpose Small Lakes Program Lakes

Multipurpose Small Lakes Program Projects
- Construction
- Existing
- Initial Talks
- Proposed

Water Marketing and Water Assurance District Lakes
Kansas Water Marketing Lakes and Service Areas

Legend

- ~~~ Streams
- Water Marketing Lakes
- Service Areas
- County
Reservoir Sedimentation

Water Supply Impacts

All State Owned Storage

Storage (af)

Conservation Storage

Water Supply Storage

Yield (MGD)

Year

2000 2010 2020 2030 2040

- 100 200 300 400 500 600 700 800

0 100 200 300 400 500 600 700 800
Kansas Water Plan Priorities
Kansas Water Plan
Watershed Issues

- Reservoir Sedimentation
- Nonpoint Source Pollution
- TMDL
- Flooding
- Wetland & Riparian Protection
- Environmental Protection
- Source Water Protection
- Water-based Recreation
WRAPS Approach

- Flooding
- Wetland & Riparian Protection
- Environmental Protection
- Source Water Protection
- Water-based Recreation
- Nonpoint source Pollution
- Reservoir Sedimentation
- TMDL

- Develop
- Assess
- Plan
- Implement
WRAPS

Kansas WRAPS Projects (as of July 2007)

Map Produced by Kansas Department of Health and Environment July 2007
Kansas Water Plan Update

- Water Quality Policy Section & Kansas-Lower Republican Basin Section, Watershed Restoration & Protection Issue
- Transition to web-based document
- Incorporate WRAPS, Kansas Surface Water Nutrient Reduction Plan, and new KLR TMDL high priority watersheds
Opportunities for Collaboration

- WRAPS Coordination and Support
- Wetlands Protection Planning and Implementation
- Study Needs
  - Sediment sources, transport and management
  - Watershed BMP evaluation and targeting
  - Reservoir restoration and management
Groundwater Declines

- Ground Water in the West
  - Declining Aquifer Storage

![Graph showing average depth to water for wells measured every year from 1996 to 2006 in Kansas Groundwater Management Districts 1, 3, and 4 (2006 measurements are provisional).]
Ozark Plateau Aquifer
Groundwater Declines

Estimated Usable Lifetime for the High Plains Aquifer in Kansas
(Based on ground-water trends from 2000 to 2005 and the minimum saturated thickness required to support 400 gpm well yields under a 90 day pumping period with wells on 1/4 section)

B.B. Wilson, Kansas Geological Survey, University of Kansas, 1910 Constant Avenue, Lawrence, KS 66047

Years from 2004 Until the Saturated Thickness (ST) Reaches Minimum Threshold

- Water Table Above 2000 Levels
- ST Already At Minimum Threshold
- Under 25
- 26 to 50
- 51 to 100
- 101 to 250
- Over 250

Extent of the Saturated Portion of the High Plains Aquifer
Water Transition Assistance Program (TAP)

- HB2710 established Rattlesnake and Prairie Dog Creeks as priorities
- Includes both State Water Plan funds and Ks v. CO damage award funds
- Permanent water right retirement
Upper Arkansas River
Conservation Reserve Enhancement Program (CREP)
Why the Upper Arkansas River?

- Reduce the declines in and along the Ark River corridor
- Help repair hydrology of areas damaged by Ark River Compact violations
- Leverage funds received from Colorado 20:80 with federal assistance.
- Voluntary, incentive-based program to achieve reduced withdrawals.
<table>
<thead>
<tr>
<th>Source</th>
<th>Costs</th>
<th>Net Present Value Costs</th>
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<tbody>
<tr>
<td>Federal contributions</td>
<td>$155,430,125</td>
<td>$113,042,930</td>
</tr>
<tr>
<td>Non-federal contributions</td>
<td>$44,269,074</td>
<td>$44,269,074</td>
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<tr>
<td><strong>Total Project Costs</strong></td>
<td><strong>$199,699,199</strong></td>
<td><strong>$157,312,004</strong></td>
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Final USDA Negotiations

- 20,000 acre CREP
- CREP can be amended to increase acreage limit
- Irrigated rental rates based on HUCs –
  - range from $100 – $115 (ctr pivot, SDI)
  - and $90 – $105 (flood)
- Dryland acres (associated with whole field enrollment) paid dryland rental rates
- Annual maintenance payment $4/acre
- Potential Federal Contribution: $31 million
- Potential State Payments: $2 million
Long Term Trends and Impacts

- Climate Variability and Change
  - Impact on Water Supply
    - Drought
  - Impact on Water Demand
    - Drought
Long Term Trends and Impacts

- Changing Economy
- Diversification of Western Kansas Economy
  - Ethanol and other biofuels
  - Dairy Industry
  - Value Added Products
- Increased Energy Demand
- Kansas Bioscience / Rice Farming
Water Management Complexities
Tracy Streeter
Director

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